

## 1. Identification

<b>Product identifier</b>	<b>Veritas Trace Perchloric Acid</b>	
<b>Other means of identification</b>		
<b>Product code</b>	7140	
<b>Recommended use</b>	manufacture of other chemical products, professional, scientific and technical activities: other professional, scientific and technical activities	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	GFS Chemicals, Inc.	
<b>Address</b>	800 Kaderly Drive Columbus, OH 43228 United States	
<b>Telephone</b>	Phone	740-881-5501
	Toll Free	800-858-9682
	Fax	740-881-5989
<b>Website</b>	www.gfschemicals.com	
<b>E-mail</b>	service@gfschemicals.com	
<b>Emergency phone number</b>	Emergency Assistance	Chemtrec 800-424-9300

## 2. Hazard(s) identification

<b>Physical hazards</b>	Oxidizing liquids	Category 1
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	May cause fire or explosion; strong oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage. Causes severe skin burns and eye damage. Causes serious eye damage.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wear fire/flame resistant/retardant clothing.
<b>Response</b>	If swallowed: Rinse mouth. Do NOT induce vomiting. 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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Immediately call a POISON CENTER or doctor/physician. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. In case of fire: Use water to extinguish.
<b>Storage</b>	Store locked up. Store away from combustibles.
<b>Disposal</b>	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.

**Supplemental information**

70% of the mixture consists of component(s) of unknown acute dermal toxicity. 70% of the mixture consists of component(s) of unknown acute inhalation toxicity. 70% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 70% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

**3. Composition/information on ingredients****Substances**

Chemical name	Common name and synonyms	CAS number	%
PERCHLORIC ACID		7601-90-3	70
WATER		7732-18-5	30

**4. First-aid measures****Inhalation**

Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Rinse skin with water/shower. Get medical attention if irritation develops or persists. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

**Eye contact**

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

**Ingestion**

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Most important symptoms/effects, acute and delayed**

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

**Indication of immediate medical attention and special treatment needed**

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**

Take off all contaminated clothing immediately. Contact with combustible material may cause fire. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

**5. Fire-fighting measures****Suitable extinguishing media**

Water.

**Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**

Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**

In case of fire and/or explosion do not breathe fumes. In case of fire: Stop leak if safe to do so. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Move containers from fire area if you can do so without risk.

**Specific methods**

Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**

May cause fire or explosion; strong oxidizer. Contact with combustible material may cause fire.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep away from clothing and other combustible materials. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST. Stop leak if you can do so without risk. Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. This product is miscible in water. Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations.

Large Spills: Dike the spilled material, where this is possible. Dilute with water. Neutralize with lime or soda ash. Flush to sewer if local regulations permit. Following product recovery, flush area with water.

Small Spills: Clean surface thoroughly to remove residual contamination.

**Environmental precautions**

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Keep away from heat. Take any precaution to avoid mixing with combustibles. Keep away from clothing and other combustible materials. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Do not store around flammable or combustible materials. Keep away from heat. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits**

This substance has no PEL, TLV, or other recommended exposure limit.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. An eye wash and safety shower must be available in the immediate work area.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

**Other**

Wear appropriate chemical resistant clothing. Wear fire/flamm resistant/retardant clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

**9. Physical and chemical properties****Appearance**

Clear.

**Physical state**

Liquid.

**Form**

Liquid.

**Color**

Colorless.

**Odor**

Odorless.

**Odor threshold**

Not available.

**pH**

< 1 very acidic

**Melting point/freezing point**

-22 °F (-30 °C)

<b>Initial boiling point and boiling range</b>	397 °F (203 °C) 66.2 °F (19 °C) 14.7 hPa
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Completely miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	1.66 g/cm3
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	HClO4 Cl-H-O4
<b>Molecular weight</b>	100.47 g/mol
<b>Oxidizing properties</b>	May cause fire or explosion; strong oxidizer.
<b>Specific gravity</b>	1.66

## 10. Stability and reactivity

<b>Reactivity</b>	May ignite or explode on contact with combustible materials. Reacts violently with strong alkaline substances. This product may react with reducing agents.
<b>Chemical stability</b>	Stable at normal conditions. Becomes oxidizing at elevated temperatures (>150 C). hygroscopic.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat. Contact with incompatible materials. Do not mix with other chemicals. Avoid temperatures above 300°F (150°C). Drying of this product on clothing or combustible materials may cause fire.
<b>Incompatible materials</b>	Bases. Combustible material. Reducing agents. Flammable materials
<b>Hazardous decomposition products</b>	Toxic gas.

## 11. Toxicological information

<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes severe skin burns and eye damage.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Causes digestive tract burns. Harmful if swallowed.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Harmful if swallowed.

Product	Species	Test Results
Veritas Trace Perchloric Acid		
<u>Acute</u>		
Oral		
LD50	Rat	1100 mg/kg
Skin corrosion/irritation	Corrosive to skin and eyes. Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.	
Skin sensitization	Due to partial or complete lack of data the classification is not possible.	
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.	
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.	
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.	
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.	
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.	
12. Ecological information		
Ecotoxicity	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.	
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
13. Disposal considerations		
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations. Neutralize with soda ash/slaked lime and discharge to sewer with lots of water.	
Local disposal regulations	Dispose in accordance with all applicable regulations.	
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Taking into account local regulations the product may be disposed of as waste water after neutralisation.	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	
14. Transport information		
DOT		
UN number	UN1873	
UN proper shipping name	Perchloric acid with more than 50 percent but not more than 72 percent acid, by mass	

**Transport hazard class(es)**

**Class** 5.1  
**Subsidiary risk** 8  
**Label(s)** 5.1, 8

**Packing group**

I

**Special precautions for user**

Read safety instructions, SDS and emergency procedures before handling.

**Special provisions**

A2, A3, N41, T10, TP1, TP12

**Packaging exceptions**

None

**Packaging non bulk**

201

**Packaging bulk**

243

**IATA****UN number**

UN1873

**UN proper shipping name**

Perchloric acid 72% or less but more than 50% acid, by weight

**Transport hazard class(es)**

**Class** 5.1  
**Subsidiary risk** 8

**Packing group**

I

**Environmental hazards**

No.

**ERG Code**

5C

**Special precautions for user**

Read safety instructions, SDS and emergency procedures before handling.

**Other information****Passenger and cargo aircraft**

Forbidden

**Cargo aircraft only**

Allowed with restrictions.

**IMDG****UN number**

UN1873

**UN proper shipping name**

PERCHLORIC ACID with more than 50% but not more than 72% acid, by mass

**Transport hazard class(es)**

**Class** 5.1  
**Subsidiary risk** 8

**Packing group**

I

**Environmental hazards****Marine pollutant**

No.

**EmS**

F-A, S-Q

**Special precautions for user**

Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not established.

**DOT****IATA; IMDG**

## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### Toxic Substances Control Act (TSCA)

All components of the mixture on the TSCA 8(b) inventory are designated "active".

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### SARA 304 Emergency release notification

Not regulated.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312

Yes

#### Hazardous chemical

##### Classified hazard categories

Oxidizer (liquid, solid, or gas)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

#### SARA 313 (TRI reporting)

Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Safe Drinking Water Act (SDWA)

Not regulated.

### US state regulations

#### California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

### Issue date

October-11-2021

Material name: Veritas Trace Perchloric Acid

7140

Version #: 01

Revision date: Issue date: October-11-2021

7 / 8

**Version #**

01

**Disclaimer**

GFS Chemicals, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.