

SAFETY DATA SHEET

Grindex 10 CO

Section 1. Identification

GHS product identifier : Grindex 10 CO

Product code : 01100-06

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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Section 2. Hazards identification

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 5
ACUTE TOXICITY (dermal) - Category 5
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
AQUATIC TOXICITY (CHRONIC) - Category 3

GHS label elements

Hazard pictograms



Signal word : Warning

Hazard statements : H303 + H313 - May be harmful if swallowed or in contact with skin.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

: P280 - Wear protective gloves. Wear eye or face protection.
P273 - Avoid release to the environment.
P264 - Wash thoroughly after handling.

Section 2. Hazards identification

- : P301 + P317 - IF SWALLOWED: Get medical help.
- P302 + P317 + P352 - IF ON SKIN: Get medical help. Wash with plenty of water.
- P332 + P317 - If skin irritation occurs: Get medical help.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- 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 + P317 - If eye irritation persists: Get medical help.
- : Not applicable.
- : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% (w/w)	CAS number	Type
2,2',2''-nitriлотriethanol	>25 - <30	CAS: 102-71-6	[1]
benzotriazole	>10 - <25	CAS: 95-14-7	[1]
2,2' -oxybisethanol	>5 - <10	CAS: 111-46-6	[1]
6,6',6''-(1,3,5-triazine-2,4,6-triyltriimino) trihexanoic acid	>5 - <10	CAS: 80584-91-4	[1]
2-(2-aminoethoxy)ethanol	>5 - <10	CAS: 929-06-6	[1]
1-(N,N-bis(2-hydroxyethyl)amino)propan-2-ol	>3 - <5	CAS: 6712-98-7	[1]
sodium hydroxide	>1 - <3	CAS: 1310-73-2	[1] [2]
1,2-Ethanediamine, N1,N1,N2,N2-tetramethyl-, polymer with 1,1'-oxybis[2-chloroethane]	>0.1 - <0.3	CAS: 31075-24-8	[1]

Additional information :

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

There are no 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.

Type

- [1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit

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. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention.

Inhalation

- : Avoid breathing vapor 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

Section 4. First aid measures

for 48 hours. Remove victim to fresh air and keep at rest in a position comfortable for breathing.

- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. 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. If necessary, call a poison center or physician. 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

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May be harmful in contact with skin. Causes skin irritation.
- Ingestion** : May be harmful if swallowed.

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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

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

Section 5. Fire-fighting measures

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- 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** : 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- Environmental precautions** : Avoid dispersal of spilled 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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert 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 release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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.

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 vapor or mist. Avoid release to the environment. 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.

Section 7. Handling and storage

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 unlabeled 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
 Sodium hydroxide	TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018) STEL 15 minutes: 4 mg/m ³ . TWA 8 hours: 2 mg/m ³ .

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

- 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.
- 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) .
- Eye 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.
- 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.
- 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.

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.
Color	: Yellow.
Odor	: Characteristic.
Odor 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)
Boiling point or initial boiling point and boiling range	: Not available.
Flash point	: Open cup: Not applicable.
Evaporation rate	: Not available.
Flammability	: Not available.
Lower and upper explosion limit/flammability limit	: Not available.
Vapor pressure	: Not available.
Relative vapor density	: Not available.
Relative density	: Not available.
Density	: 1.142 g/cm ³ [20°C (68°F)]
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): 18 mm ² /s (18 cSt)

Particle characteristics

Median particle size	: Not applicable.
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Section 10. Stability and reactivity

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.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

Result

2,2',2"-nitrilotriethanol

Rabbit - Dermal - LD50

>2000 mg/kg

-

Rat - Oral - LD50

6400 mg/kg

benzotriazole

Rat - Oral - LD50

500 mg/kg

-

Rabbit - Dermal - LD50

>2000 mg/kg

2,2' -oxybisethanol

Rabbit - Dermal - LD50

>5000 mg/kg

-

Rat - Oral - LD50

>5000 mg/kg

6,6',6''-(1,3,5-triazine-2,4,6-triyltriimino)
trihexanoic acid**Rat - Oral - LD50**

>5000 mg/kg

-

Rat - Dermal - LD50

>2000 mg/kg

2-(2-aminoethoxy)ethanol

Rabbit - Dermal - LD50

>3000 mg/kg

1-(N,N-bis(2-hydroxyethyl)amino)propan-2-ol

Rat - Oral - LD50

>2000 mg/kg

-

Rabbit - Dermal - LD50

>2000 mg/kg

sodium hydroxide

Rat - Oral - LD50

>2000 mg/kg

1,2-Ethanediamine, N1,N1,N2,
N2-tetramethyl-, polymer with 1,1'-oxybis
[2-chloroethane]**Rat - Oral - LD50**

1951 mg/kg

-

Rabbit - Dermal - LD50

>2000 mg/kg

-

Rat - Inhalation - LC50 Vapor

5.8 mg/l [4 hours]

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Not available.

