Safety Data Sheet
according to HPR, Schedule 1

Printing date 07/04/2024 Version Number 5 Reviewed on 07/04/2024

*
1 Identification

· **Product identifier**

· **Trade name: Volatiles Calibration Check Standard (1X1 mL)**

· **Part number:** CLP-110-1
· **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA

· **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

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2 Hazard identification

· **Classification of the substance or mixture**


GHS02 Flame

Flammable Liquids - Category 2	H225 Highly flammable liquid and vapour.


GHS06 Skull and crossbones

Acute Toxicity (Inhalation) - Category 3	H331 Toxic if inhaled.


GHS08 Health hazard

Carcinogenicity - Category 1A	H350 May cause cancer.
Reproductive Toxicity - Category 2	H361 Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity - Single Exposure - Category 1	H370 Causes damage to the central nervous system and the visual organs.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS02 GHS06 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
methanol
vinyl chloride

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trichloromethane
toluene

· **Hazard statements**
H225 Highly flammable liquid and vapour.
H331 Toxic if inhaled.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to the central nervous system and the visual organs.

· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P240	Ground and bond container and receiving equipment.
P242	Use non-sparking tools.
P243	Take actions to prevent static discharges.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P321	Specific treatment (see on this label).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P370+P378	In case of fire: Use CO2, powder or water spray to extinguish.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 3
Reactivity = 0

CA

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3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
67-56-1	methanol	80-100% w/w *
67-66-3	trichloromethane	0.1-1% w/w *
75-01-4	vinyl chloride	0.1-1% w/w *
75-35-4	1,1-dichloroethylene	0.1-1% w/w *
100-41-4	ethylbenzene	0.1-1% w/w *
108-88-3	toluene	0.1-1% w/w *

* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.

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· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/ Personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-56-1 methanol	
EL	STEL: 250 ppm TWA: 200 ppm Skin
EV	STEL: 325 mg/m³, 250 ppm TWA: 260 mg/m³, 200 ppm Skin
67-66-3 trichloromethane	
EL	TWA: 2 ppm IARC 2B; R
EV	TWA: 49 mg/m³, 10 ppm

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75-01-4 vinyl chloride	
EL	TWA: 1 ppm ACGIH A1; IARC 1
EV	TWA: 1 ppm
75-35-4 1,1-dichloroethylene	
EL	TWA: 1 ppm IARC 2B
EV	STEL: 80 mg/m³, 20 ppm TWA: 4 mg/m³, 1 ppm
100-41-4 ethylbenzene	
EL	TWA: 20 ppm IARC 2B
EV	STEL: 540 mg/m³, 125 ppm TWA: 435 mg/m³, 100 ppm
108-88-3 toluene	
EL	TWA: 20 ppm R
EV	TWA: 20 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· **Breathing equipment:**
When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
· **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: >4 hours

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· **Eye protection:**

Tightly sealed goggles

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	Colorless
· **Odor:**	Alcohol-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	-98 °C
Boiling point/Boiling range:	64.7 °C
· **Flash point:**	9 °C
· **Flammability (solid, gaseous):**	Highly flammable.
· **Auto igniting:**	455 °C
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	5.5 Vol %
Upper:	44 Vol %
· **Vapor pressure at 20 °C:**	100 hPa
· **Density at 20 °C:**	0.80418 g/cm³
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	99.2 %

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Solids content:	0.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	79,114 mg/kg (rat)
Dermal	LD50	29,668 mg/kg (rat)
Inhalative	LC50/4 h	3.04 mg/L

67-56-1 methanol		
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)
67-66-3 trichloromethane		
Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)
		>20,000 mg/kg (rabbit)
75-01-4 vinyl chloride		
Oral	LD50	500 mg/kg (rat)
75-35-4 1,1-dichloroethylene		
Oral	LD50	200 mg/kg (rat)
Inhalative	LC50/4 h	6,350 mg/L (mouse)
100-41-4 ethylbenzene		
Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	15,354 mg/kg (rabbit)
Inhalative	LC50/4 h	17.2 mg/L (rat)
108-88-3 toluene		
Oral	LD50	5,580 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)

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Inhalative	LC50/4 h	5,320 mg/L (mouse) 28.1 mg/L (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
67-66-3	trichloromethane	2B
75-01-4	vinyl chloride	1
75-35-4	1,1-dichloroethylene	2B
78-87-5	1,2-dichloropropane	1
100-41-4	ethylbenzene	2B
108-88-3	toluene	3

· **NTP (National Toxicology Program)**		
67-66-3	trichloromethane	R
75-01-4	vinyl chloride	K

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· **Not Regulated, De minimis Quantities**	-
· **UN-Number**	
· **DOT/TDG, ADR, IMDG, IATA**	UN1230
· **UN proper shipping name**	
· **DOT/TDG**	Methanol solution
· **ADR**	1230 Methanol solution
· **IMDG, IATA**	METHANOL solution
· **Transport hazard class(es)**	
· **DOT/TDG (Transport dangerous goods):**	

· **Class**	3 Flammable liquids
· **Label**	3, 6.1
· **ADR**	

· **Class**	3 Flammable liquids
· **Label**	3+6.1
· **IMDG**	

· **Class**	3 Flammable liquids
· **Label**	3/6.1
· **IATA**	

· **Class**	3 Flammable liquids
· **Label**	3 (6.1)
· **Packing group**	
· **DOT/TDG, ADR, IMDG, IATA**	II

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· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Hazard identification number (Kemler code):**	336
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT/TDG**	
· **Quantity limitations**	On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L
· **ADR**	
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1230 METHANOL SOLUTION, 3 (6.1), II

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15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

67-66-3	trichloromethane

· **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

67-66-3	trichloromethane
75-01-4	vinyl chloride
100-41-4	ethylbenzene

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· **Canadian Ingredient Disclosure list (limit 1%)**

All ingredients are listed.

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials:**
Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** pdl-acg-regulatory-cq@agilent.com
· **Date of the latest revision of the safety data sheet** 07/04/2024 / 4
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
· *** Data compared to the previous version altered.**