

Product name: Enterprise Edition LCMS OQ/PV Sulfa Standard
Part no.: 5190-0580

This product is composed of the following:

Kit Components, Reagents

Box/Module Part number	Box/Module Name	Kit Component Part Number	Kit Component Name	Qty Units	GHS
	-	5190-0580-1	Enterprise Edition LCMS OQ/PV Sulfa Standard 1	1	Yes
-	-	5190-0580-2	Enterprise Edition LCMS OQ/PV Sulfa Standard 2	1	Yes
-	-	5190-0580-3	Enterprise Edition LCMS OQ/PV Sulfa Standard 3	1	Yes
-	-	5190-0580-4	Enterprise Edition LCMS OQ/PV Sulfa Standard 4	1	Yes
-	-	5190-0580-5	Enterprise Edition LCMS OQ/PV Sulfa Standard 5	1	Yes
-	-	5190-0580-6	Enterprise Edition LCMS OQ/PV Sulfa Standard Blank	1	Yes

Article SDSs, if maintained, are available on www.agilent.com. We recommend using the article product code when searching. SDSs are only available for a limited set of countries.

Transport Information for the Kit:

Dangerous Goods classification for: 5190-0580

DOT	IMDG	IATA
UN1230, Methanol solution, 3, II	UN1230, METHANOL solution, 3 (6.1), II	UN1230, Methanol solution, 3(6.1), II

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SDSs for each individual Kit component follow this cover sheet.

SAFETY DATA SHEET

Enterprise Edition LCMS OQ/PV Sulfa Standard 1

Section 1. Identification

GHS product identifier : Enterprise Edition LCMS OQ/PV Sulfa Standard 1
Part no. : 5190-0580-1

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 x 2.2 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H370 - Causes damage to organs.

Precautionary statements

Prevention : P280 - Wear protective gloves and protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.

Response : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Methanol	methyl alcohol	≥15 - ≤40	CAS: 67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
Formaldehyde.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Methanol	<p>NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 325 mg/m³. STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m³. TWA 8 hours: 200 ppm.</p>

Section 8. Exposure controls/personal protection

OSHA PEL (United States, 5/2018)

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

OSHA PEL 1989 (United States, 3/1989)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 325 mg/m³.

ACGIH TLV (United States, 1/2024)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 328 mg/m³.

Biological exposure indices

Ingredient name	Exposure indices
Methanol	ACGIH BEI (United States, 1/2024) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Faint odor.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >35°C (>95°F)
- Flash point** : Closed cup: <23°C (<73.4°F) [Based on solvent.]
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Methanol	126.96329	16.9	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

- Relative vapor density** : Not available.
- Relative density** : 0.937
- Density** : 0.937 g/cm³
- Solubility(ies)** :

Media	Result
water	Soluble

- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
Methanol	455	851	DIN 51794

- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

- Median particle size** : Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
Methanol	Rabbit - Dermal - LD50	15800 mg/kg
	Rat - Oral - LD50	5600 mg/kg
	Rat - Inhalation - LC50 Vapor	145000 ppm [1 hours]
	Rat - Inhalation - LC50 Vapor	64000 ppm [4 hours]
	Rat - Inhalation - LC50 Vapor	83.84 mg/l [4 hours]
	Rat - Inhalation - LC50 Vapor	189.95 mg/l [1 hours]
Conclusion/Summary [Product]	: Not available.	

Skin corrosion/irritation

Product/ingredient name	Result	
Methanol	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours
Conclusion/Summary [Product]	: Repeated exposure may cause skin dryness or cracking.	
Ingredient name	Conclusion/Summary	
Methanol	Repeated exposure may cause skin dryness or cracking.	

Serious eye damage/eye irritation

	Result	
Methanol	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Eyes - Moderate irritant	-
	Rabbit - Eyes - Severe irritant	-
Conclusion/Summary [Product]	: May cause eye irritation.	
Ingredient name	Conclusion/Summary	
Methanol	May cause eye irritation.	

Section 11. Toxicological information

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Repeated or prolonged exposure to the substance can produce reproductive system damage.
[Product]

Ingredient name

methanol

Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

Specific target organ toxicity (single exposure)

Product/ingredient name

Methanol

Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

: No known significant effects or critical hazards.

