

Printing date 03/28/2019 Version Number 2 Reviewed on 03/28/2019

1 Identification

· Product identifier

· Trade name: Volatiles Standard (1X1 mL)

· Part number: EPA-2141N-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

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to organs.

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







GHS02

02 GHS06

- · Signal word Danger
- · Hazard-determining components of labeling: methanol
- · Hazard statements

Highly flammable liquid and vapor.

Toxic if inhaled.

Causes damage to organs.

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· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed: Call a POISON CENTER or doctor/physician.

Specific treatment (see on this label).

In case of fire: Use for extinction: CO2, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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 = *1Fire = 3

REACTIVITY 0 Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

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

· Dangerous components:

67-56-1 methanol

99.305%

4 First-aid measures

- · Description of first aid measures
- General information:

Immediately remove any clothing soiled by the product.

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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.

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
106-46-7	1,4-dichlorobenzene	30 ppm
156-60-5	trans-dichloroethylene	280 ppm
75-35-4	1,1-dichloroethylene	45 ppm
79-00-5	1,1,2-trichloroethane	30 ppm
127-18-4	tetrachloroethylene	35 ppm
100-41-4	ethylbenzene	33 ppm
56-23-5	carbon tetrachloride	1.2 ppm
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	1,2-dichloroethane	50 ppm
	1,2-dichloropropane	30 ppm
	chlorobenzene	10 ppm
541-73-1	1,3-dichlorobenzene	6 ppm
· PAC-2:		
		2,100 ppr
106-46-7	1,4-dichlorobenzene	70 ppm
156-60-5	trans-dichloroethylene 1	,000 ppr
		00 ppm
		80 ppm
	l ·	230 ppm
		100* pp
		3 ppm
		200 ppm
		220 ppm
		50 ppm
541-73-1	1,3-dichlorobenzene	66 ppm
· PAC-3:		
67-56-1	methanol	7200* pp:
		,000 ppr
156-60-5	trans-dichloroethylene 1	,700 ppr
		,000 ppr
79-00-5	1,1,2-trichloroethane	500 ppm
127-18-4	tetrachloroethylene 1	,200 ppr
		800* pp
		340 ppm
107-06-2	1,2-dichloroethane	300 ppm
78-87-5	1,2-dichloropropane	2,000 ppr
		100 ppm
541-73-1	1,3-dichlorobenzene	100 ppm

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.

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- · 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:

67-56-1 methanol

PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm
	Long-term value: 260 mg/m³, 200 ppm Skin
TLV	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm
	Skin; BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- $\cdot \ Personal \ protective \ equipment:$
- · 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.

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· 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 proper	ties
· Information on basic physical and c · General Information	hemical properties
· 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 (-144.4 °F)
Boiling point/Boiling range:	64 °C (147.2 °F)
· Flash point:	9 °C (48.2 °F)
· Flammability (solid, gaseous):	Not applicable.
· 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 %
Upper:	44 Vol %
· Vapor pressure at 20 °C (68 °F):	100 hPa (75 mm Hg)
· Density at 20 °C (68 °F):	0.80329 g/cm ³ (6.70346 lbs/gal)
· 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/wate	- Not determined



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· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.7 %
VOC content:	99.62 %
	800.2 g/l / 6.68 lb/gal
Solids content:	0.1 %
· 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 (Acı	ATE (Acute Toxicity Estimate)			
Inhalative	LC50/4 h	3.02 mg/L		
67-56-1 m	ethanol			
Oral	LD50	5,628 mg/kg (rat)		
Dermal	LD50	15,800 mg/kg (rabbit)		
56-23-5 ca	56-23-5 carbon tetrachloride			
Oral	LD50	2,350 mg/kg (rat)		
Dermal	LD50	5,070 mg/kg (rat)		
107-06-2	107-06-2 1,2-dichloroethane			
Oral	LD50	670 mg/kg (rat)		
Dermal	LD50	2,800 mg/kg (rat)		
		2,800 mg/kg (rabbit)		
· Primary i	rritant eff	ect·		

- Primary irritant effects
- · 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:

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Toxic

IARC (II	nternational Agency for Research on Cancer)	
106-46-7	1,4-dichlorobenzene	2
75-35-4	1,1-dichloroethylene	3
79-00-5	1,1,2-trichloroethane	3
127-18-4	tetrachloroethylene	2
100-41-4	ethylbenzene	2
56-23-5	carbon tetrachloride	2
107-06-2	1,2-dichloroethane	2
78-87-5	1,2-dichloropropane	1
541-73-1	1,3-dichlorobenzene	3
NTP (Na	tional Toxicology Program)	
106-46-7	1,4-dichlorobenzene	
127-18-4	tetrachloroethylene	
56-23-5	carbon tetrachloride	
107-06-2	1,2-dichloroethane	

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.

