

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2023

Version Number 4

Reviewed on 12/22/2023

1 Identification

- **Product identifier**
- **Trade name:** VOC Standard (1X1 mL)
- **Part number:** DWM-588-1
- **Restrictions**
This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.
- **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

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Toxicity - Oral 3

H301 Toxic if swallowed.

Acute Toxicity - Inhalation 3

H331 Toxic if inhaled.



GHS08 Health hazard

Germ Cell Mutagenicity 1B

H340 May cause genetic defects.

Carcinogenicity 1A

H350 May cause cancer.

Toxic to Reproduction 1A

H360 May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure 1

H370 Causes damage to the central nervous system and the visual organs.

Specific Target Organ Toxicity - Repeated Exposure 2

H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Toxicity - Dermal 4

H312 Harmful in contact with skin.

Sensitization - Skin 1

H317 May cause an allergic skin reaction.

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· **Label elements**

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

· **Hazard pictograms**



GHS02 GHS06 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

methanol
benzene
1,2-dibromo-3-chloropropane
carbon tetrachloride
tetrachloroethylene
(Z)-1,3-dichloropropene
trans-1,3-dichloropropene

· **Hazard statements**

H225 Highly flammable liquid and vapor.
H301+H331 Toxic if swallowed or if inhaled.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H370 Causes damage to the central nervous system and the visual organs.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
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.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 If swallowed: Immediately call a poison center/doctor.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a poison center/doctor if you feel unwell.
P314 Get medical advice/attention if you feel unwell.

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P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

· HMIS-ratings (scale 0 - 4)

· Other hazards
· Results of PBT and vPvB assessment
· PBT:

87-61-6	1,2,3-trichlorobenzene
87-68-3	hexachlorobuta-1,3-diene
120-82-1	1,2,4-trichlorobenzene

· vPvB:

87-68-3	hexachlorobuta-1,3-diene
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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	84.832%
56-23-5	carbon tetrachloride	0.2528%
67-66-3	trichloromethane	0.2528%
71-43-2	benzene	0.2528%
71-55-6	1,1,1-trichloroethane	0.2528%
74-83-9	bromomethane	0.2528%
74-87-3	chloromethane	0.2528%
75-00-3	chloroethane	0.2528%
75-01-4	vinyl chloride	0.2528%
75-09-2	dichloromethane	0.2528%
75-25-2	bromoform	0.2528%

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75-27-4	bromodichloromethane	0.2528%
75-35-4	1,1-dichloroethylene	0.2528%
79-00-5	1,1,2-trichloroethane	0.2528%
79-01-6	trichloroethylene	0.2528%
79-34-5	1,1,2,2-tetrachloroethane	0.2528%
87-61-6	1,2,3-trichlorobenzene	0.2528%
87-68-3	hexachlorobuta-1,3-diene	0.2528%
91-20-3	naphthalene	0.2528%
96-12-8	1,2-dibromo-3-chloropropane	0.2528%
96-18-4	1,2,3-trichloropropane	0.2528%
98-82-8	Cumene	0.2528%
99-87-6	p-cymene	0.2528%
100-41-4	ethylbenzene	0.2528%
100-42-5	styrene	0.2528%
103-65-1	propylbenzene	0.2528%
106-46-7	1,4-dichlorobenzene	0.2528%
106-93-4	1,2-dibromoethane	0.2528%
107-06-2	1,2-dichloroethane	0.2528%
108-88-3	toluene	0.2528%
120-82-1	1,2,4-trichlorobenzene	0.2528%
127-18-4	tetrachloroethylene	0.2528%
563-58-6	1,1-dichloropropene	0.2528%
630-20-6	1,1,1,2-tetrachloroethane	0.2528%
10061-01-5	(Z)-1,3-dichloropropene	0.2528%
10061-02-6	trans-1,3-dichloropropene	0.2528%

4 First-aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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: Do not induce vomiting; immediately call for medical help.

· Information for doctor:

· Most important symptoms and effects, both acute and delayed No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **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 item 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-56-1	methanol	530 ppm
56-23-5	carbon tetrachloride	1.2 ppm
67-66-3	trichloromethane	2 ppm
71-43-2	benzene	52 ppm
71-55-6	1,1,1-trichloroethane	230 ppm
74-83-9	bromomethane	19 ppm
74-87-3	chloromethane	150 ppm
74-95-3	dibromomethane	3 ppm
74-97-5	bromochloromethane	600 ppm
75-00-3	chloroethane	300 ppm
75-01-4	vinyl chloride	250 ppm
75-09-2	dichloromethane	200 ppm
75-25-2	bromoform	1.5 ppm
75-27-4	bromodichloromethane	1.3 mg/m ³
75-34-3	1,1-dichloroethane	300 ppm