Inhalation

: Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.

Skin contact

: Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Enterprise Edition LCMS OQ/PV Sulfa Standard 1 Methanol	394.8 100	1184.4 300	N/A N/A	11.8 3	N/A N/A

Other information : Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Repeated exposure may cause skin dryness or cracking. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Methanol	Acute - LC50 - Marine water Acute - LC50 - Fresh water Chronic - NOEC - Marine water Acute - EC50 - Marine water
	2500 mg/l [48 hours] 290 mg/l [96 hours] 9.96 mg/l [96 hours] 2736 mg/l [96 hours]

Section 12. Ecological information

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Methanol	-0.77	<10	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.










RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1230	UN1230	UN1230	UN1230	UN1230
UN proper shipping name	Methanol solution	METHANOL solution	METANOL solution	METHANOL solution	Methanol solution

Section 14. Transport information

Transport hazard class(es)	3 	3 (6.1)  	3 (6.1)  	3 (6.1)  	3 (6.1)  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification

- : **Reportable quantity** 19739.9 lbs / 8961.9 kg [2526.7 gal / 9564.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- : **Limited quantity** Yes.
- : **Packaging instruction** Exceptions: 150. Non-bulk: 202. Bulk: 242.
- : **Quantity limitation** Passenger aircraft/rail: 1 L. Cargo aircraft: 60 L.
- : **Special provisions** IB2, T7, TP2

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).
- : **Explosive Limit and Limited Quantity Index** 1
- : **Passenger Carrying Road or Rail Index** 1
- : **Special provisions** 43

Mexico Classification

- : **Special provisions** 279

IMDG

- : **Emergency schedules** F-E, S-D
- : **Special provisions** 279

IATA

- : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
- : **Special provisions** A113

- : **Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- : **Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
Methanol	≥15 - ≤40	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

SARA 313


	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	≥15 - ≤40
Supplier notification	Methanol	67-56-1	≥15 - ≤40

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHANOL
New York : The following components are listed: Methanol
New Jersey : The following components are listed: METHYL ALCOHOL
Pennsylvania : The following components are listed: METHANOL

California Prop. 65

 **WARNING:** This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method

[History](#)

Date of issue/Date of revision : 11/06/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DOT = Department of Transportation
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- TDG = Transportation of Dangerous Goods
- UN = United Nations

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

SAFETY DATA SHEET

Enterprise Edition LCMS OQ/PV Sulfa Standard 2

Section 1. Identification

GHS product identifier : Enterprise Edition LCMS OQ/PV Sulfa Standard 2
Part no. : 5190-0580-2

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 x 2.2 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H370 - Causes damage to organs. (central nervous system (CNS), optic nerve)

Precautionary statements

Prevention : P280 - Wear protective gloves and protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.

Response : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Methanol	methyl alcohol	≥15 - ≤40	CAS: 67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
Formaldehyde.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Methanol	<p>NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 325 mg/m³. STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m³. TWA 8 hours: 200 ppm.</p>

Section 8. Exposure controls/personal protection

OSHA PEL (United States, 5/2018)

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

OSHA PEL 1989 (United States, 3/1989)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 325 mg/m³.

ACGIH TLV (United States, 1/2024)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 328 mg/m³.

Biological exposure indices

Ingredient name	Exposure indices
Methanol	ACGIH BEI (United States, 1/2024) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Faint odor.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >35°C (>95°F)
- Flash point** : Closed cup: <23°C (<73.4°F) [Based on solvent.]
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Methanol	126.96329	16.9	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

- Relative vapor density** : Not available.
- Relative density** : 0.937
- Density** : 0.937 g/cm³
- Solubility(ies)** :

Media	Result
water	Soluble

- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
Methanol	455	851	DIN 51794

- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

- Median particle size** : Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

Methanol

Result

Rabbit - Dermal - LD50 15800 mg/kg
 Rat - Oral - LD50 5600 mg/kg
 Rat - Inhalation - LC50 Vapor 145000 ppm [1 hours]
 Rat - Inhalation - LC50 Vapor 64000 ppm [4 hours]
 Rat - Inhalation - LC50 Vapor 83.84 mg/l [4 hours]
 Rat - Inhalation - LC50 Vapor 189.95 mg/l [1 hours]

Conclusion/Summary [Product]

: Not available.

