

SAFETY DATA SHEET

Creation Date 22-Sep-2009

Revision Date 24-Dec-2021

Revision Number 4

1. Identification

Product Name Yttrium Nitrate Hexahydrate
Cat No. : Y4-10
Synonyms Nitric acid, yttrium(3+) salt, hexahydrate; Yttrium nitrate hexahydrate (1:3:6)
Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Heeger Materials Inc
230 Steele St.
Denver, CO 80206
Tel: (925) 385-8104

Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|-----------------------------------|------------|
| Acute oral toxicity | Category 4 |
| Serious Eye Damage/Eye Irritation | Category 2 |

Label Elements

Signal Word
Warning

Hazard Statements
Harmful if swallowed
Causes serious eye irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear eye/face protection

Eyes

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

If eye irritation persists: Get medical advice/attention

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

| Component | CAS No | Weight % |
|--|------------|----------|
| Nitric acid, yttrium(3+) salt, hexahydrate | 13494-98-9 | 100 |

4. First-aid measures

| | |
|--|---|
| General Advice | If symptoms persist, call a physician. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur. |
| Most important symptoms and effects | None reasonably foreseeable. |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---------------------------------------|--|
| Suitable Extinguishing Media | Dry chemical, CO ₂ , water spray or alcohol-resistant foam. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | Not applicable |

| | |
|---|--------------------------|
| Method - | No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Nitrogen oxides (NOx).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 2 | 0 | 1 | OX |

6. Accidental release measures

| | |
|---|---|
| Personal Precautions | Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. |
| Environmental Precautions | Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. |
| Methods for Containment and Clean Up | Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. |

7. Handling and storage

| | |
|-----------------|---|
| Handling | Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid dust formation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. |
| Storage. | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from oxidizing agents. |

8. Exposure controls / personal protection**Exposure Guidelines**

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|--|--------------------------|----------|---|--------------------------|
| Nitric acid, yttrium(3+) salt, hexahydrate | TWA: 1 mg/m ³ | | IDLH: 500 mg/m ³ TWA: 1 mg/m ³ | TWA: 1 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

| | |
|-----------------------------|---|
| Engineering Measures | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. |
|-----------------------------|---|

Personal Protective Equipment

| | |
|----------------------------|--|
| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard |
|----------------------------|--|

EN166.

| | |
|---------------------------------|---|
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. Physical and chemical properties

| | |
|---|---|
| Physical State | Solid |
| Appearance | Light red |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | No data available |
| Boiling Point/Range | No information available |
| Flash Point | Not applicable |
| Evaporation Rate | Not applicable |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | No information available |
| Vapor Density | Not applicable |
| Specific Gravity | 2.68 |
| Solubility | Soluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |
| Viscosity | Not applicable |
| Molecular Formula | Y(NO ₃) ₃ ·6H ₂ O |
| Molecular Weight | 383.001 |

10. Stability and reactivity

| | |
|---|--|
| Reactive Hazard | Yes |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. |
| Incompatible Materials | Strong oxidizing agents |
| Hazardous Decomposition Products | Nitrogen oxides (NO _x) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic No information available

Products

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|------------------------|--|
| Irritation | Irritating to eyes and skin |
| Sensitization | No information available |
| Carcinogenicity | Possible cancer hazard. May cause cancer based on animal data. This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B). The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|--|------------|------------|------------|------------|------------|------------|
| Nitric acid, yttrium(3+) salt, hexahydrate | 13494-98-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

| | |
|---|--|
| Mutagenic Effects | No information available |
| Reproductive Effects | No information available. |
| Developmental Effects | No information available. |
| Teratogenicity | No information available. |
| STOT - single exposure | None known |
| STOT - repeated exposure | None known |
| Aspiration hazard | No information available |
| Symptoms / effects, both acute and delayed | No information available |
| Endocrine Disruptor Information | No information available |
| Other Adverse Effects | The toxicological properties have not been fully investigated. |

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

| | |
|--------------------------------------|--|
| Persistence and Degradability | Soluble in water Persistence is unlikely based on information available. |
| Bioaccumulation/ Accumulation | No information available. |
| Mobility | Will likely be mobile in the environment due to its water solubility. |

13. Disposal considerations

| | |
|-------------------------------|---|
| Waste Disposal Methods | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|-------------------------------|---|

14. Transport information

DOT

| | |
|-----------------------------|--|
| UN-No | UN1477 |
| Proper Shipping Name | NITRATES, INORGANIC, N.O.S. |
| Technical Name | Nitric acid, yttrium(3+) salt, hexahydrate |
| Hazard Class | 5.1 |
| Packing Group | II |

TDG

UN-No UN1477
 Proper Shipping Name NITRATES, INORGANIC, N.O.S.
 Hazard Class 5.1
 Packing Group II

IATA

UN-No UN1477
 Proper Shipping Name NITRATES, INORGANIC, N.O.S.
 Hazard Class 5.1
 Packing Group II

IMDG/IMO

UN-No UN1477
 Proper Shipping Name NITRATES, INORGANIC, N.O.S.
 Hazard Class 5.1
 Packing Group II

15. Regulatory information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|--|------------|------|---|-----------------------------|
| Nitric acid, yttrium(3+) salt, hexahydrate | 13494-98-9 | - | - | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|--|------------|-----|------|--------|-------|------|------|------|-------|------|
| Nitric acid, yttrium(3+) salt, hexahydrate | 13494-98-9 | - | - | - | - | X | X | X | X | - |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations**SARA 313**

| Component | CAS No | Weight % | SARA 313 - Threshold Values % |
|--|------------|----------|-------------------------------|
| Nitric acid, yttrium(3+) salt, hexahydrate | 13494-98-9 | 100 | 1.0 |

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--|---------------|------------|--------------|----------|--------------|
| Nitric acid, yttrium(3+) salt, hexahydrate | - | X | - | X | - |

U.S. Department of Transportation

| | |
|-----------------------------|---|
| Reportable Quantity (RQ): | N |
| DOT Marine Pollutant | N |
| DOT Severe Marine Pollutant | N |

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--|------------|----------------|------------------------------|---------------------------|--|
| Nitric acid, yttrium(3+) salt, hexahydrate | 13494-98-9 | Not applicable | Not applicable | Not applicable | Not applicable |

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--|------------|---|--|----------------------------|------------------------------------|
| Nitric acid, yttrium(3+) salt, hexahydrate | 13494-98-9 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other information

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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

End of SDS

Heeger Materials Inc