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75-35-4	1,1-dichloroethylene	45 ppm
75-69-4	trichlorofluoromethane	91 ppm
75-71-8	dichlorodifluoromethane	3,000 ppm
78-87-5	1,2-dichloropropane	30 ppm
79-00-5	1,1,2-trichloroethane	30 ppm
79-01-6	trichloroethylene	130 ppm
79-34-5	1,1,2,2-tetrachloroethane	3 ppm
87-61-6	1,2,3-trichlorobenzene	15 mg/m ³
87-68-3	hexachlorobuta-1,3-diene	1 ppm
91-20-3	naphthalene	15 ppm
95-49-8	2-chlorotoluene	75 ppm
95-50-1	1,2-dichlorobenzene	50 ppm
95-63-6	1,2,4-trimethylbenzene	140 ppm
96-12-8	1,2-dibromo-3-chloropropane	0.003 ppm
96-18-4	1,2,3-trichloropropane	0.015 ppm

PAC-2:

67-56-1	methanol	2,100 ppm
56-23-5	carbon tetrachloride	13 ppm
67-66-3	trichloromethane	64 ppm
71-43-2	benzene	800 ppm
71-55-6	1,1,1-trichloroethane	600 ppm
74-83-9	bromomethane	210 ppm
74-87-3	chloromethane	910 ppm
74-95-3	dibromomethane	33 ppm
74-97-5	bromochloromethane	830 ppm
75-00-3	chloroethane	5100* ppm
75-01-4	vinyl chloride	1,200 ppm
75-09-2	dichloromethane	560 ppm
75-25-2	bromoform	6.8 ppm
75-27-4	bromodichloromethane	14 mg/m ³
75-34-3	1,1-dichloroethane	670 ppm
75-35-4	1,1-dichloroethylene	500 ppm
75-69-4	trichlorofluoromethane	1,000 ppm
75-71-8	dichlorodifluoromethane	10,000 ppm
78-87-5	1,2-dichloropropane	220 ppm
79-00-5	1,1,2-trichloroethane	180 ppm
79-01-6	trichloroethylene	450 ppm
79-34-5	1,1,2,2-tetrachloroethane	120 ppm
87-61-6	1,2,3-trichlorobenzene	60 mg/m ³
87-68-3	hexachlorobuta-1,3-diene	3 ppm
91-20-3	naphthalene	83 ppm

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95-49-8	2-chlorotoluene	310 ppm
95-50-1	1,2-dichlorobenzene	170 ppm
95-63-6	1,2,4-trimethylbenzene	360 ppm
96-12-8	1,2-dibromo-3-chloropropane	2.2 ppm
96-18-4	1,2,3-trichloropropane	170 ppm

PAC-3:

67-56-1	methanol	7200* ppm
56-23-5	carbon tetrachloride	340 ppm
67-66-3	trichloromethane	3,200 ppm
71-43-2	benzene	4000* ppm
71-55-6	1,1,1-trichloroethane	4,200 ppm
74-83-9	bromomethane	740 ppm
74-87-3	chloromethane	3,000 ppm
74-95-3	dibromomethane	200 ppm
74-97-5	bromochloromethane	5,000 ppm
75-00-3	chloroethane	20000** ppm
75-01-4	vinyl chloride	4800* ppm
75-09-2	dichloromethane	6,900 ppm
75-25-2	bromoform	41 ppm
75-27-4	bromodichloromethane	85 mg/m ³
75-34-3	1,1-dichloroethane	4,000 ppm
75-35-4	1,1-dichloroethylene	1,000 ppm
75-69-4	trichlorofluoromethane	10,000 ppm
75-71-8	dichlorodifluoromethane	50,000 ppm
78-87-5	1,2-dichloropropane	2,000 ppm
79-00-5	1,1,2-trichloroethane	500 ppm
79-01-6	trichloroethylene	3,800 ppm
79-34-5	1,1,2,2-tetrachloroethane	150 ppm
87-61-6	1,2,3-trichlorobenzene	360 mg/m ³
87-68-3	hexachlorobuta-1,3-diene	10 ppm
91-20-3	naphthalene	500 ppm
95-49-8	2-chlorotoluene	1,800 ppm
95-50-1	1,2-dichlorobenzene	1,000 ppm
95-63-6	1,2,4-trimethylbenzene	480 ppm
96-12-8	1,2-dibromo-3-chloropropane	4.3 ppm
96-18-4	1,2,3-trichloropropane	1,000 ppm

7 Handling and storage

Handling:
Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

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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.

