

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

1 Identification

- **Product identifier**
- **Trade name:** Custom Inorganic Standard
- **Article number:** 50M53-1
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
High-Purity Standards
7221 Investment Drive, North Charleston, SC 29418 United States
Telephone: +1-843-767-7900
Fax: +1-843-767-7906
highpuritystandards.com
Email: info@highpuritystandards.com
- **Information department:** Product safety department
- **Emergency telephone number:**
INFOTRAC
Emergency telephone numbers 1-800-535-5053
Other emergency telephone numbers 1-352-323-3500

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Substances and mixtures which, in contact with water, emit flammable gases 2

H261 In contact with water releases flammable gas.



GHS07

Skin Irritation 2
Eye Irritation 2A

H315 Causes skin irritation.
H319 Causes serious eye irritation.

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



GHS02



GHS07

- **Signal word** Danger
- **Hazard statements**
H261 In contact with water releases flammable gas.
H315 Causes skin irritation.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 1)

H319 Causes serious eye irritation.

· **Precautionary statements**

Do not allow contact with water.

Handle under inert gas. Protect from moisture.

Wash thoroughly after handling.

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

If on skin: Wash with plenty of water.

Specific treatment (see on this label).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO₂, sand, extinguishing powder to extinguish.

Store in a dry place. Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 2

The substance demonstrates unusual reactivity with water.

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 2

· **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:**

7440-24-6	strontium	5.0%
7697-37-2	nitric acid	2.0%

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 2)

· Chemical identification of the substance/preparation

7732-18-5 water, distilled, conductivity or of similar purity

93.0%

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** 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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Extinguishing powder. Do not use water.
CO₂. Do not use water.
Sand. Do not use water.
Special powder for metal fires. Do not use water.
CO₂, sand, extinguishing powder. Do not use water.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
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.
Do not flush with water or aqueous cleansing agents

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 3)

- **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:

7440-24-6	strontium	30 mg/m ³
7697-37-2	nitric acid	0.16 ppm

· PAC-2:

7440-24-6	strontium	330 mg/m ³
7697-37-2	nitric acid	24 ppm

· PAC-3:

7440-24-6	strontium	2,000 mg/m ³
7697-37-2	nitric acid	92 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **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 constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

7697-37-2 nitric acid		
PEL	Long-term value: 5 mg/m ³ , 2 ppm	

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 4)

REL	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5 mg/m ³ , 2 ppm
TLV	Short-term value: (4) NIC-0.025* ppm Long-term value: (2) ppm *inh. fraction + vapor

- **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.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
Form: Liquid
Color: According to product specification

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 5)

· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Contact with water liberates extremely flammable gases.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
· Density at 20 °C (68 °F):	1.08706 g/cm ³ (9.07152 lbs/gal)
· Bulk density:	1,087 kg/m ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	93.0 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	5.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 6)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Contact with water releases flammable gases.
- **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:**
- **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:
Irritant
- **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.

· OSHA-Ca (Occupational Safety & Health Administration)
--

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 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard





(Contd. of page 7)

· **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA | <p>UN3129</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · ADR · IMDG, IATA | <p>Water-reactive liquid, corrosive, n.o.s. (strontium, Nitric acid)
 3129 WATER-REACTIVE LIQUID, CORROSIVE, N.O.S. (strontium, NITRIC ACID)
 WATER-REACTIVE LIQUID, CORROSIVE, N.O.S. (strontium, NITRIC ACID)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <div style="display: flex; align-items: center;">   </div> |
| <ul style="list-style-type: none"> · Class · Label | <p>4.3 Substances which, in contact with water, emit flammable gases
 4.3, 8</p> |
| <ul style="list-style-type: none"> · ADR | <div style="display: flex; align-items: center;">   </div> |
| <ul style="list-style-type: none"> · Class | <p>4.3 (WC1) Substances which, in contact with water, emit flammable gases</p> |

(Contd. on page 9)

Safety Data Sheet





acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 8)

· Label	4.3+8
· IMDG	
 	
· Class	4.3 Substances which, in contact with water, emit flammable gases
· Label	4.3/8
· IATA	
 	
· Class	4.3 Substances which, in contact with water, emit flammable gases
· Label	4.3 (8)
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Substances which, in contact with water, emit flammable gases
· Hazard identification number (Kemler code):	389
· EMS Number:	F-G,S-N
· Segregation groups	(SGG1a) Strong acids
· Stowage Category	E
· Stowage Code	SW5 If under deck, stow in a mechanically ventilated space.
· Handling Code	H1 Keep as dry as reasonably practicable
· Segregation Code	SG26 In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained.
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: Forbidden On cargo aircraft only: 5 L
· ADR	
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 9)

· IMDG	
· Limited quantities (LQ)	0
· 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 3129 WATER-REACTIVE LIQUID, CORROSIVE, N.O.S. (STRONTIUM, NITRIC ACID), 4.3 (8), II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

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

7697-37-2	nitric acid
-----------	-------------

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

7697-37-2	nitric acid
-----------	-------------

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

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **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.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 10)

Hazard pictograms

GHS02 GHS07

Signal word *Danger***Hazard statements***H261 In contact with water releases flammable gas.**H315 Causes skin irritation.**H319 Causes serious eye irritation.***Precautionary statements***Do not allow contact with water.**Handle under inert gas. Protect from moisture.**Wash thoroughly after handling.**Wear protective gloves/protective clothing/eye protection/face protection.**If on skin: Wash with plenty of water.**Specific treatment (see on this label).**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**If skin irritation occurs: Get medical advice/attention.**Take off contaminated clothing and wash it before reuse.**Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.**If eye irritation persists: Get medical advice/attention.**In case of fire: Use CO2, sand, extinguishing powder to extinguish.**Store in a dry place. Store in a closed container.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: *Environment protection department.***Contact:***High-Purity Standards**Tel: 843-767-7900**Fax: 843-767-7906***Date of preparation / last revision** *11/03/2022***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*

(Contd. on page 12)

Safety Data Sheet
acc. to OSHA HCS

Printing date 11/03/2022

Reviewed on 11/03/2022

Trade name: Custom Inorganic Standard

(Contd. of page 11)

*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)**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**Substances and mixtures which, in contact with water, emit flammable gases 2: Substances and mixtures which in contact with water emit flammable gases – Category 2**Skin Irritation 2: Skin corrosion/irritation – Category 2**Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*

US