

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

SECTION 1: Identification

1.1 Product identifier

Trade name **True North Chemicals Iron Remover**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses **Vehicle wheel cleaner**

1.3 Details of the supplier of the safety data sheet

DSI Automotive Products
1271 Fayland Dr
Fargo, ND 58078
United States

Telephone: 1.800.437.4621
e-mail: dsi@dsiautomotive.com
Website: dsiautomotive.com

1.4 Emergency telephone number

Emergency information service **USA 1.800.535.5053, INTL 1.352.323.3500
24 hr emergency information**

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

| Section | Hazard class | Category | Hazard class and category | Hazard statement |
|---------|--------------------|----------|---------------------------|------------------|
| A.4S | skin sensitization | 1 | Skin Sens. 1 | H317 |

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word **warning**

- Pictograms

GHS07



- Hazard statements

H317 **May cause an allergic skin reaction.**

- Precautionary statements

P261 **Avoid breathing dust/fume/gas/mist/vapors/spray.**
P272 **Contaminated work clothing must not be allowed out of the workplace.**
P280 **Wear protective gloves/protective clothing/eye protection/face protection.**
P302+P352 **If on skin: Wash with plenty of water.**
P321 **Specific treatment (see on this label).**
P333+P313 **If skin irritation or rash occurs: Get medical advice/attention.**
P363 **Wash contaminated clothing before reuse.**
P501 **Dispose of contents/container in accordance with local/regional/national/international regulations.**

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

- Hazardous ingredients for labelling (2-hydroxyethyl)ammonium mercaptoacetate

2.3 Other hazards

Hazards not otherwise classified

May be harmful if swallowed (GHS category 5: acutely toxic - oral).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

| Hazardous ingredients acc. to GHS | | | | |
|--|-------------------|-----------|--|-------|
| Name of substance | Identifier | Wt% | Classification acc. to GHS | Notes |
| (2-hydroxyethyl)ammonium mercaptoacetate | CAS No 126-97-6 | 12 - < 20 | Acute Tox. 4 / H302 Skin Sens. 1B / H317 | |
| 2-(2-butoxyethoxy)ethanol | CAS No 112-34-5 | 1 - < 3 | Eye Irrit. 2 / H319 | |
| ethoxylated C11-15 secondary alcohols | CAS No 68131-40-8 | 1 - < 3 | Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 | |
| benzaldehyde | CAS No 100-52-7 | 0.1 - < 1 | Acute Tox. 4 / H302 Acute Tox. 3 / H331 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 Flam. Liq. 4 / H227 | |

For full text of abbreviations: see SECTION 16. Exact percentage of ingredients is withheld as a trade secret.

This table, if present, includes all GHS classified ingredients present above their cut-off limits, even if the finished product is not classified as hazardous by GHS.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

not required

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation
- Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Control of the effects

Protect against external exposure, such as

Frost

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | | | | |
|--|-----------------------------------|----------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|--------------|
| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Ceiling-C [ppm] | Ceiling-C [mg/m ³] | Notation | Source |
| US | diethylene glycol monobutyl ether | 112-34-5 | TLV® | 10 | | | | | | iv | AC-GIH® 2019 |

Notation

Ceiling-C ceiling value is a limit value above which exposure should not occur

iv inhalable fraction and vapor

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

| Relevant DNELs of components of the mixture | | | | | | |
|---|----------|-----------|------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| (2-hydroxyethyl)ammonium mercaptoacetate | 126-97-6 | DNEL | 1.41 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| (2-hydroxyethyl)ammonium mercaptoacetate | 126-97-6 | DNEL | 2.06 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | DNEL | 67.5 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

| Relevant DNELs of components of the mixture | | | | | | |
|---|------------|-----------|-------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | DNEL | 67.5 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | DNEL | 101.2 mg/m ³ | human, inhalatory | worker (industry) | acute - local effects |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | DNEL | 83 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | DNEL | 42.32 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | DNEL | 6 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| benzaldehyde | 100-52-7 | DNEL | 9.8 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| benzaldehyde | 100-52-7 | DNEL | 9.8 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| benzaldehyde | 100-52-7 | DNEL | 1.14 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |

