

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : TIMn
 Product code : 0.TIMn.0

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Fertilisers
 Fertilizer

1.3. Supplier

Timac Agro USA, INC.
 Route 724 & I-176
 P.O. Box 888
 Reading, PA 19607 - USA
 T 1-800-545-5474

1.4. Emergency telephone number

| Country | Organization/Company | Address | Emergency number | Comment |
|----------|----------------------|---------|---|---------|
| Americas | 3E | | +1-760-476-3962 (Access code : 333021) | (24/7) |

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Corrosive to metals Category 1 H290 May be corrosive to metals
 Acute toxicity (oral) Category 4 H302 Harmful if swallowed
 Skin corrosion/irritation Category 2 H315 Causes skin irritation
 Serious eye damage/eye irritation Category 1 H318 Causes serious eye damage
 Specific target organ toxicity (repeated exposure) Category 2 H373 May cause damage to organs (brain) through prolonged or repeated exposure (Inhalation)

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

: Danger

Hazard statements (GHS US) :

: H290 - May be corrosive to metals
 H302 - Harmful if swallowed
 H315 - Causes skin irritation
 H318 - Causes serious eye damage
 H373 - May cause damage to organs (brain) through prolonged or repeated exposure (Inhalation)

Precautionary statements (GHS US) :

: P260 - Do not breathe spray, vapors.
 P280 - Wear protective clothing, eye protection, face protection, protective gloves.
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a doctor, a POISON CENTER.

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P390 - Absorb spillage to prevent material-damage.
P405 - Store locked up.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | GHS US classification |
|---------------------------|----------------------|----------|---|
| Uronium hydrogen sulphate | (CAS-No.) 21351-39-3 | >25 | Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 |
| manganese sulphate | (CAS-No.) 7785-87-7 | >10-< 25 | Eye Dam. 1, H318 STOT RE 2, H373 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Prompt treatment is essential to minimize damage. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Call a poison center/doctor/physician if you feel unwell. Move the affected person away from the contaminated area and into the fresh air. Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : For even minor contact, immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Do not remove clothing if it sticks to the skin. Get immediate medical advice/attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Wash immediately with plenty water (during 20 minutes), also under eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist immediately, even if there are no immediate symptoms. If possible show him this sheet. Failing this, show him the packaging or label.
- First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Unconscious: maintain adequate airway and respiration. Place the affected person in the recovery position. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : (see section(s) : 2.1/2.3).

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : Not flammable.
- Explosion hazard : Gives off hydrogen by reaction with metals.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Control the vapors with a water spray. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment. Contain the extinguishing fluids by bunding.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Complete protective clothing. EN 469. Self-contained breathing apparatus.
- Other information : Only qualified personnel equipped with suitable protective equipment may intervene. Relevant water authorities should be notified of any large spillage to water course or drain.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material-damage. Remove ignition sources. Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate and limit access. Mark the danger area. Do not touch or walk on the spilled product. Avoid contact with skin, eyes and clothing. Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. acid-resistant protective clothing. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area. Stop leak if safe to do so. Dike and contain spill.

6.2. Environmental precautions

Prevent liquid from entering sewers, watercourses, underground or low areas. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Pump up the product into a suitably labeled spare container. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapor. Do not breathe vapors. Use personal protective equipment as required. Avoid contact with skin, eyes and clothing. Do not handle until all safety precautions have been read and understood. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Separate working clothes from town clothes. Launder separately. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : The floor of the depot should be impermeable and designed to form a water-tight basin. Store on an acid resistant underground. Comply with applicable regulations.

Storage conditions : Protect from sunlight. Store in a well-ventilated place. Store closed containers with closure in upper position. Store locked up. Keep out of reach of children.

Incompatible products : Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity.

Storage temperature : 4 - 30 °C Store at ambient temperature. Protect from freezing.

Heat-ignition : Keep away from open flames, hot surfaces and sources of ignition.

Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

Special rules on packaging : Keep only in original container. Store in a closed container.

Packaging materials : Do not store in corrodable metal.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Uronium hydrogen sulphate (21351-39-3)

Not applicable

manganese sulphate (7785-87-7)

| | | |
|-------|------------|---|
| ACGIH | Local name | Manganese, elemental and inorganic compounds, as Mn |
|-------|------------|---|

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| manganese sulphate (7785-87-7) | | |
|--------------------------------|--------------------------------|--|
| ACGIH | ACGIH TWA (mg/m ³) | 0.02 mg/m ³ (R - Respirable particulate matter) 0.1 mg/m ³ (I - Inhalable particulate matter) |
| ACGIH | Remark (ACGIH) | TLV® Basis: CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen) |
| ACGIH | Regulatory reference | ACGIH 2020 |

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Local exhaust and general ventilation must be adequate to meet exposure standards.
- Environmental exposure controls : Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Assure that emissions are compliant with all applicable air pollution control regulations. Comply with applicable regulations.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Since the product consists of several substances, the durability of the glove material cannot be estimated and needs to be tested before use

| Type | Material | Permeation | Thickness (mm) | Permeation |
|-----------------|--------------------------------------|-------------------|----------------|------------|
| Reusable gloves | butyl rubber, Neoprene rubber (HNBR) | 6 (> 480 minutes) | | |