Skin corrosion/irritation

Product/ingredient name

Methanol

Result

Rabbit - Skin - Moderate irritant

Duration of treatment/
exposure: 24 hours

Conclusion/Summary [Product]

: Repeated exposure may cause skin dryness or cracking.

Ingredient name

Methanol

Conclusion/Summary

Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Methanol

Result

Rabbit - Eyes - Moderate irritant
 Rabbit - Eyes - Moderate irritant
 Rabbit - Eyes - Severe irritant

Duration of treatment/
exposure: 24 hours

-

-

Conclusion/Summary [Product]

: May cause eye irritation.

Ingredient name

Methanol

Conclusion/Summary

May cause eye irritation.

Section 11. Toxicological information

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Repeated or prolonged exposure to the substance can produce reproductive system damage.
[Product]

Ingredient name

methanol

Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

Specific target organ toxicity (single exposure)

Product/ingredient name

Methanol

Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

: No known significant effects or critical hazards.

Inhalation

: Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.

Skin contact

: Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Enterprise Edition LCMS OQ/PV Sulfa Standard 2 Methanol	394.8 100	1184.4 300	N/A N/A	11.8 3	N/A N/A

Other information : Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Repeated exposure may cause skin dryness or cracking. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Methanol	Acute - LC50 - Marine water 2500 mg/l [48 hours] Acute - LC50 - Fresh water 290 mg/l [96 hours] Chronic - NOEC - Marine water 9.96 mg/l [96 hours] Acute - EC50 - Marine water 2736 mg/l [96 hours]

Section 12. Ecological information

Conclusion/Summary : Not available.
[Product]

Persistence and degradability

Conclusion/Summary : Not available.
[Product]

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Methanol	-0.77	<10	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.










RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1230	UN1230	UN1230	UN1230	UN1230
UN proper shipping name	Methanol solution	METHANOL solution	METANOL solution	METHANOL solution	Methanol solution

Section 14. Transport information

Transport hazard class(es)	3 	3 (6.1)  	3 (6.1)  	3 (6.1)  	3 (6.1)  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification

- : **Reportable quantity** 19739.9 lbs / 8961.9 kg [2526.7 gal / 9564.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- Limited quantity** Yes.
- Packaging instruction** Exceptions: 150. Non-bulk: 202. Bulk: 242.
- Quantity limitation** Passenger aircraft/rail: 1 L. Cargo aircraft: 60 L.
- Special provisions** IB2, T7, TP2

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).
- Explosive Limit and Limited Quantity Index** 1
- Passenger Carrying Road or Rail Index** 1
- Special provisions** 43

Mexico Classification

- : **Special provisions** 279

IMDG

- : **Emergency schedules** F-E, S-D
- Special provisions** 279

IATA

- : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
- Special provisions** A113

- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
Methanol	≥15 - ≤40	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1


SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	≥15 - ≤40
Supplier notification	Methanol	67-56-1	≥15 - ≤40

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHANOL
New York : The following components are listed: Methanol
New Jersey : The following components are listed: METHYL ALCOHOL
Pennsylvania : The following components are listed: METHANOL
California Prop. 65

 **WARNING:** This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method

[History](#)

Date of issue/Date of revision : 11/06/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DOT = Department of Transportation
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- TDG = Transportation of Dangerous Goods
- UN = United Nations

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

SAFETY DATA SHEET

Enterprise Edition LCMS OQ/PV Sulfa Standard 3

Section 1. Identification

GHS product identifier : Enterprise Edition LCMS OQ/PV Sulfa Standard 3
Part no. : 5190-0580-3

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 x 2.2 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H370 - Causes damage to organs. (central nervous system (CNS), optic nerve)

Precautionary statements

Prevention : P280 - Wear protective gloves and protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.