8 Exposure controls/personal protection

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

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm

REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm
Skin

TLV Short-term value: 250 ppm

Long-term value: 200 ppm

Skin; BEI

56-23-5 carbon tetrachloride

PEL Long-term value: 10 ppm

Ceiling limit value: 25; 200* ppm

*5-min peak in any 4 hrs

REL Short-term value: 12.6* mg/m³, 2* ppm

*60-min; See Pocket Guide App. A

TLV Short-term value: 10 ppm

Long-term value: 5 ppm

Skin, A2

67-66-3 trichloromethane

PEL Ceiling limit value: 240 mg/m³, 50 ppm

REL Short-term value: 9.78* mg/m³, 2* ppm

*60-min; See Pocket Guide App. A

TLV Long-term value: 10 ppm

A3

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71-43-2 benzene

PEL	Short-term value: 15* mg/m ³ , 5* ppm Long-term value: 3* mg/m ³ , 1* ppm *table Z-2 for exclusions in 29CFR1910.1028(d)
REL	Short-term value: 1 ppm Long-term value: 0.1 ppm See Pocket Guide App. A
TLV	Short-term value: (2.5) NIC-0.1 ppm Long-term value: (0.5) NIC-0.02 ppm Skin; BEI, A1

71-55-6 1,1,1-trichloroethane

PEL	Long-term value: 1900 mg/m ³ , 350 ppm
REL	Ceiling limit value: 1900* mg/m ³ , 350* ppm *15-min; See Pocket Guide App. C
TLV	Short-term value: 450 ppm Long-term value: 350 ppm BEI, A4

74-83-9 bromomethane

PEL	Ceiling limit value: 80 mg/m ³ , 20 ppm Skin
REL	See Pocket Guide App. A
TLV	Long-term value: 1 ppm Skin, A4

74-87-3 chloromethane

PEL	Long-term value: 100 ppm Ceiling limit value: 200; 300* ppm *5-min peak in any 3 hrs
REL	See Pocket Guide App. A
TLV	Short-term value: 100 ppm Long-term value: 50 ppm Skin, A4

75-00-3 chloroethane

PEL	Long-term value: 2600 mg/m ³ , 1000 ppm
REL	Handle with caution; See Pocket Guide App. C
TLV	Long-term value: 100 ppm Skin, A3

75-01-4 vinyl chloride

PEL	Short-term value: 5* ppm Long-term value: 1 ppm *Avg. not exceeding any 15 min; see 29CFR1910.1017
REL	See Pocket Guide App. A
TLV	Long-term value: 1 ppm A1

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75-09-2 dichloromethane

PEL	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052
REL	See Pocket Guide App. A
TLV	Long-term value: 50 ppm BEI, A3

75-25-2 bromoform

PEL	Long-term value: 5 mg/m ³ , 0.5 ppm Skin
REL	Long-term value: 5 mg/m ³ , 0.5 ppm Skin
TLV	Long-term value: 0.5 ppm A3

75-35-4 1,1-dichloroethylene

REL	See Pocket Guide App.A
TLV	Long-term value: 5 ppm A4

79-00-5 1,1,2-trichloroethane

PEL	Long-term value: 45 mg/m ³ , 10 ppm Skin
REL	Long-term value: 45 mg/m ³ , 10 ppm Skin; See Pocket Guide Apps.A and C
TLV	Long-term value: 10 ppm Skin, A3

79-01-6 trichloroethylene

PEL	Long-term value: 100 ppm Ceiling limit value: 200; 300* ppm *5-min peak in any 2 hrs
REL	See Pocket Guide Apps. A and C
TLV	Short-term value: 25 ppm Long-term value: 10 ppm BEI, A2

79-34-5 1,1,2,2-tetrachloroethane

PEL	Long-term value: 35 mg/m ³ , 5 ppm Skin
REL	Long-term value: 7 mg/m ³ , 1 ppm Skin; See Pocket Guide Apps. A and C
TLV	Long-term value: 1 ppm Skin, A3

87-68-3 hexachlorobuta-1,3-diene

REL	Long-term value: 0.24 mg/m ³ , 0.02 ppm Skin; See Pocket Guide App. A
TLV	Long-term value: 0.02 ppm Skin, A3

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91-20-3 naphthalene

PEL	Long-term value: 50 mg/m ³ , 10 ppm
REL	Short-term value: 75 mg/m ³ , 15 ppm Long-term value: 50 mg/m ³ , 10 ppm
TLV	Long-term value: 10 ppm Skin; BEI, A3

96-12-8 1,2-dibromo-3-chloropropane

PEL	Long-term value: 0.001 ppm see 29 CFR 1910.1044
REL	See Pocket Guide App. A

96-18-4 1,2,3-trichloropropane

PEL	Long-term value: 300 mg/m ³ , 50 ppm
REL	Long-term value: 60 mg/m ³ , 10 ppm Skin, See Pocket Guide App. A
TLV	Long-term value: 0.005 ppm A2