Eye protection:

Safety glasses with side guards should be worn to prevent injury from airborne particles and/or other eye contact with this product

| Type | Use | Characteristics |
|-----------------------------|---------|-------------------|
| Safety glasses, Face shield | Droplet | With side shields |

Skin and body protection:

Skin protection appropriate to the conditions of use should be provided

| Type |
|--------------------------|
| Chemical resistant apron |
| Boots |

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device | Filter type | Condition |
|------------------------------------|-------------|-----------------------------------|
| Reusable half mask, Full face mask | ABEK-P3 | Vapour protection, Mist formation |

Personal protective equipment symbol(s):



Other information:

See Heading 7 : 7.1. Precautions for safe handling.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Mixture contains one or more component(s) which have the following colour(s):
Yellow Light pink
- Odor : Odorless

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| | |
|---|---------------------|
| Odor threshold | : No data available |
| pH | : 1 |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : 212 °F |
| Flash point | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapor pressure | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Relative density | : No data available |
| Specific gravity / density | : 11.9 lb/gal |
| Solubility | : Soluble. |
| Log Pow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

Contact with metals produces hydrogen gas which may form explosive mixtures with air.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Alkalis. Bases. Oxidizing agent. Reducing agents. Metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In case of fire: See Heading 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------|---|
| Acute toxicity (oral) | : Harmful if swallowed. |
| Acute toxicity (dermal) | : Not classified (Based on available data, the classification criteria are not met) |
| Acute toxicity (inhalation) | : Not classified (Based on available data, the classification criteria are not met) |
| Additional information | : No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation |

| | |
|---|--|
| ATE US (oral) | 649.35 mg/kg body weight |
| Ironium hydrogen sulphate (21351-39-3) | |
| LD50 oral rat | 350 mg/kg body weight Farm Chemicals Handbook. Vol. -, Pg. C124, 1991. |
| LD50 dermal rat | > 2000 mg/kg body weight |
| manganese sulphate (7785-87-7) | |
| LD50 oral rat | 2150 mg/kg Indian Journal of Pharmacology, 23(3): 153-159 |
| LC50 inhalation rat (mg/l) | > 4.45 mg/l (OECD 403 method) |

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| | |
|-----------------------------------|--|
| Skin corrosion/irritation | : Causes skin irritation. pH: 1 |
| Serious eye damage/irritation | : Causes serious eye damage. pH: 1 |
| Respiratory or skin sensitization | : Not classified (Based on available data, the classification criteria are not met) No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation |
| Germ cell mutagenicity | : Not classified (Based on available data, the classification criteria are not met) No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation |
| Carcinogenicity | : Not classified (Based on available data, the classification criteria are not met) |

| manganese sulphate (7785-87-7) | |
|--|--|
| NOAEL (chronic,oral,animal/male,2 years) | 615 mg/kg body weight |
| NOAEL (chronic,oral,animal/female,2 years) | 715 mg/kg body weight |
| Reproductive toxicity | : Not classified (Based on available data, the classification criteria are not met) No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation |
| STOT-single exposure | : Not classified (Based on available data, the classification criteria are not met) No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation |
| STOT-repeated exposure | : May cause damage to organs (brain) through prolonged or repeated exposure (Inhalation). (Based on available data, the classification criteria are not met) No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation |

| manganese sulphate (7785-87-7) | |
|---------------------------------------|---|
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |
| Aspiration hazard | : Not classified (Based on available data, the classification criteria are not met. No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation) |
| Viscosity, kinematic | : No data available |
| Symptoms/effects | : (see section(s) : 2.1/2.3). |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|--|
| Ecology - general | : Based on available data, the classification criteria are not met. No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms. Do not allow uncontrolled discharge of product into the environment. |
|-------------------|--|

| Uronium hydrogen sulphate (21351-39-3) | |
|---|--|
| LC50 fish 1 | > 79 mg/l <i>Oryzias latipes</i> |
| LC50 other aquatic organisms 1 | 13477 mg/l <i>Helisoma trivolvis</i> , 48h |
| ErC50 (algae) | > 79 mg/l <i>Pseudokirchneriella subcapitata</i> , 72h |
| NOEC (acute) | 1000 mg/l 3h |

| manganese sulphate (7785-87-7) | |
|---------------------------------------|---|
| LC50 fish 1 | 14.5 mg/l <i>Oncorhynchus mykiss</i> (OECD 203 method) |
| EC50 Daphnia 1 | 9.8 mg/l <i>Daphnia magna</i> (Results obtained on a similar product) |
| ErC50 (algae) | 61 mg/l <i>Desmodesmus subspicatus</i> (OECD 201 method) |
| NOEC chronic fish | 0.6 mg/l <i>Onchorhynchus mykiss</i> , 4 months |