| Relevant PNECs of components of the mixture | | | | | | |
|---|----------|-----------|-----------------|-------------------|------------------------------|------------------------------|
| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
| (2-hydroxyethyl)ammonium mercaptoacetate | 126-97-6 | PNEC | 38 µg/l | aquatic organisms | freshwater | short-term (single instance) |
| (2-hydroxyethyl)ammonium mercaptoacetate | 126-97-6 | PNEC | 3.8 µg/l | aquatic organisms | marine water | short-term (single instance) |
| (2-hydroxyethyl)ammonium mercaptoacetate | 126-97-6 | PNEC | 3.2 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 200 mg/l | microorganisms | sewage treatment plant (STP) | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 4 mg/kg | benthic organisms | sediment | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 56 mg/kg | (top) predators | water | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 3.9 mg/l | aquatic organisms | water | intermittent release |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 0.4 mg/kg | pelagic organisms | sediment | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 1.1 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 0.11 mg/l | aquatic organisms | marine water | short-term (single instance) |

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

| Relevant PNECs of components of the mixture | | | | | | |
|---|------------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 200 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 4.4 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 0.44 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | PNEC | 0.32 mg/kg | terrestrial organisms | soil | short-term (single instance) |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | PNEC | 20 µg/l | aquatic organisms | freshwater | short-term (single instance) |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | PNEC | 2 µg/l | aquatic organisms | marine water | short-term (single instance) |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | PNEC | 8.24 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | PNEC | 28.1 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | PNEC | 2.81 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | PNEC | 5.6 mg/kg | terrestrial organisms | soil | short-term (single instance) |
| benzaldehyde | 100-52-7 | PNEC | 0.002 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| benzaldehyde | 100-52-7 | PNEC | 0 mg/l | aquatic organisms | marine water | short-term (single instance) |
| benzaldehyde | 100-52-7 | PNEC | 7.59 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| benzaldehyde | 100-52-7 | PNEC | 0.022 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| benzaldehyde | 100-52-7 | PNEC | 0.002 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| benzaldehyde | 100-52-7 | PNEC | 0.003 mg/kg | terrestrial organisms | soil | short-term (single instance) |

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|----------------|------------------------|
| Physical state | liquid |
| Color | colorless to pale pink |
| Odor | fruity |

Other safety parameters

| | |
|---|-----------------------------------|
| pH (value) | 6 – 8 (25 °C) |
| Melting point/freezing point | not determined |
| Initial boiling point and boiling range | 100 °C |
| Flash point | 114 °C at 101.3 kPa |
| Evaporation rate | not determined |
| Flammability (solid, gas) | not relevant, (fluid) |
| Explosive limits | not determined |
| Vapor pressure | 31.69 hPa at 25 °C |
| Density | 1.03 g/ml |
| Vapor density | this information is not available |

Solubility(ies)

| | |
|--------------------|----------------------------|
| - Water solubility | miscible in any proportion |
|--------------------|----------------------------|

Partition coefficient

| | |
|-----------------------------|-----------------------------------|
| - n-octanol/water (log KOW) | this information is not available |
|-----------------------------|-----------------------------------|

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

| | |
|---------------------------|----------------|
| Auto-ignition temperature | 210 °C |
| Viscosity | not determined |
| Explosive properties | none |
| Oxidizing properties | none |

9.2 Other information

| | |
|--|---|
| Temperature class (USA, acc. to NEC 500) | T3 (maximum permissible surface temperature on the equipment: 200 °C) |
|--|---|

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Mixture with acids will generate poisonous hydrogen sulphide gas.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Acids, Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if swallowed.