98-82-8 Cumene

PEL	Long-term value: 245 mg/m ³ , 50 ppm Skin
REL	Long-term value: 245 mg/m ³ , 50 ppm Skin
TLV	Long-term value: 5 ppm A3

100-41-4 ethylbenzene

PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 545 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Long-term value: 20 ppm OTO, BEI, A3

100-42-5 styrene

PEL	Long-term value: 100 ppm Ceiling limit value: 200; 600* ppm *5-min peak in any 3 hrs
REL	Short-term value: 425 mg/m ³ , 100 ppm Long-term value: 215 mg/m ³ , 50 ppm
TLV	Short-term value: 20 ppm Long-term value: 10 ppm BEI, OTO, A3

106-46-7 1,4-dichlorobenzene

PEL	Long-term value: 450 mg/m ³ , 75 ppm
REL	See Pocket Guide App. A
TLV	Long-term value: 10 ppm A3

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106-93-4 1,2-dibromoethane

PEL	Long-term value: 20 ppm Ceiling limit value: 30; 50* ppm *5-min peak per 8-hr shift
REL	Long-term value: 0.045 ppm Ceiling limit value: 0.13* ppm *15-min; See Pocket Guide App. A
TLV	Skin, A3

107-06-2 1,2-dichloroethane

PEL	Long-term value: 50 ppm Ceiling limit value: 100; 200* ppm *5-min peak in any 3 hrs
REL	Short-term value: 8 mg/m ³ , 2 ppm Long-term value: 4 mg/m ³ , 1 ppm See Pocket Guide Apps. A and C
TLV	Long-term value: 10 ppm A4

108-88-3 toluene

PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV	Long-term value: 20 ppm BEI, OTO, A4

120-82-1 1,2,4-trichlorobenzene

REL	Ceiling limit value: 40 mg/m ³ , 5 ppm
TLV	Ceiling limit value: 5 ppm

127-18-4 tetrachloroethylene

PEL	Long-term value: 100 ppm Ceiling limit value: 200; 300* ppm *5-min peak in any 3 hrs
REL	Minimize workplace exp. concs.; Pocket Guide App. A
TLV	Short-term value: 100 ppm Long-term value: 25 ppm BEI, A3

630-20-6 1,1,1,2-tetrachloroethane

REL	Handle with caution; See Pocket Guide App. C
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Ingredients with biological limit values:
67-56-1 methanol

BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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71-43-2 benzene

BEI 25 µg/g creatinine
Medium: urine
Time: end of shift
Parameter: S-Phenylmercapturic acid (background)

500 µg/g creatinine
Medium: urine
Time: end of shift
Parameter: t,t-Muconic acid (background)

71-55-6 1,1,1-trichloroethane

BEI 20 ppm
Medium: end-exhaled air
Time: prior to shift at end of workweek
Parameter: Methyl chloroform

700 µg/L
Medium: urine
Time: end of shift
Parameter: Methyl chloroform

75-09-2 dichloromethane

BEI 0.3 mg/L
Medium: urine
Time: end of shift
Parameter: Dichloromethane (semi-quantitative)

79-01-6 trichloroethylene

BEI 15 mg/L
Medium: urine
Time: end of shift at end of workweek
Parameter: Trichloroacetic acid (nonspecific)

0.5 mg/L
Medium: blood
Time: end of shift at end of workweek
Parameter: Trichloroethanol without hydrolysis (nonspecific)

-
Medium: blood
Time: end of shift at end of workweek
Parameter: Trichloroethylene (semi-quantitative)

-
Medium: end-exhaled air
Time: end of shift at end of workweek
Parameter: Trichloroethylene (semi-quantitative)

91-20-3 naphthalene

BEI -
Medium: -
Time: end of shift
Parameter: 1-Naphthol with hydrolysis + 2-Naphthol with hydrolysis (Nq,Ns)

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100-41-4 ethylbenzene

BEI 0.15 g/g creatinine
Medium: urine
Time: end of shift at end of workweek
Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific)

100-42-5 styrene

BEI 400 mg/g creatinine
Medium: urine
Time: end of shift
Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific)

40 µg/L
Medium: urine
Time: end of shift
Parameter: Styrene

108-88-3 toluene

BEI 0.02 mg/L
Medium: blood
Time: prior to last shift of workweek
Parameter: Toluene

0.03 mg/L
Medium: urine
Time: end of shift
Parameter: Toluene

0.3 mg/g creatinine
Medium: urine
Time: end of shift
Parameter: o-Cresol with hydrolysis (background)

127-18-4 tetrachloroethylene

BEI 3 ppm
Medium: end-exhaled air
Time: prior to shift
Parameter: Tetrachloroethylene

0.5 mg/L
Medium: blood
Time: prior to shift
Parameter: Tetrachloroethylene

· **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.
Avoid contact with the eyes and skin.

