

SAFETY DATA SHEET

Grindex 10

Blaser.
SWISSLUBE

Section 1. Identification

Product identifier : Grindex 10
Product code : 01101-08

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

| |
|--|
| Identified uses |
| Industrial use only. Metal working fluids |
| Uses advised against |
| Consumer use. |

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Emergency telephone number (with hours of operation) : +65 3165 2217 (24h/7d)

Section 2. Hazards identification

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

GHS label elements, including precautionary statements

Hazard pictograms :



Signal word : Warning
Hazard statements : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Precautionary statements

Prevention : P280 - Wear protective gloves. Wear eye or face protection.
P264 - Wash thoroughly after handling.

Response : P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Section 2. Hazards identification

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

| Ingredient name | % | CAS number |
|---------------------------------------|-------|------------|
| 2-aminoethanol | ≤5 | 141-43-5 |
| sodium hydroxide | ≤3 | 1310-73-2 |
| citric acid | ≤3 | 5949-29-1 |
| benzotriazole | ≤3 | 95-14-7 |
| pyridine-2-thiol 1-oxide, sodium salt | <0.25 | 3811-73-2 |

Additional information :

Neutralisation product: Equilibrium of Ionic Pairs according to REACH Annex V, 4.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Chemical formula : Not applicable.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Avoid breathing vapour or mist. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store between the following temperatures: -15 to 40°C (5 to 104°F). Shelf life: 24 months. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|------------------|--|
| 2-aminoethanol | Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 3 ppm 8 hours. PEL (long term): 7.5 mg/m ³ 8 hours. PEL (short term): 15 mg/m ³ 15 minutes. PEL (short term): 6 ppm 15 minutes. |
| sodium hydroxide | Workplace Safety and Health Act (Singapore, 2/2006). |

Section 8. Exposure controls/personal protection

PEL (short term): 2 mg/m³ 15 minutes.

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Wear suitable gloves tested to EN374. Nitrile gloves. thickness 0.3 mm (minimum) .
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved before handling this product.
- Respiratory protection** : A respirator is not needed under normal and intended conditions of product use. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Colour** : Light tan.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- pH** : 8.7 to 9.4 [Conc. (% w/w): 5%]
- Melting point/freezing point** : Not available.
- Pour point** : <-15°C (<5°F)

Section 9. Physical and chemical properties and safety characteristics

| | |
|--|--|
| Boiling point, initial boiling point, and boiling range | : >100°C (>212°F) |
| Flash point | : Open cup: Not applicable. |
| Evaporation rate | : Not available. |
| Flammability | : Not available. |
| Lower and upper explosion limit/flammability limit | : Not available. |
| Vapour pressure | : Not available. |
| Relative vapour density | : Not available. |
| Relative density | : Not available. |
| Density | : 1.105 g/cm ³ [20°C (68°F)] |
| Solubility in water | : Not available. |
| Miscible with water | : Yes. |
| Partition coefficient: n-octanol/water | : Not applicable. |
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : Not available. |
| Viscosity | : Kinematic (40°C (104°F)): 10.3 mm ² /s (10.3 cSt) |
| <u>Particle characteristics</u> | |
| Median particle size | : Not applicable. |

Section 10. Stability and reactivity

| | |
|---|--|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : Shelf life: 24 months. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | : No specific data. |
| Incompatible materials | : No specific data. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| SADT | : Not available. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---------------------------------------|-------------|---------|-------------|----------|
| 2-aminoethanol | LD50 Dermal | Rabbit | 2504 mg/kg | - |
| | LD50 Oral | Rat | 1720 mg/kg | - |
| sodium hydroxide | LD50 Oral | Rat | >2000 mg/kg | - |
| citric acid | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| benzotriazole | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | 500 mg/kg | - |
| pyridine-2-thiol 1-oxide, sodium salt | LD50 Dermal | Rat | 1800 mg/kg | - |
| | LD50 Oral | Rat | 1500 mg/kg | - |

Section 11. Toxicological information

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|------------------------|---------|-------|---------------------|-------------|
| 2-aminoethanol | Skin - Severe irritant | Woman | - | - | - |
| citric acid | Eyes - Mild irritant | Rabbit | - | 0.5 minutes 5 mg | - |

Conclusion/Summary

Skin : pH value - Used for classification

Eyes : pH value - Used for classification

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|------------------------------|
| 2-aminoethanol | Category 3 | - | Respiratory tract irritation |
| citric acid | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---------------------------------------|------------|-------------------|----------------|
| pyridine-2-thiol 1-oxide, sodium salt | Category 1 | - | nervous system |

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

Inhalation : No specific data.

Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:
 irritation
 redness
- Ingestion** : No specific data.

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

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---------------------------------------|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Grindex 10 | >2000 | >2000 | N/A | 108.6 | 152.7 |
| 2-aminoethanol | 1720 | 1100 | N/A | 11 | N/A |
| sodium hydroxide | 500 | N/A | N/A | N/A | N/A |
| benzotriazole | 500 | N/A | N/A | N/A | N/A |
| pyridine-2-thiol 1-oxide, sodium salt | 500 | 790 | N/A | N/A | 0.5 |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---------------------------------------|---|--|--|
| 2-aminoethanol | Acute LC50 329160 µg/l Fresh water Chronic NOEC 0.85 mg/l | Fish - <i>Lepomis macrochirus</i> Daphnia | 96 hours 21 days |
| benzotriazole | Chronic NOEC 1.2 mg/l LC50 180 mg/l Acute EC50 15.8 mg/l Chronic NOEC 1 mg/l | Fish Fish Daphnia - <i>Daphnia galeata</i> Daphnia - <i>Daphnia galeata</i> | 30 days 96 hours 48 hours 21 days |
| pyridine-2-thiol 1-oxide, sodium salt | EC50 0.0012 mg/l EC50 0.0088 mg/l | Algae Daphnia | 72 hours 48 hours |

Persistence/degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| benzotriazole | - | - | Not readily |

Section 12. Ecological information

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| 2-aminoethanol | -1.31 | - | Low |
| citric acid | -1.72 | - | Low |
| benzotriazole | 1.44 | - | Low |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | UN | IMDG | IATA | ADR/RID | ADN |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | - | - | - | - | - |
| Transport hazard class (es) | - | - | - | - | - |
| Packing group | - | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. | No. |

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Singapore - hazardous chemicals under government control

None.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

| List name | Ingredient name | Status |
|--------------|-----------------|--------|
| Schedule III | Triethanolamine | Listed |

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

History

Date of printing : 12. Jan. 2024

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Version : 1.03

Product Stewardship Blaser Swissslube AG

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

| Classification | Justification |
|---|-----------------|
| SKIN CORROSION/IRRITATION - Category 2 | Expert judgment |
| SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A | Expert judgment |

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.