| Acute toxicity estimate (ATE) of components of the mixture | | | |
|--|------------|----------------|--------------|
| Name of substance | CAS No | Exposure route | ATE |
| (2-hydroxyethyl)ammonium mercaptoacetate | 126-97-6 | oral | 318 mg/kg |
| ethoxylated C11-15 secondary alcohols | 68131-40-8 | oral | ≥2,000 mg/kg |

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

| Acute toxicity estimate (ATE) of components of the mixture | | | |
|--|----------|-------------------|-------------|
| Name of substance | CAS No | Exposure route | ATE |
| benzaldehyde | 100-52-7 | oral | 1,430 mg/kg |
| benzaldehyde | 100-52-7 | inhalation: vapor | 5 mg/l/4h |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

- | | | |
|------|---|---|
| 14.1 | UN number | not subject to transport regulations |
| 14.2 | UN proper shipping name | not assigned |
| 14.3 | Transport hazard class(es) | not assigned |
| 14.4 | Packing group | not assigned |
| 14.5 | Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 | Special precautions for user | There is no additional information. |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | The cargo is not intended to be carried in bulk. |

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

| Name of substance | CAS No | Functionality | Authoritative Lists |
|--|-----------|----------------------------|---------------------|
| water | 7732-18-5 | carrier fluid / dis-solver | |
| (2-hydroxyethyl)ammonium mercaptoacetate | 126-97-6 | metal cleaner | |
| 2-(2-butoxyethoxy)ethanol | | co-solvent | CA TACs |
| sodium gluconate | 527-07-1 | chelate / se-questrant | |
| benzaldehyde | 100-52-7 | fragrance | |
| isobutyl acetate | 110-19-0 | fragrance | |
| isopentyl acetate | 123-92-2 | fragrance | |
| Benzyl acetate | 140-11-4 | fragrance | |
| propylene glycol | 57-55-6 | humectant | |
| citral | 5392-40-5 | fragrance | |

- Toxic or Hazardous Substance List (MA-TURA)

| Name of substance | CAS No | DEP CODE | PBT / HHS / LHS | PBT / HHS Threshold | De Minimis Concentration Threshold |
|---------------------------|--------|----------|-----------------|---------------------|------------------------------------|
| 2-(2-butoxyethoxy)ethanol | | 1022 | | | 1.0 % |

- Hazardous Substance List (NJ-RTK)

| Name of substance | CAS No | Remarks | Classifications |
|---------------------------|----------|---------|-----------------|
| 2-(2-butoxyethoxy)ethanol | | | |
| benzaldehyde | 100-52-7 | | F2 |

Legend

F2 Flammable - Second Degree

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

- Hazardous Substance List (Chapter 323) (PA-RTK)

| Name acc. to inventory | CAS No | Classification |
|------------------------|--------|----------------|
| GLYCOL ETHERS | | E |

Legend

E Environmental hazard

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

VOC content

Regulated Volatile Organic Compounds (VOC-EPA): 1.005 %
Regulated Volatile Organic Compounds (VOC-Cal ARB): 1.005 %

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

| Category | Rating | Description |
|---------------------|--------|--|
| Chronic | / | none |
| Health | 2 | temporary or minor injury may occur |
| Flammability | 1 | material that must be preheated before ignition can occur |
| Physical hazard | 0 | material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive |
| Personal protection | - | |

Chronic: chronic hazard
Flammability: flammability hazard
Health: health hazard
Personal protection: personal protective equipment (PPE) for normal use
Physical hazard: reactivity

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

| Category | Degree of hazard | Description |
|----------------|------------------|--|
| Flammability | 1 | material that must be preheated before ignition can occur |
| Health | 2 | material that, under emergency conditions, can cause temporary incapacitation or residual injury |
| Instability | 0 | material that is normally stable, even under fire conditions |
| Special hazard | | |

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

National inventories

| Country | Inventory | Status |
|---------|------------|--------------------------------|
| CA | DSL | all ingredients are listed |
| EU | REACH Reg. | not all ingredients are listed |
| US | TSCA | all ingredients are listed |