14 Transport information

· Not Regulated, De minimus Quantities	-
· UN-Number · DOT, IMDG, IATA	UN1992

· UN proper shipping name

• **DOT** Flammable liquids, toxic, n.o.s. (Methanol)

· IMDG, IATA FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

· Transport hazard class(es)

 \cdot 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

• Environmental hazards: Not applicable.

· Special precautions for user Warning: Flammable liquids

Danger code (Kemler):
EMS Number:
Stowage Category

336
F-E,S-D
B

· Stowage Code SW2 Clear of living quarters.

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

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(Contd. of page 9) · Transport/Additional information: \cdot DOT · Quantity limitations On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L · 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 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL), 3 (6.1), II

15 Regulatory information

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

· Sara	and environmental regulations, registation specific for the substance of imature
· Section 3	55 (extremely hazardous substances):
None of t	he ingredients is listed.
· Section 3	13 (Specific toxic chemical listings):
67-56-1	methanol
106-46-7	1,4-dichlorobenzene
75-35-4	1,1-dichloroethylene
79-00-5	1,1,2-trichloroethane
	tetrachloroethylene
100-41-4	ethylbenzene
56-23-5	carbon tetrachloride
	1,2-dichloroethane
	1,2-dichloropropane
	chlorobenzene
541-73-1	1,3-dichlorobenzene

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

1			
· Chemical	· Chemicals known to cause cancer:		
	1,4-dichlorobenzene		
1	1,1-dichloroethylene		
	1,1,2-trichloroethane		
	tetrachloroethylene		
	ethylbenzene		
56-23-5	carbon tetrachloride		
107-06-2	1,2-dichloroethane		
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78-87-5 1,2-dichloropropane	(Contd. of page
· Chemicals known to cause reproductive toxicity for	females:
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for	males:
None of the ingredients is listed.	marcs.
· Chemicals known to cause developmental toxicity:	
67-56-1 methanol	
· Carcinogenic categories	
EPA (Environmental Protection Agency)	
156-60-5 trans-dichloroethylene	II
75-35-4 1,1-dichloroethylene	C, S (inh.), I (ora
79-00-5 1,1,2-trichloroethane	C
127-18-4 tetrachloroethylene	L
100-41-4 ethylbenzene	D
56-23-5 carbon tetrachloride	L
107-06-2 1,2-dichloroethane	B2
108-90-7 chlorobenzene	D
541-73-1 1,3-dichlorobenzene	D
· TLV (Threshold Limit Value established by ACGII	I)
106-46-7 1,4-dichlorobenzene	F
75-35-4 1,1-dichloroethylene	F
79-00-5 1,1,2-trichloroethane	F
127-18-4 tetrachloroethylene	F
100-41-4 ethylbenzene	F
56-23-5 carbon tetrachloride	F
107-06-2 1,2-dichloroethane	
78-87-5 1,2-dichloropropane	F
108-90-7 chlorobenzene	F
NIOSH-Ca (National Institute for Occupational Sa	fety and Health)
106-46-7 1,4-dichlorobenzene	,
75-35-4 1,1-dichloroethylene	
79-00-5 1,1,2-trichloroethane	
127-18-4 tetrachloroethylene	
56-23-5 carbon tetrachloride	
107-06-2 1,2-dichloroethane	
107-00-2 1,2-dicinoroctilane	



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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: regulatory@ultrasci.com
- · Date of preparation / last revision 03/28/2019 / 1
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport 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

ACGIH: American Conference of Governmental Industrial Hygienists

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

LC50: Lethal concentration, 50 perce

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

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

* Data compared to the previous version altered.

US