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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

Eye protection:


Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form:

Fluid

Color:

According to product specification

Odor:

Characteristic

Odor threshold:

Not determined.

pH-value:

Not determined.

Change in condition
Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

64 °C (147.2 °F)

Flash point:

9 °C (48.2 °F)

Flammability (solid, gaseous):

Highly flammable.

Ignition temperature:

455 °C (851 °F)

Decomposition temperature:

Not determined.

Auto igniting:

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 %

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Trade name: VOC Standard (1X1 mL)

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Upper:	44 Vol %
· Vapor pressure at 20 °C (68 °F):	100 hPa (75 mm Hg)
· Density:	Not determined.
· 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:	92.2 %
VOC content:	91.15 %
	911.5 g/l / 7.61 lb/gal
Solids content:	0.8 %
· 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.

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:
ATE (Acute Toxicity Estimate)

Oral	LD50	5,703 mg/kg
Dermal	LD50	1,556 mg/kg
Inhalative	LC50/4 h	3.42 mg/L

67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

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56-23-5 carbon tetrachloride

Oral	LD50	2,350 mg/kg (rat)
Dermal	LD50	5,070 mg/kg (rat)

67-66-3 trichloromethane

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)
		>20,000 mg/kg (rabbit)

71-43-2 benzene

Oral	LD50	3,340 mg/kg (rat)
Dermal	LD50	48 mg/kg (mouse)
		>8,260 mg/kg (rabbit)
Inhalative	LC50/4 h	9,980 mg/L (mouse)

71-55-6 1,1,1-trichloroethane

Oral	LD50	10,300 mg/kg (rat)
------	------	--------------------

74-83-9 bromomethane

Oral	LD50	214 mg/kg (rat)
Inhalative	LC50/4 h	302 mg/L (rat)

74-87-3 chloromethane

Oral	LD50	1,800 mg/kg (rat)
Inhalative	LC50/4 h	>21,800 mg/L (rat)

75-00-3 chloroethane

Inhalative	LC50/4 h	>19,000 mg/L (rat)
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75-01-4 vinyl chloride

Oral	LD50	500 mg/kg (rat)
------	------	-----------------

75-09-2 dichloromethane

Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)

75-25-2 bromoform

Oral	LD50	933 mg/kg (rat)
------	------	-----------------

75-27-4 bromodichloromethane

Oral	LD50	450 mg/kg (mouse)
------	------	-------------------

75-35-4 1,1-dichloroethylene

Oral	LD50	200 mg/kg (rat)
Inhalative	LC50/4 h	6,350 mg/L (mouse)

79-00-5 1,1,2-trichloroethane

Oral	LD50	836 mg/kg (rat)
------	------	-----------------

79-01-6 trichloroethylene

Oral	LD50	2,402 mg/kg (mouse)
		4,290 mg/kg (rat)
Dermal	LD50	8,450 mg/kg (mouse)

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79-34-5 1,1,2,2-tetrachloroethane

Oral	LD50	200 mg/kg (rat)
------	------	-----------------

87-61-6 1,2,3-trichlorobenzene

Oral	LD50	1,830 mg/kg (rat)
------	------	-------------------

87-68-3 hexachlorobuta-1,3-diene

Oral	LD50	82 mg/kg (rat)
Dermal	LD50	100 mg/kg (rabbit)
Inhalative	LC50/4 h	370 mg/L (mouse)

91-20-3 naphthalene

Oral	LD50	490 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rat) 20,000 mg/kg (rabbit)

96-12-8 1,2-dibromo-3-chloropropane

Oral	LD50	170 mg/kg (rat)
Dermal	LD50	1,420 mg/kg (rat) 1,400 mg/kg (rabbit)

96-18-4 1,2,3-trichloropropane

Oral	LD50	152 mg/kg (rat)
Dermal	LD50	523 mg/kg (rabbit)
Inhalative	LC50/4 h	4,800 mg/L (rat)

98-82-8 Cumene

Oral	LD50	1,400 mg/kg (rat)
Dermal	LD50	>3,160 mg/kg (rabbit)
Inhalative	LC50/4 h	24.7 mg/L (mouse)

99-87-6 p-cymene

Oral	LD50	4,750 mg/kg (rat)
Inhalative	LC50/4 h	3 mg/L (ATE)

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)

100-42-5 styrene

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	11.8 mg/L (rat)

103-65-1 propylbenzene

Oral	LD50	6,040 mg/kg (rat)
------	------	-------------------

106-46-7 1,4-dichlorobenzene

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.07 mg/L (rat)

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106-93-4 1,2-dibromoethane

Oral	LD50	108 mg/kg (rat) 55 mg/kg (rabbit)
Dermal	LD50	300 mg/kg (rabbit)