Response : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Methanol	methyl alcohol	≥15 - ≤40	CAS: 67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
Formaldehyde.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Methanol	<p>NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 325 mg/m³. STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m³. TWA 8 hours: 200 ppm.</p>

Section 8. Exposure controls/personal protection

OSHA PEL (United States, 5/2018)

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

OSHA PEL 1989 (United States, 3/1989)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 325 mg/m³.

ACGIH TLV (United States, 1/2024)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 328 mg/m³.

Biological exposure indices

Ingredient name	Exposure indices
Methanol	ACGIH BEI (United States, 1/2024) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Faint odor.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >35°C (>95°F)
- Flash point** : Closed cup: <23°C (<73.4°F) [Based on solvent.]
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Methanol	126.96329	16.9	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

- Relative vapor density** : Not available.
- Relative density** : 0.937
- Density** : 0.937 g/cm³
- Solubility(ies)** :

Media	Result
water	Soluble

- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
Methanol	455	851	DIN 51794

- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

- Median particle size** : Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

Methanol

Result

Rabbit - Dermal - LD50 15800 mg/kg
 Rat - Oral - LD50 5600 mg/kg
 Rat - Inhalation - LC50 Vapor 145000 ppm [1 hours]
 Rat - Inhalation - LC50 Vapor 64000 ppm [4 hours]
 Rat - Inhalation - LC50 Vapor 83.84 mg/l [4 hours]
 Rat - Inhalation - LC50 Vapor 189.95 mg/l [1 hours]

Conclusion/Summary [Product]

: Not available.

Skin corrosion/irritation

Product/ingredient name

Methanol

Result

Rabbit - Skin - Moderate irritant

Duration of treatment/
exposure: 24 hours

Conclusion/Summary [Product]

: Repeated exposure may cause skin dryness or cracking.

Ingredient name

Methanol

Conclusion/Summary

Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Methanol

Result

Rabbit - Eyes - Moderate irritant
 Rabbit - Eyes - Moderate irritant
 Rabbit - Eyes - Severe irritant

Duration of treatment/
exposure: 24 hours

-

-

Conclusion/Summary [Product]

: May cause eye irritation.

Ingredient name

Methanol

Conclusion/Summary

May cause eye irritation.

Section 11. Toxicological information

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Repeated or prolonged exposure to the substance can produce reproductive system damage.
[Product]

Ingredient name

methanol

Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

Specific target organ toxicity (single exposure)

Product/ingredient name

Methanol

Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.

Skin contact : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Enterprise Edition LCMS OQ/PV Sulfa Standard 3 Methanol	394.8 100	1184.4 300	N/A N/A	11.8 3	N/A N/A

Other information : Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Repeated exposure may cause skin dryness or cracking. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Methanol	Acute - LC50 - Marine water 2500 mg/l [48 hours] Acute - LC50 - Fresh water 290 mg/l [96 hours] Chronic - NOEC - Marine water 9.96 mg/l [96 hours] Acute - EC50 - Marine water 2736 mg/l [96 hours]

Section 12. Ecological information

Conclusion/Summary : Not available.
[Product]

Persistence and degradability

Conclusion/Summary : Not available.
[Product]

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Methanol	-0.77	<10	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.










RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1230	UN1230	UN1230	UN1230	UN1230
UN proper shipping name	Methanol solution	METHANOL solution	METANOL solution	METHANOL solution	Methanol solution

Section 14. Transport information

Transport hazard class(es)	3 	3 (6.1)  	3 (6.1)  	3 (6.1)  	3 (6.1)  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification

- : **Reportable quantity** 19740 lbs / 8961.9 kg [2526.7 gal / 9564.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- : **Limited quantity** Yes.
- : **Packaging instruction** Exceptions: 150. Non-bulk: 202. Bulk: 242.
- : **Quantity limitation** Passenger aircraft/rail: 1 L. Cargo aircraft: 60 L.
- : **Special provisions** IB2, T7, TP2

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).
- : **Explosive Limit and Limited Quantity Index** 1
- : **Passenger Carrying Road or Rail Index** 1
- : **Special provisions** 43

Mexico Classification

- : **Special provisions** 279

IMDG

- : **Emergency schedules** F-E, S-D
- : **Special provisions** 279

IATA

- : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
- : **Special provisions** A113