Conclusion/Summary [Product] : pH value - Used for classification

Serious eye damage/eye irritation

Not available.

Conclusion/Summary [Product] : pH value - Used for classification

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Section 11. Toxicological information

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name

2,2' -oxybisethanol

Result

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Aspiration hazard

Not available.

Information on the 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** : May be harmful in contact with skin. Causes skin irritation.
- Ingestion** : May be harmful if swallowed.

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 and also 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.

Conclusion/Summary [Product] : 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 (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Grindex 10 CO	2004.7	4406.9	N/A	N/A	N/A
2,2',2"-nitrilotriethanol	6400	2500	N/A	N/A	N/A
benzotriazole	500	2500	N/A	N/A	N/A
2,2' -oxybisethanol	500	N/A	N/A	N/A	N/A
6,6',6''-(1,3,5-triazine-2,4,6-triyltriimino)trihexanoic acid	N/A	2500	N/A	N/A	N/A
2-(2-aminoethoxy)ethanol	N/A	2500	N/A	N/A	N/A
1-(N,N-bis(2-hydroxyethyl)amino)propan-2-ol	2500	2500	N/A	N/A	N/A
sodium hydroxide	500	N/A	N/A	N/A	N/A
1,2-Ethanediamine, N1,N1,N2,N2-tetramethyl-, polymer with 1,1'-oxybis[2-chloroethane]	1951	2500	N/A	11	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
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Section 12. Ecological information

2,2',2''-nitrilotriethanol	Chronic - NOEC - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> 16 mg/l [21 days] Effect: Behavior
benzotriazole	Acute - EC50 OECD Daphnia - Water flea - <i>Daphnia galeata</i> Age: <24 hours 15.8 mg/l [48 hours] Effect: Intoxication
-	LC50 Fish 180 mg/l [96 hours]
-	EC50 Algae 75 mg/l [72 hours]
2,2' -oxybisethanol	Acute - LC50 - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> Age: 34 days; Size: 19.1 mm; Weight: 0.102 g 75200000 µg/l [96 hours] Effect: Mortality
-	NOEC Algae 2700 mg/l [8 days]
1-(N,N-bis(2-hydroxyethyl)amino)propan-2-ol	EC50 Daphnia >100 mg/l [48 hours]
-	EC50 Aquatic plants >100 mg/l [96 hours]
1,2-Ethanediamine, N1,N1,N2, N2-tetramethyl-, polymer with 1,1'-oxybis [2-chloroethane]	Acute - EC50 Daphnia 0.37 mg/l [48 hours]
-	Acute - LC50 - Fresh water Fish 0.047 mg/l [96 hours]
-	Acute - NOEC - Fresh water Fish 0.037 mg/l [96 hours]

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzotriazole	-	-	Not readily
1-(N,N-bis(2-hydroxyethyl)amino)propan-2-ol	-	86%; <28 day(s)	-

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
2,2',2''-nitritoltriethanol	-1	<3.9	Low
benzotriazole	1.44	-	Low
2,2' -oxybisethanol	-1.98	100	Low
2-(2-aminoethoxy)ethanol	-1.89	-	Low

Mobility in soil

Soil/Water partition coefficient : 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 minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	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

TCCSCA List of toxic chemicals

Not applicable.

TCCSCA List of concerned chemicals

Not applicable.

OSHA Article 29 : None of the components are listed.

OSHA Article 30 : None of the components are listed.

Priority management chemicals, Article 2

Regulation Governing Designation and Handling Permission of Controlled Chemicals : Not applicable

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

List name	Ingredient name	Status
Schedule III	2,2',2"-nitrilotriethanol	Listed

Montreal Protocol

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Taiwan : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 5 ACUTE TOXICITY (dermal) - Category 5 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A AQUATIC TOXICITY (CHRONIC) - Category 3	Calculation method Calculation method Expert judgment Expert judgment Calculation method

Organization that prepared the SDS Product Stewardship Blaser Swisslube AG

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History

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Section 16. Other information

Key to abbreviations

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
EC50 = Half maximal effective concentration
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LC50 = Median lethal concentration
LD50 = Median lethal dose
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

Indicates information that has changed from previously issued version.

Notice to reader

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