107-06-2 1,2-dichloroethane

Oral	LD50	670 mg/kg (rat)
Dermal	LD50	2,800 mg/kg (rat) 2,800 mg/kg (rabbit)

108-88-3 toluene

Oral	LD50	5,580 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/L (mouse) 28.1 mg/L (rat)

120-82-1 1,2,4-trichlorobenzene

Oral	LD50	756 mg/kg (rat)
Dermal	LD50	6,139 mg/kg (rat)

127-18-4 tetrachloroethylene

Oral	LD50	2,629 mg/kg (rat)
Inhalative	LC50/4 h	4,000 mg/L (rat)

630-20-6 1,1,1,2-tetrachloroethane

Oral	LD50	670 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)
Inhalative	LC50/4 h	2,100 mg/L (rat)

10061-01-5 (Z)-1,3-dichloropropene

Oral	LD50	250 mg/kg (rat)
------	------	-----------------

10061-02-6 trans-1,3-dichloropropene

Oral	LD50	250 mg/kg (rat)
------	------	-----------------

· Primary irritant effect:
· on the skin: No irritant effect.

· on the eye: No irritating effect.

· Sensitization: Sensitization possible through skin contact.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Irritant

The product can cause inheritable damage.

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

56-23-5	carbon tetrachloride	2B
67-66-3	trichloromethane	2B
71-43-2	benzene	1
71-55-6	1,1,1-trichloroethane	2A

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74-83-9	bromomethane	3
74-87-3	chloromethane	3
75-00-3	chloroethane	3
75-01-4	vinyl chloride	1
75-09-2	dichloromethane	2A
75-25-2	bromoform	3
75-27-4	bromodichloromethane	2B
75-35-4	1,1-dichloroethylene	2B
78-87-5	1,2-dichloropropane	1
79-00-5	1,1,2-trichloroethane	3
79-01-6	trichloroethylene	1
79-34-5	1,1,2,2-tetrachloroethane	2B
87-68-3	hexachlorobuta-1,3-diene	3
91-20-3	naphthalene	2B
95-47-6	o-xylene	3
95-50-1	1,2-dichlorobenzene	3
96-12-8	1,2-dibromo-3-chloropropane	2B
96-18-4	1,2,3-trichloropropane	2A
98-82-8	Cumene	2B
100-41-4	ethylbenzene	2B
100-42-5	styrene	2A
106-42-3	p-xylene	3
106-46-7	1,4-dichlorobenzene	2B
106-93-4	1,2-dibromoethane	2A
107-06-2	1,2-dichloroethane	2B
108-38-3	m-xylene	3

· NTP (National Toxicology Program)

56-23-5	carbon tetrachloride	R
67-66-3	trichloromethane	R
71-43-2	benzene	K
75-01-4	vinyl chloride	K
75-09-2	dichloromethane	R
75-27-4	bromodichloromethane	R
79-01-6	trichloroethylene	K
91-20-3	naphthalene	R
96-12-8	1,2-dibromo-3-chloropropane	R
96-18-4	1,2,3-trichloropropane	R
98-82-8	Cumene	R
100-42-5	styrene	R
106-46-7	1,4-dichlorobenzene	R
106-93-4	1,2-dibromoethane	R

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107-06-2	1,2-dichloroethane	R
127-18-4	tetrachloroethylene	R
· OSHA-Ca (Occupational Safety & Health Administration)		
71-43-2	benzene	
75-01-4	vinyl chloride	
75-09-2	dichloromethane	
96-12-8	1,2-dibromo-3-chloropropane	

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 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- **Results of PBT and vPvB assessment**

· PBT:		
87-61-6	1,2,3-trichlorobenzene	
87-68-3	hexachlorobuta-1,3-diene	
120-82-1	1,2,4-trichlorobenzene	
· vPvB:		
87-68-3	hexachlorobuta-1,3-diene	

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

14 Transport information

· Not Regulated, De minimis Quantities	-
· UN-Number	
· DOT, IMDG, IATA	UN1230

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- UN proper shipping name
- DOT
- IMDG, IATA

Methanol
METHANOL

- Transport hazard class(es)

- DOT



- 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, IMDG, IATA

II

- 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
- Quantity limitations On passenger aircraft/rail: 1 L
On cargo aircraft only: 60 L

- IMDG
- Limited quantities (LQ) 1L

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· 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, 3 (6.1), II

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

74-83-9 bromomethane

75-34-3 1,1-dichloroethane

· Section 313 (Specific toxic chemical listings):