- : **Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- : **Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

- : **Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- : **Clean Air Act Section 602 Class I Substances** : Not listed
- : **Clean Air Act Section 602 Class II Substances** : Not listed
- : **DEA List I Chemicals (Precursor Chemicals)** : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
Methanol	≥15 - ≤40	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1


SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	≥15 - ≤40
Supplier notification	Methanol	67-56-1	≥15 - ≤40

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHANOL
New York : The following components are listed: Methanol
New Jersey : The following components are listed: METHYL ALCOHOL
Pennsylvania : The following components are listed: METHANOL
California Prop. 65

 **WARNING:** This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method

[History](#)

Date of issue/Date of revision : 11/06/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DOT = Department of Transportation
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- TDG = Transportation of Dangerous Goods
- UN = United Nations

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

SAFETY DATA SHEET

Enterprise Edition LCMS OQ/PV Sulfa Standard 4

Section 1. Identification

GHS product identifier : Enterprise Edition LCMS OQ/PV Sulfa Standard 4
Part no. : 5190-0580-4

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 x 2.2 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H370 - Causes damage to organs. (central nervous system (CNS), optic nerve)

Precautionary statements

Prevention : P280 - Wear protective gloves and protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.

Response : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Methanol	methyl alcohol	≥15 - ≤40	CAS: 67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
Formaldehyde.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Methanol	<p>NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 325 mg/m³. STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m³. TWA 8 hours: 200 ppm.</p>

Section 8. Exposure controls/personal protection

OSHA PEL (United States, 5/2018)

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

OSHA PEL 1989 (United States, 3/1989)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 325 mg/m³.

ACGIH TLV (United States, 1/2024)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 328 mg/m³.

Biological exposure indices

Ingredient name	Exposure indices
Methanol	ACGIH BEI (United States, 1/2024) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Faint odor.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >35°C (>95°F)
- Flash point** : Closed cup: <23°C (<73.4°F) [Based on solvent.]
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Methanol	126.96329	16.9	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

- Relative vapor density** : Not available.
- Relative density** : 0.937
- Density** : 0.937 g/cm³
- Solubility(ies)** :

Media	Result
water	Soluble

- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
Methanol	455	851	DIN 51794

- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

- Median particle size** : Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
Methanol	Rabbit - Dermal - LD50	15800 mg/kg
	Rat - Oral - LD50	5600 mg/kg
	Rat - Inhalation - LC50 Vapor	145000 ppm [1 hours]
	Rat - Inhalation - LC50 Vapor	64000 ppm [4 hours]
	Rat - Inhalation - LC50 Vapor	83.84 mg/l [4 hours]
	Rat - Inhalation - LC50 Vapor	189.95 mg/l [1 hours]
Conclusion/Summary [Product]	: Not available.	

Skin corrosion/irritation

Product/ingredient name	Result	
Methanol	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours
Conclusion/Summary [Product]	: Repeated exposure may cause skin dryness or cracking.	
Ingredient name	Conclusion/Summary	
Methanol	Repeated exposure may cause skin dryness or cracking.	

Serious eye damage/eye irritation

	Result	
Methanol	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Eyes - Moderate irritant	-
	Rabbit - Eyes - Severe irritant	-
Conclusion/Summary [Product]	: May cause eye irritation.	
Ingredient name	Conclusion/Summary	
Methanol	May cause eye irritation.	

Section 11. Toxicological information

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Repeated or prolonged exposure to the substance can produce reproductive system damage.
[Product]

Ingredient name

methanol

Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

Specific target organ toxicity (single exposure)

Product/ingredient name

Methanol

Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

: No known significant effects or critical hazards.

Inhalation

: Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.

Skin contact

: Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Enterprise Edition LCMS OQ/PV Sulfa Standard 4 Methanol	394.8 100	1184.4 300	N/A N/A	11.8 3	N/A N/A

Other information : Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Repeated exposure may cause skin dryness or cracking. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Methanol	Acute - LC50 - Marine water 2500 mg/l [48 hours] Acute - LC50 - Fresh water 290 mg/l [96 hours] Chronic - NOEC - Marine water 9.96 mg/l [96 hours] Acute - EC50 - Marine water 2736 mg/l [96 hours]

Section 12. Ecological information

Conclusion/Summary : Not available.
[Product]

Persistence and degradability

Conclusion/Summary : Not available.
[Product]

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Methanol	-0.77	<10	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.










RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1230	UN1230	UN1230	UN1230	UN1230
UN proper shipping name	Methanol solution	METHANOL solution	METANOL solution	METHANOL solution	Methanol solution

Section 14. Transport information

Transport hazard class(es)	3 	3 (6.1)  	3 (6.1)  	3 (6.1)  	3 (6.1)  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification

- : **Reportable quantity** 19740 lbs / 8962 kg [2526.7 gal / 9564.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- Limited quantity** Yes.
- Packaging instruction** Exceptions: 150. Non-bulk: 202. Bulk: 242.
- Quantity limitation** Passenger aircraft/rail: 1 L. Cargo aircraft: 60 L.
- Special provisions** IB2, T7, TP2

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).
- Explosive Limit and Limited Quantity Index** 1
- Passenger Carrying Road or Rail Index** 1
- Special provisions** 43

Mexico Classification

- : **Special provisions** 279

IMDG

- : **Emergency schedules** F-E, S-D
- Special provisions** 279

IATA

- : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
- Special provisions** A113

- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
Methanol	≥15 - ≤40	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1


SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	≥15 - ≤40
Supplier notification	Methanol	67-56-1	≥15 - ≤40

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHANOL
New York : The following components are listed: Methanol
New Jersey : The following components are listed: METHYL ALCOHOL
Pennsylvania : The following components are listed: METHANOL
California Prop. 65

 **WARNING:** This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method

[History](#)

Date of issue/Date of revision : 11/06/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DOT = Department of Transportation
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- TDG = Transportation of Dangerous Goods
- UN = United Nations

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

SAFETY DATA SHEET

Enterprise Edition LCMS OQ/PV Sulfa Standard 5

Section 1. Identification

GHS product identifier : Enterprise Edition LCMS OQ/PV Sulfa Standard 5
Part no. : 5190-0580-5

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : 1 x 2.2 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H370 - Causes damage to organs. (central nervous system (CNS), optic nerve)

Precautionary statements

Prevention

: P280 - Wear protective gloves and protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.

Response

: P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.

Storage

: Not applicable.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards

Section 2. Hazards identification

- Hazards not otherwise classified** : None known.
- Hazards identified when used** : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Methanol	methyl alcohol	≥15 - ≤40	CAS: 67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide Formaldehyde.
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Methanol	NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m ³ . STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m ³ . CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 325 mg/m ³ . STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m ³ . TWA 8 hours: 200 ppm.

Section 8. Exposure controls/personal protection

OSHA PEL (United States, 5/2018)

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

OSHA PEL 1989 (United States, 3/1989)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 325 mg/m³.

ACGIH TLV (United States, 1/2024)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 328 mg/m³.

Biological exposure indices

Ingredient name	Exposure indices
Methanol	ACGIH BEI (United States, 1/2024) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Faint odor.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >35°C (>95°F)
- Flash point** : Closed cup: <23°C (<73.4°F) [Based on solvent.]
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Methanol	126.96329	16.9	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

- Relative vapor density** : Not available.

- Relative density** : 0.937

- Density** : 0.937 g/cm³

- Solubility(ies)** :
- | Media | Result |
|-------|---------|
| water | Soluble |

- Miscible with water** : Yes.

- Partition coefficient: n-octanol/water** : Not applicable.

- Auto-ignition temperature** :
- | Ingredient name | °C | °F | Method |
|-----------------|-----|-----|-----------|
| Methanol | 455 | 851 | DIN 51794 |

- Decomposition temperature** : Not available.

- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

- Median particle size** : Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

Methanol

Result

Rabbit - Dermal - LD50 15800 mg/kg
 Rat - Oral - LD50 5600 mg/kg
 Rat - Inhalation - LC50 Vapor 145000 ppm [1 hours]
 Rat - Inhalation - LC50 Vapor 64000 ppm [4 hours]
 Rat - Inhalation - LC50 Vapor 83.84 mg/l [4 hours]
 Rat - Inhalation - LC50 Vapor 189.95 mg/l [1 hours]

Conclusion/Summary [Product]

: Not available.