Legend

DSL Domestic Substances List (DSL)
REACH Reg. REACH registered substances
TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|-----------|---|--|-----------------|
| 3.2 | | Hazardous ingredients acc. to GHS: change in the listing (table) | yes |
| 5.2 | Hazardous combustion products: Carbon monoxide (CO), Carbon dioxide (CO ₂) | Hazardous combustion products: Nitrogen oxides (NO _x), Carbon monoxide (CO), Carbon dioxide (CO ₂) | yes |
| 8.1 | | Relevant DNELs of components of the mixture: change in the listing (table) | yes |
| 8.1 | | Relevant PNECs of components of the mixture: change in the listing (table) | yes |
| 9.1 | Flash point: not determined | Flash point: 114 °C at 101.3 kPa | yes |
| 9.1 | Density: not determined | Density: 1.03 g/ml | yes |
| 9.1 | Relative density: information on this property is not available | | yes |
| 10.3 | Possibility of hazardous reactions: No known hazardous reactions. | Possibility of hazardous reactions: Mixture with acids will generate poisonous hydro- gen sulphide gas. | yes |
| 10.5 | Incompatible materials: Oxidizers | Incompatible materials: Acids, Oxidizers | yes |
| 11.1 | | Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table) | yes |
| 15.1 | Toxic Substance Control Act (TSCA): all ingredients are listed | | yes |
| 15.1.50.5 | New Jersey Worker and Community Right to Know Act | | yes |
| 15.1.50.5 | | Right to Know Hazardous Substance List: change in the listing (table) | yes |

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|--|-----------------|
| 15.1 | | Right to Know Hazardous Substance List | yes |
| 15.1 | | Cleaning Product Right to Know Act Substance List (CA-RTK) | yes |
| 15.1 | | Cleaning Product Right to Know Act Substance List (CA-RTK): change in the listing (table) | yes |
| 15.1 | | Toxic or Hazardous Substance List (MA-TURA) | yes |
| 15.1 | | Toxic or Hazardous Substance List (MA-TURA): change in the listing (table) | yes |
| 15.1 | | Hazardous Substance List (NJ-RTK) | yes |
| 15.1 | | Hazardous Substance List (NJ-RTK): change in the listing (table) | yes |
| 15.1 | | Hazardous Substance List (Chapter 323) (PA-RTK) | yes |
| 15.1 | | Hazardous Substance List (Chapter 323) (PA-RTK): change in the listing (table) | yes |
| 15.1 | VOC content: Regulated Volatile Organic Compounds (VOC-EPA): 1.056 % Regulated Volatile Organic Compounds (VOC-Cal ARB): 1.056 % | VOC content: Regulated Volatile Organic Compounds (VOC-EPA): 1.005 % Regulated Volatile Organic Compounds (VOC-Cal ARB): 1.005 % | yes |
| 16 | | List of relevant phrases (code and full text as stated in chapter 2 and 3): change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|---------------|--|
| 49 CFR US DOT | 49 CFR U.S. Department of Transportation |
| ACGIH® 2019 | From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement |
| Acute Tox. | Acute toxicity |
| ATE | Acute Toxicity Estimate |
| Cal ARB | California Air Resources Board |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| DEP CODE | Department of Environmental Protection Code |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EPA | Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

| Abbr. | Descriptions of used abbreviations |
|----------------|---|
| Flam. Liq. | Flammable liquid |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| HHS | Higher hazard substance |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| LHS | Lower hazard substance |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| NPCA-HMIS® III | National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition |
| OSHA | Occupational Safety and Health Administration (United States) |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| Skin Sens. | Skin sensitization |
| STEL | Short-term exposure limit |
| STOT SE | Specific target organ toxicity - single exposure |
| TLV® | Threshold Limit Values |
| TWA | Time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

True North Chemicals Iron Remover

Version number: GHS 3.0
Replaces version of: 2019-10-01 (GHS 2)

Revision: 2020-05-01

| Code | Text |
|------|--------------------------------------|
| H227 | Combustible liquid. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |
| H335 | May cause respiratory irritation. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.