67-56-1 methanol

56-23-5 carbon tetrachloride

67-66-3 trichloromethane

71-43-2 benzene

71-55-6 1,1,1-trichloroethane

74-83-9 bromomethane

74-87-3 chloromethane

74-95-3 dibromomethane

75-00-3 chloroethane

75-01-4 vinyl chloride

75-09-2 dichloromethane

75-25-2 bromoform

75-27-4 bromodichloromethane

75-34-3 1,1-dichloroethane

75-35-4 1,1-dichloroethylene

75-69-4 trichlorofluoromethane

75-71-8 dichlorodifluoromethane

78-87-5 1,2-dichloropropane

79-00-5 1,1,2-trichloroethane

79-01-6 trichloroethylene

79-34-5 1,1,2,2-tetrachloroethane

87-68-3 hexachlorobuta-1,3-diene

91-20-3 naphthalene

95-47-6 o-xylene

95-50-1 1,2-dichlorobenzene

95-63-6 1,2,4-trimethylbenzene

96-12-8 1,2-dibromo-3-chloropropane

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96-18-4	1,2,3-trichloropropane
98-82-8	Cumene
100-41-4	ethylbenzene

· TSCA (Toxic Substances Control Act):

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

67-56-1	methanol	ACTIVE
56-23-5	carbon tetrachloride	ACTIVE
67-66-3	trichloromethane	ACTIVE
71-43-2	benzene	ACTIVE
71-55-6	1,1,1-trichloroethane	ACTIVE
74-83-9	bromomethane	ACTIVE
74-87-3	chloromethane	ACTIVE
74-95-3	dibromomethane	ACTIVE
74-97-5	bromochloromethane	ACTIVE
75-00-3	chloroethane	ACTIVE
75-01-4	vinyl chloride	ACTIVE
75-09-2	dichloromethane	ACTIVE
75-25-2	bromoform	ACTIVE
75-27-4	bromodichloromethane	ACTIVE
75-34-3	1,1-dichloroethane	ACTIVE
75-35-4	1,1-dichloroethylene	ACTIVE
75-69-4	trichlorofluoromethane	ACTIVE
75-71-8	dichlorodifluoromethane	ACTIVE
78-87-5	1,2-dichloropropane	ACTIVE
79-00-5	1,1,2-trichloroethane	ACTIVE
79-01-6	trichloroethylene	ACTIVE
79-34-5	1,1,2,2-tetrachloroethane	ACTIVE
87-61-6	1,2,3-trichlorobenzene	ACTIVE
87-68-3	hexachlorobuta-1,3-diene	ACTIVE
91-20-3	naphthalene	ACTIVE
95-47-6	o-xylene	ACTIVE
95-49-8	2-chlorotoluene	ACTIVE
95-50-1	1,2-dichlorobenzene	ACTIVE
95-63-6	1,2,4-trimethylbenzene	ACTIVE
96-12-8	1,2-dibromo-3-chloropropane	ACTIVE

· Hazardous Air Pollutants

67-56-1	methanol
56-23-5	carbon tetrachloride
67-66-3	trichloromethane
71-43-2	benzene

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71-55-6	1,1,1-trichloroethane
74-83-9	bromomethane
74-87-3	chloromethane
75-00-3	chloroethane
75-01-4	vinyl chloride
75-09-2	dichloromethane
75-25-2	bromoform
75-34-3	1,1-dichloroethane
75-35-4	1,1-dichloroethylene
78-87-5	1,2-dichloropropane
79-00-5	1,1,2-trichloroethane
79-01-6	trichloroethylene
79-34-5	1,1,2,2-tetrachloroethane
87-68-3	hexachlorobuta-1,3-diene
91-20-3	naphthalene
95-47-6	o-xylene
96-12-8	1,2-dibromo-3-chloropropane
98-82-8	Cumene
100-41-4	ethylbenzene
100-42-5	styrene
106-42-3	p-xylene
106-46-7	1,4-dichlorobenzene
106-93-4	1,2-dibromoethane
107-06-2	1,2-dichloroethane
108-38-3	m-xylene
108-88-3	toluene

· Proposition 65

· Chemicals known to cause cancer:

56-23-5	carbon tetrachloride
67-66-3	trichloromethane
71-43-2	benzene
75-00-3	chloroethane
75-01-4	vinyl chloride
75-09-2	dichloromethane
75-25-2	bromoform
75-27-4	bromodichloromethane
75-34-3	1,1-dichloroethane
75-35-4	1,1-dichloroethylene
78-87-5	1,2-dichloropropane
79-00-5	1,1,2-trichloroethane
79-01-6	trichloroethylene

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79-34-5	1,1,2,2-tetrachloroethane
87-68-3	hexachlorobuta-1,3-diene
91-20-3	naphthalene
96-12-8	1,2-dibromo-3-chloropropane
96-18-4	1,2,3-trichloropropane
98-82-8	Cumene
100-41-4	ethylbenzene
100-42-5	styrene
106-46-7	1,4-dichlorobenzene
106-93-4	1,2-dibromoethane
107-06-2	1,2-dichloroethane
127-18-4	tetrachloroethylene
630-20-6	1,1,1,2-tetrachloroethane