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12.2. Persistence and degradability

| TIMn | |
|--|----------------------------|
| Persistence and degradability | Not established. |
| Uronium hydrogen sulphate (21351-39-3) | |
| Persistence and degradability | Readily biodegradable. |
| manganese sulphate (7785-87-7) | |
| Persistence and degradability | Not readily biodegradable. |
| Biodegradation | Not applicable |

12.3. Bioaccumulative potential

| TIMn | |
|--|---------------------------------|
| Bioaccumulative potential | Not established. |
| Uronium hydrogen sulphate (21351-39-3) | |
| Log Kow | -1.56 |
| Bioaccumulative potential | Not potentially bioaccumulable. |
| manganese sulphate (7785-87-7) | |
| Bioaccumulative potential | Not potentially bioaccumulable. |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

| | |
|--|---|
| Regional legislation (waste) | : Disposal must be done according to official regulations. |
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Sewage disposal recommendations | : Disposal must be done according to official regulations. |
| Product/Packaging disposal recommendations | : Discharging into rivers and drains is forbidden. |
| Additional information | : Do not re-use empty containers. |

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

| | |
|--------------------------------|--|
| Transport document description | : UN1760 Corrosive liquids, n.o.s. (Uronium hydrogen sulphate), 8, II |
| UN-No.(DOT) | : UN1760 |
| Proper Shipping Name (DOT) | : Corrosive liquids, n.o.s. |
| Class (DOT) | : 8 - Class 8 - Corrosive material 49 CFR 173.136 |
| Packing group (DOT) | : II - Medium Danger |
| Hazard labels (DOT) | : 8 - Corrosive |



| | |
|---|-------|
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 202 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : 242 |

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| | |
|--|--|
| DOT Special Provisions (49 CFR 172.102) | : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 154 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 1 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 30 L |
| DOT Vessel Stowage Location | : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| DOT Vessel Stowage Other | : 40 - Stow "clear of living quarters" |
| Emergency Response Guide (ERG) Number | : 154 |
| Other information | : No supplementary information available. |

Transportation of Dangerous Goods

| | |
|---|---|
| Transport document description | : UN1760 CORROSIVE LIQUID, N.O.S. (Uronium hydrogen sulphate), 8, II |
| UN-No. (TDG) | : UN1760 |
| Proper Shipping Name (Transportation of Dangerous Goods) | : CORROSIVE LIQUID, N.O.S. |
| TDG Primary Hazard Classes | : 8 - Class 8 - Corrosives |
| Packing group | : II - Medium Danger |
| TDG Special Provisions | : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a)UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b)UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c)UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d)UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e)UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act". (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a)UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b)UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. SOR/2014-306 |
| Explosive Limit and Limited Quantity Index | : 1 L |
| Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index | : 1 L |

Transport by sea

| | |
|---------------------------------------|--|
| Transport document description (IMDG) | : UN 1760 CORROSIVE LIQUID, N.O.S. (Uronium hydrogen sulphate), 8, II |
| UN-No. (IMDG) | : 1760 |

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| | |
|-----------------------------|--|
| Proper Shipping Name (IMDG) | : CORROSIVE LIQUID, N.O.S. |
| Class (IMDG) | : 8 - Corrosive substances |
| Packing group (IMDG) | : II - substances presenting medium danger |
| Limited quantities (IMDG) | : 1 L |
| EmS-No. (1) | : F-A |
| EmS-No. (2) | : S-B |

Air transport

| | |
|---------------------------------------|--|
| Transport document description (IATA) | : UN 1760 Corrosive liquid, n.o.s. (Uronium hydrogen sulphate), 8, II |
| UN-No. (IATA) | : 1760 |
| Proper Shipping Name (IATA) | : Corrosive liquid, n.o.s. |
| Class (IATA) | : 8 - Corrosives |
| Packing group (IATA) | : II - Medium Danger |

SECTION 15: Regulatory information

15.1. US Federal regulations

| |
|---|
| Uronium hydrogen sulphate (21351-39-3) |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |
| manganese sulphate (7785-87-7) |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

15.2. International regulations

CANADA

| |
|---|
| Uronium hydrogen sulphate (21351-39-3) |
| Listed on the Canadian DSL (Domestic Substances List) |
| manganese sulphate (7785-87-7) |
| Listed on the Canadian DSL (Domestic Substances List) |

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

SECTION 16: Other information

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Full text of H-phrases:

| | |
|------|---|
| H290 | May be corrosive to metals |
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H373 | May cause damage to organs through prolonged or repeated exposure |

Abbreviations and acronyms:

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| | |
|-------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| IARC | International Agency for Research on Cancer |
| LC50 | Median lethal concentration |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| ATE | Acute Toxicity Estimate |
| EC50 | Median effective concentration |
| SDS | Safety Data Sheet |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| STP | Sewage treatment plant |
| vPvB | Very Persistent and Very Bioaccumulative |

NFPA health hazard

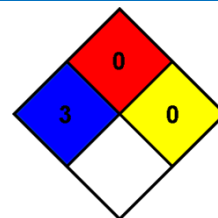
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: I
I - Safety glasses, Gloves, Dust & vapor respirator

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.