Skin corrosion/irritation

Product/ingredient name

Methanol

Result

Rabbit - Skin - Moderate irritant

Duration of treatment/
exposure: 24 hours

Conclusion/Summary [Product]

: Repeated exposure may cause skin dryness or cracking.

Ingredient name

Methanol

Conclusion/Summary

Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Methanol

Result

Rabbit - Eyes - Moderate irritant
 Rabbit - Eyes - Moderate irritant
 Rabbit - Eyes - Severe irritant

Duration of treatment/
exposure: 24 hours

-

-

Conclusion/Summary [Product]

: May cause eye irritation.

Ingredient name

Methanol

Conclusion/Summary

May cause eye irritation.

Section 11. Toxicological information

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Repeated or prolonged exposure to the substance can produce reproductive system damage.
[Product]

Ingredient name

methanol

Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

Specific target organ toxicity (single exposure)

Product/ingredient name

Methanol

Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

: No known significant effects or critical hazards.

Inhalation

: Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.

Skin contact

: Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Enterprise Edition LCMS OQ/PV Sulfa Standard 5 Methanol	394.8 100	1184.4 300	N/A N/A	11.8 3	N/A N/A

Other information : Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Repeated exposure may cause skin dryness or cracking. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Methanol	Acute - LC50 - Marine water 2500 mg/l [48 hours] Acute - LC50 - Fresh water 290 mg/l [96 hours] Chronic - NOEC - Marine water 9.96 mg/l [96 hours] Acute - EC50 - Marine water 2736 mg/l [96 hours]

Section 12. Ecological information

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Methanol	-0.77	<10	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.











RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1230	UN1230	UN1230	UN1230	UN1230
UN proper shipping name	Methanol solution	METHANOL solution	METANOL solution	METHANOL solution	Methanol solution

Section 14. Transport information

Transport hazard class(es)	3 (6.1)  	3 (6.1)  	3 (6.1)  	3 (6.1)  	3 (6.1)  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

- DOT Classification** : **Reportable quantity** 19740 lbs / 8962 kg [2526.7 gal / 9564.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 60 L.
Special provisions IB2, T7, TP2
- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).
Explosive Limit and Limited Quantity Index 1
Passenger Carrying Road or Rail Index 1
Special provisions 43
- Mexico Classification** : **Special provisions** 279
- IMDG** : **Emergency schedules** F-E, S-D
Special provisions 279
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
Special provisions A113
- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
Methanol	≥15 - ≤40	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

SARA 313


	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	≥15 - ≤40
Supplier notification	Methanol	67-56-1	≥15 - ≤40

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHANOL
New York : The following components are listed: Methanol
New Jersey : The following components are listed: METHYL ALCOHOL
Pennsylvania : The following components are listed: METHANOL

California Prop. 65

 **WARNING:** This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method

[History](#)

Date of issue/Date of revision : 11/06/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DOT = Department of Transportation
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- TDG = Transportation of Dangerous Goods
- UN = United Nations

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

SAFETY DATA SHEET

Enterprise Edition LCMS OQ/PV Sulfa Standard Blank

Section 1. Identification

GHS product identifier : Enterprise Edition LCMS OQ/PV Sulfa Standard Blank
Part no. : 5190-0580-6

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 x 2.2 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H370 - Causes damage to organs. (central nervous system (CNS), optic nerve)

Precautionary statements

Prevention : P280 - Wear protective gloves and protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.

Response : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Methanol	methyl alcohol	≥15 - ≤40	CAS: 67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
Formaldehyde.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Methanol	<p>NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 325 mg/m³. STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m³. TWA 8 hours: 200 ppm.</p>

Section 8. Exposure controls/personal protection

OSHA PEL (United States, 5/2018)

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

OSHA PEL 1989 (United States, 3/1989)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 260 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 325 mg/m³.

ACGIH TLV (United States, 1/2024)

Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 328 mg/m³.