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

71-43-2	benzene
74-87-3	chloromethane
79-01-6	trichloroethylene
96-12-8	1,2-dibromo-3-chloropropane
106-93-4	1,2-dibromoethane

· Chemicals known to cause developmental toxicity:

67-56-1	methanol
67-66-3	trichloromethane
71-43-2	benzene
74-83-9	bromomethane
74-87-3	chloromethane
79-01-6	trichloroethylene
106-93-4	1,2-dibromoethane
108-88-3	toluene

· Carcinogenic categories
· EPA (Environmental Protection Agency)

56-23-5	carbon tetrachloride	L
67-66-3	trichloromethane	B2, L, NL
71-43-2	benzene	A, K/L
71-55-6	1,1,1-trichloroethane	II
74-83-9	bromomethane	D
74-87-3	chloromethane	D, CBD
74-97-5	bromochloromethane	D
75-01-4	vinyl chloride	A, K/L
75-09-2	dichloromethane	L

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75-25-2	bromoform	B2
75-27-4	bromodichloromethane	B2
75-34-3	1,1-dichloroethane	C
75-35-4	1,1-dichloroethylene	C, S (inh.), I (oral)
79-00-5	1,1,2-trichloroethane	C
79-01-6	trichloroethylene	CaH
79-34-5	1,1,2,2-tetrachloroethane	L
87-68-3	hexachlorobuta-1,3-diene	C
91-20-3	naphthalene	C, CBD
95-47-6	o-xylene	I
95-50-1	1,2-dichlorobenzene	D
95-63-6	1,2,4-trimethylbenzene	II
96-18-4	1,2,3-trichloropropane	L
98-82-8	Cumene	D, CBD
100-41-4	ethylbenzene	D
106-42-3	p-xylene	I
106-93-4	1,2-dibromoethane	L
107-06-2	1,2-dichloroethane	B2
108-38-3	m-xylene	I
108-67-8	mesitylene	II
108-86-1	bromobenzene	II

· TLV (Threshold Limit Value)

56-23-5	carbon tetrachloride	A2
67-66-3	trichloromethane	A3
71-43-2	benzene	A1
71-55-6	1,1,1-trichloroethane	A4
74-83-9	bromomethane	A4
74-87-3	chloromethane	A4
75-00-3	chloroethane	A3
75-01-4	vinyl chloride	A1
75-09-2	dichloromethane	A3
75-25-2	bromoform	A3
75-34-3	1,1-dichloroethane	A4
75-35-4	1,1-dichloroethylene	A4
75-69-4	trichlorofluoromethane	A4
75-71-8	dichlorodifluoromethane	A4
78-87-5	1,2-dichloropropane	A4
79-00-5	1,1,2-trichloroethane	A3
79-01-6	trichloroethylene	A2
79-34-5	1,1,2,2-tetrachloroethane	A3
87-68-3	hexachlorobuta-1,3-diene	A3

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91-20-3	naphthalene	A4
95-47-6	o-xylene	A4
95-50-1	1,2-dichlorobenzene	A4
96-18-4	1,2,3-trichloropropane	A3
100-41-4	ethylbenzene	A3
100-42-5	styrene	A4
106-42-3	p-xylene	A4
106-46-7	1,4-dichlorobenzene	A3
106-93-4	1,2-dibromoethane	A3
107-06-2	1,2-dichloroethane	A4
108-38-3	m-xylene	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

56-23-5	carbon tetrachloride
67-66-3	trichloromethane
71-43-2	benzene
74-83-9	bromomethane
74-87-3	chloromethane
75-01-4	vinyl chloride
75-09-2	dichloromethane
75-35-4	1,1-dichloroethylene
78-87-5	1,2-dichloropropane
79-00-5	1,1,2-trichloroethane
79-01-6	trichloroethylene
79-34-5	1,1,2,2-tetrachloroethane
87-68-3	hexachlorobuta-1,3-diene
96-12-8	1,2-dibromo-3-chloropropane
96-18-4	1,2,3-trichloropropane
106-46-7	1,4-dichlorobenzene
106-93-4	1,2-dibromoethane
107-06-2	1,2-dichloroethane
127-18-4	tetrachloroethylene

· 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.

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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 preparation / last revision** 12/22/2023

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Acute Toxicity - Oral 3: Acute toxicity – Category 3

Acute Toxicity - Dermal 4: Acute toxicity – Category 4

Sensitization - Skin 1: Skin sensitisation – Category 1

Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B

Carcinogenicity 1A: Carcinogenicity – Category 1A

Toxic to Reproduction 1A: Reproductive toxicity – Category 1A

Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2

· *** Data compared to the previous version altered.**

US