

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Issue date: August 26, 2015

Product identifier

Product Name **MDR**

Other means of identification

Product Code 42700

Synonyms None

Details of the supplier of the safety data sheet

Company Name TITAN INDUSTRIAL CHEMICALS, LLC
P.O. BOX 635
GROVER, MO. 63040
636-273-9033

Emergency telephone number

Emergency Telephone **INFOTRAC 1-800-535-5053**

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

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

| | |
|--|---------------------------|
| Acute toxicity - Oral | Category 4 |
| Acute toxicity - Dermal | Not classified |
| Acute toxicity - Inhalation (Gases) | Category 3 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Skin corrosion/irritation | Category 1 Sub-category B |
| Serious eye damage/eye irritation | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |

Label elements

Emergency Overview

Danger

Hazard statements

Harmful if swallowed

Toxic if inhaled

Causes severe skin burns and eye damage

May cause respiratory irritation. May cause drowsiness or dizziness



Appearance Clear

Physical state Liquid

Odor Acidic

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific Treatment (See Section 4 on the SDS)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other Information

Unknown Acute Toxicity 0.14% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% | Trade Secret |
|-------------------|-----------|----------|--------------|
| Hydrochloric Acid | 7647-01-0 | 10-30 | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

| | |
|---|--|
| General advice | Immediate medical attention is required. |
| Skin Contact | Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. |
| Eye contact | Keep eye wide open while rinsing. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area. |
| Inhalation | Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. |
| Ingestion | Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately. |
| Self-protection of the first aider | Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. |

Most important symptoms and effects, both acute and delayed

Symptoms Any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible materials Incompatible with strong acids and bases. Incompatible with oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines No Exposure limits noted for ingredient(s).

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------------------|----------------|--|--|
| Hydrochloric Acid 7647-01-0 | Ceiling: 2 ppm | (vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m ³ Ceiling: 5 ppm Ceiling: 7 mg/m ³ | IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m ³ |
| 2-butoxyethanol 111-76-2 | TWA: 20 ppm | TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S* S* | IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³ |

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection No special technical protective measures are necessary. Wear protective gloves and protective clothing. Prolonged contact may cause redness and irritation. Wear protective gloves and protective clothing if needed.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear
Color Reddish
Odor Acidic
Odor threshold No Information available

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|------------------------------|--------------------------|-------------------------|
| pH | <2 | |
| Specific Gravity | 1.029 | |
| Viscosity | Water Thin | |
| Melting point/freezing point | No Information available | |
| Flash point | No Information available | |

| | |
|--------------------------------------|--------------------------|
| Boiling point / boiling range | No Information available |
| Evaporation rate | No Information available |
| Flammability (solid, gas) | No Information available |
| Flammability Limits in Air | |
| Upper flammability limit: | No Information available |
| Lower flammability limit: | No Information available |
| Vapor pressure | No Information available |
| Vapor density | No Information available |
| Water solubility | Complete |
| Partition coefficient | No Information available |
| Autoignition temperature | No Information available |
| Decomposition temperature | No Information available |

Other Information

| | |
|------------------------|------|
| Density Lbs/Gal | 8.58 |
| VOC Content (%) | 0.16 |

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods.

Incompatible materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| | |
|----------------------------|---|
| Product Information | Harmful by inhalation and in contact with eyes and skin. |
| Inhalation | Avoid breathing vapors or mists. Harmful by inhalation. Inhalation of vapors in high concentration may cause severe irritation or burns to the respiratory tract. |
| Eye contact | Avoid contact with eyes. Causes severe eye damage. Corrosive to the eyes and may cause severe damage including blindness. |
| Skin Contact | Avoid contact with skin. Corrosive. Contact with skin may cause severe irritation and burns. |
| Ingestion | Do not taste or swallow. May be harmful if swallowed. |

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------------------|---------------------|-------------------------|-------------------------|
| Hydrochloric Acid 7647-01-0 | = 700 mg/kg (Rat) | > 5010 mg/kg (Rabbit) | = 1.68 mg/L (Rat) 1 h |
| 2-butoxyethanol 111-76-2 | = 470 mg/kg (Rat) | = 99 mg/kg (Rabbit) | = 450 ppm (Rat) 4 h |

Information on toxicological effects

Symptoms No Information available.

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

Sensitization No Information available.
Germ cell mutagenicity No Information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|--------------------------------|-------|---------|-----|------|
| Hydrochloric Acid 7647-01-0 | Yes | Group 3 | Yes | Yes |

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Not classifiable as a human carcinogen

Reproductive toxicity No Information available.
STOT - single exposure No Information available.
STOT - repeated exposure No Information available.
Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.
Target organ effects EYES, Respiratory system, Skin.
Aspiration hazard No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0.14% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity

4.84% of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|--------------------------------|----------------------|--|--|
| Hydrochloric Acid 7647-01-0 | Yes | 282: 96 h Gambusiaaffinis mg/L LC50 static | Yes |
| 2-butoxyethanol 111-76-2 | Yes | 1490: 96 h Lepomismacrochirus mg/L LC50 static 2950: 96 h Lepomismacrochirus mg/L LC50 | 1000: 48 h Daphnia magna mg/L EC50 1698 - 1940: 24 h Daphnia magna mg/L EC50 |

Persistence and degradability

No Information available.

Bioaccumulation

No Information available.

Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

DOT

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | SARA 313 - Threshold Values % |
|-------------------------------|-------------------------------|
| Hydrochloric Acid - 7647-01-0 | 1.0 |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Hydrochloric Acid 7647-01-0 | 5000 lb | - | - | X |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|--------------------------------|--------------------------|----------------|--|
| Hydrochloric Acid 7647-01-0 | 5000 lb | 5000 lb | RQ 5000 lb final RQ RQ 2270 kg final RQ |

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------|------------|---------------|--------------|
| Hydrochloric Acid 7647-01-0 | X | X | X |
| 2-butoxyethanol 111-76-2 | X | X | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

| | | | | |
|-------------|------------------|----------------|--------------------|--------------------------------------|
| <u>NFPA</u> | Health hazards 3 | Flammability 0 | Instability 0 | Physical and Chemical Properties Yes |
| <u>HMIS</u> | Health hazards 3 | Flammability 0 | Physical hazards 0 | Personal protection C |

Issue Date August 26, 2015

Revision Date

Revision Note

No Information available

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 Safety Data Sheet