Biological exposure indices

Ingredient name	Exposure indices
Methanol	ACGIH BEI (United States, 1/2024) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Faint odor.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >35°C (>95°F)
- Flash point** : Closed cup: <23°C (<73.4°F) [Based on solvent.]
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Methanol	126.96329	16.9	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

- Relative vapor density** : Not available.
- Relative density** : 0.937
- Density** : 0.937 g/cm³
- Solubility(ies)** :

Media	Result
water	Soluble

- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
Methanol	455	851	DIN 51794

- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

- Median particle size** : Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
Methanol	Rabbit - Dermal - LD50	15800 mg/kg
	Rat - Oral - LD50	5600 mg/kg
	Rat - Inhalation - LC50 Vapor	145000 ppm [1 hours]
	Rat - Inhalation - LC50 Vapor	64000 ppm [4 hours]
	Rat - Inhalation - LC50 Vapor	83.84 mg/l [4 hours]
	Rat - Inhalation - LC50 Vapor	189.95 mg/l [1 hours]
Conclusion/Summary [Product]	: Not available.	

Skin corrosion/irritation

Product/ingredient name	Result	
Methanol	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours
Conclusion/Summary [Product]	: Repeated exposure may cause skin dryness or cracking.	
Ingredient name	Conclusion/Summary	
Methanol	Repeated exposure may cause skin dryness or cracking.	

Serious eye damage/eye irritation

	Result	
Methanol	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Eyes - Moderate irritant	-
	Rabbit - Eyes - Severe irritant	-
Conclusion/Summary [Product]	: May cause eye irritation.	
Ingredient name	Conclusion/Summary	
Methanol	May cause eye irritation.	

Section 11. Toxicological information

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Repeated or prolonged exposure to the substance can produce reproductive system damage.
[Product]

Ingredient name

methanol

Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

Specific target organ toxicity (single exposure)

Product/ingredient name

Methanol

Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled.

Skin contact : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Enterprise Edition LCMS OQ/PV Sulfa Standard Blank Methanol	394.8 100	1184.4 300	N/A N/A	11.8 3	N/A N/A

Other information : Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Repeated exposure may cause skin dryness or cracking. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Methanol	Acute - LC50 - Marine water Acute - LC50 - Fresh water Chronic - NOEC - Marine water Acute - EC50 - Marine water
	2500 mg/l [48 hours] 290 mg/l [96 hours] 9.96 mg/l [96 hours] 2736 mg/l [96 hours]

Section 12. Ecological information

Conclusion/Summary : Not available.
[Product]

Persistence and degradability

Conclusion/Summary : Not available.
[Product]

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Methanol	-0.77	<10	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.










RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1230	UN1230	UN1230	UN1230	UN1230
UN proper shipping name	Methanol solution	METHANOL solution	METANOL solution	METHANOL solution	Methanol solution

Section 14. Transport information

Transport hazard class(es)	3 	3 (6.1)  	3 (6.1)  	3 (6.1)  	3 (6.1)  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

- DOT Classification** : **Reportable quantity** 19739.9 lbs / 8961.9 kg [2526.7 gal / 9564.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 60 L.
Special provisions IB2, T7, TP2
- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).
Explosive Limit and Limited Quantity Index 1
Passenger Carrying Road or Rail Index 1
Special provisions 43
- Mexico Classification** : **Special provisions** 279
- IMDG** : **Emergency schedules** F-E, S-D
Special provisions 279
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
Special provisions A113
- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
Methanol	≥15 - ≤40	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1


SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	≥15 - ≤40
Supplier notification	Methanol	67-56-1	≥15 - ≤40

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHANOL
New York : The following components are listed: Methanol
New Jersey : The following components are listed: METHYL ALCOHOL
Pennsylvania : The following components are listed: METHANOL
California Prop. 65

 **WARNING:** This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: All components are listed or exempted.
Turkey	: All components are listed or exempted.
United States	: All components are active or exempted.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method

[History](#)

Date of issue/Date of revision : 11/06/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DOT = Department of Transportation
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- TDG = Transportation of Dangerous Goods
- UN = United Nations

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Other information

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