

SAFETY DATA SHEET



Additive R01

Section 1. Identification

Product name : Additive R01
Product code : 29189-01

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

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

Manufacturer : BLASER SWISSLUBE AG
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Supplier's details : Irving Tooling Solutions Ltd.
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NZ-8042 Christchurch
Tel:+64 3 981 8199
E-Mail: service@toolingsolutions.co.nz

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Emergency telephone number (with hours of operation) : +64 9 929 1483 (24h/7d)

Section 2. Hazards identification

HSNO Classification : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

This material is not classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

GHS label elements

Signal word : Warning

Hazard statements : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Do not apply directly into or onto water.
Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

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

Section 2. Hazards identification

- Response** : P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P332 + P313 - If skin irritation occurs: Get medical advice or attention.
 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.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Symbol** :



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
1-aminopropan-2-ol	≥10 - ≤30	78-96-6
2-butoxyethanol	≥10 - ≤25	111-76-2
2-amino-2-methylpropanol	≤5	124-68-5
citric acid	≤5	5949-29-1
2,2',2''-nitrilotriethanol	≤3	102-71-6
2,2'-(methylinino)diethanol	≤3	105-59-9
benzotriazole	≤3	95-14-7
Poly(oxy-1,2-ethanediyl), α-(carboxymethyl)-ω-(octyloxy)-	≤3	107600-33-9
dicyclohexylamine	≤1.5	101-83-7

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.

Section 4. First aid measures

Description of necessary first aid measures

- 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.

Section 4. First aid measures

- 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.
- 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.
- 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

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

Over-exposure signs/symptoms

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

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

- Specific treatments** : No specific treatment.
- 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.
- 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** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.

- 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

Section 5. Firefighting measures

Hazchem code : Not available.

Special precautions 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.

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). Water polluting material. May be harmful to the environment if released in large quantities.

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. 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 : Storage temperature: 0 to 40°C (32 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-butoxyethanol	HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2020). Absorbed through skin. WES-TWA: 25 ppm 8 hours. WES-TWA: 121 mg/m ³ 8 hours.
2,2',2"-nitrilotriethanol	HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2020). WES-TWA: 5 mg/m ³ 8 hours.

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.

Section 8. Exposure controls/personal protection

- 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** : Yellow to red.
- Odour** : Ammoniacal.
- Odour threshold** : Not available.
- pH** : 8.9 to 9.9 [Conc. (% w/w): 5%]
- Melting point/freezing point** : Not available.
- Pour point** : <0°C (<32°F)
- Boiling point, 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.
- Vapour pressure** : Not available.
- Relative vapour density** : Not available.
- Relative density** : Not available.
- Density** : 1.02 g/cm³ [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** : Kinematic (40°C (104°F)): 13 mm²/s (13 cSt)

Particle characteristics

- 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.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on likely routes of exposure

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

Symptoms related to the physical, chemical and toxicological characteristics

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

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1-aminopropan-2-ol	LD50 Dermal	Rabbit	1851 mg/kg	-
	LD50 Oral	Rat	2098 mg/kg	-
2-butoxyethanol	LD50 Dermal	Rabbit	400 mg/kg	-
	LD50 Oral	Rat	1480 mg/kg	-
2-amino-2-methylpropanol	LD50 Dermal	Rabbit	>2000 mg/kg	-
citric acid	LD50 Dermal	Rabbit	>2000 mg/kg	-
2,2',2''-nitritotriethanol	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	6400 mg/kg	-
2,2'-(methylimino)diethanol	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	4780 mg/kg	-
benzotriazole	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-
Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -(octyloxy)	LD50 Oral	Rat	>2000 mg/kg	-
-				
dicyclohexylamine	LD50 Dermal	Rabbit	200 mg/kg	-
	LD50 Oral	Rat	200 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
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.

Section 11. Toxicological information

Potential chronic health effects

General	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Eye contact	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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)
Additive R01	>2000	>2000	N/A	57.9	N/A
1-aminopropan-2-ol	2098	1851	N/A	N/A	N/A
2-butoxyethanol	1480	1100	N/A	11	N/A
2,2',2''-nitritotriethanol	6400	N/A	N/A	N/A	N/A
2,2'-(methylimino)diethanol	4780	N/A	N/A	N/A	N/A
benzotriazole	500	N/A	N/A	N/A	N/A
dicyclohexylamine	200	200	N/A	N/A	N/A

Section 12. Ecological information

Ecotoxicity : This material is harmful to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
1-aminopropan-2-ol	Acute LC50 210 mg/l Fresh water	Fish - <i>Carassius auratus</i>	96 hours
2-butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - <i>Crangon crangon</i>	48 hours
2-amino-2-methylpropanol	Acute LC50 1250000 µg/l Marine water	Fish - <i>Menidia beryllina</i>	96 hours
2,2',2''-nitrilotriethanol	LC50 193 mg/l	Daphnia	48 hours
benzotriazole	Chronic NOEC 16 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
	LC50 180 mg/l	Fish	96 hours
	Acute EC50 15.8 mg/l	Daphnia - <i>Daphnia galeata</i>	48 hours
	Chronic NOEC 1 mg/l	Daphnia - <i>Daphnia galeata</i>	21 days
dicyclohexylamine	Acute EC50 70.1 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours

Persistence/degradability

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

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
1-aminopropan-2-ol	-0.96	-	Low
2-butoxyethanol	0.81	-	Low
2-amino-2-methylpropanol	-0.63	-	Low
citric acid	-1.72	-	Low
2,2',2''-nitrilotriethanol	-1	<3.9	Low
2,2'-(methylimino)diethanol	-1.08	-	Low
benzotriazole	1.44	-	Low
dicyclohexylamine	2.724	459	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

	New Zealand	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

HSNO Approval Number : HSR002606

HSNO Classification : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

List name	Ingredient name	Status
Schedule III	Triethanolamine Methyldiethanolamine	Listed 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.

Inventory list

New Zealand : All components are listed or exempted.

Section 16. Other information

History

Date of printing	: 12. Feb. 2024
Date of issue/Date of revision	: 12. Feb. 2024
Date of previous issue	: No previous validation
Version	: 1
Prepared by	: Product Stewardship Blaser Swissslube AG
Key to abbreviations	: ADG = Australian Dangerous Goods ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road 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) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail SGG = Segregation Group UN = United Nations

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.