

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

1 Identification

- **Product identifier**
- **Trade name:** Custom Standard (1X1 mL)
- **Part number:** CUS-21516
- **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 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

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 organs.



GHS07

Skin Irritation - Category 2

H315 Causes skin irritation.

Eye Irritation - Category 2A

H319 Causes serious eye irritation.

- **Label elements**

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

(Contd. on page 2)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 1)

· Hazard pictograms



· Signal word Danger

· Hazard-determining components of labeling:

methanol

· Hazard statements

Highly flammable liquid and vapour.

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

Suspected of damaging fertility or the unborn child.

Causes damage to organs.

· Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

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

Use non-sparking tools.

Take actions to prevent static discharges.

Do not breathe dust/fume/gas/mist/vapours/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.

Specific treatment (see on this label).

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If eye irritation persists: Get medical advice/attention.

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.

(Contd. on page 3)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 2)

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



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = *2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

3 Composition/Information on ingredients

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

· **Dangerous components:**

67-56-1	methanol	98.612% w/w
993-16-8	Methyltin trichloride	0.114% w/w
683-18-1	dibutyltin dichloride	0.0824% w/w

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. If symptoms persist, 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 Firefighting 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

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 3)

- **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.

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.

8 Exposure controls/ Personal protection

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

(Contd. on page 5)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 4)

· Control parameters
· Components with limit values that require monitoring at the workplace:
67-56-1 methanol

EL	Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin

993-16-8 Methyltin trichloride

EL	Short-term value: 0.2 mg/m ³ Long-term value: 0.1 mg/m ³ as Sn; Skin
EV	Long-term value: 0.1 mg/m ³ as Sn, Skin

683-18-1 dibutyltin dichloride

EL	Short-term value: 0.2 mg/m ³ Long-term value: 0.1 mg/m ³ as Sn; Skin
EV	Long-term value: 0.1 mg/m ³ as Sn, Skin

· 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.

· 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

(Contd. on page 6)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 5)

· Eye protection:



Tightly sealed goggles

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 °C

· Flash point: 9 °C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 455 °C

· 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: 100 hPa

Density at 20 °C:	0.8 g/cm ³
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: 98.6 %

(Contd. on page 7)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 6)

Solids content:	0.4 %
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)

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)

993-16-8 Methyltin trichloride

Oral	LD50	1,370 mg/kg (rat)
------	------	-------------------

753-73-1 dimethyltin dichloride
--

Oral	LD50	73.9 mg/kg (rat)
------	------	------------------

683-18-1 dibutyltin dichloride

Oral	LD50	50 mg/kg (rat)
------	------	----------------

1461-22-9 tributyltin chloride

Oral	LD50	129 mg/kg (rat)
Inhalative	LC50/4 h	<0.078 mg/L (rat)

639-58-7 fentin chloride

Oral	LD50	238 mg/kg (rat)
Dermal	LD50	>1,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** 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
Irritant

(Contd. on page 8)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 7)

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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.

· **Uncleaned packagings:**

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

14 Transport information

· **Not Regulated, De minimus Quantities** -

· **UN-Number**

· **DOT, TDG, IMDG, IATA**

UN3021

· **UN proper shipping name**

· **DOT**

· **TDG**

· **IMDG**

· **IATA**

Pesticides, liquid, flammable, toxic (Methanol)
3021 PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
(METHANOL), ENVIRONMENTALLY HAZARDOUS
PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
(METHANOL, fentin chloride), MARINE POLLUTANT
PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
(METHANOL)

(Contd. on page 9)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 8)

· Transport hazard class(es)
· DOT

· Class

3 Flammable liquids

· Label

3, 6.1

· TDG (Transport dangerous goods):

· 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, IMDG, IATA

II

· Environmental hazards:
· Marine pollutant:

Symbol (fish and tree)

· Special marking (TDG):

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids

· Danger code (Kemler):

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.

(Contd. on page 10)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 9)

· Transport/Additional information:
· DOT
· Quantity limitations

On passenger aircraft/rail: 1 L

On cargo aircraft only: 60 L

· TDG
· 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 3021 PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
(METHANOL), 3 (6.1), II, ENVIRONMENTALLY
HAZARDOUS

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Sara
· Section 355 (extremely hazardous substances):

1066-45-1 trimethyltin chloride

639-58-7 fentin chloride

· Section 313 (Specific toxic chemical listings):

67-56-1 methanol

639-58-7 fentin chloride

· TSCA (Toxic Substances Control Act):

67-56-1 methanol

993-16-8 Methyltin trichloride

1118-46-3 Monobutyltin trichloride

753-73-1 dimethyltin dichloride

3091-25-6 n-octyltin-trichloride

683-18-1 dibutyltin dichloride

1066-45-1 trimethyltin chloride

3542-36-7 dichlorodioctylstannane

1461-22-9 tributyltin chloride

639-58-7 fentin chloride

3091-32-5 Chlorotriethylstannane

2587-76-0 chlorotriethylstannane

1461-25-2 tetrabutyltin

(Contd. on page 11)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 04/11/2019

Version Number 1

Reviewed on 04/11/2019

Trade name: Custom Standard (1X1 mL)

(Contd. of page 10)

· **Canadian substance listings:**· **Canadian Domestic Substances List (DSL)**

67-56-1	methanol
993-16-8	Methyltin trichloride
1118-46-3	Monobutyltin trichloride
753-73-1	dimethyltin dichloride
683-18-1	dibutyltin dichloride
1461-22-9	tributyltin chloride
1461-25-2	tetrabutyltin

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

None of the ingredients is listed.

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

All ingredients are listed.

· **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.

· **Date of the latest revision of the safety data sheet** 04/11/2019 / -· **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