SAFETY DATA SHEET

Blaser TP 334

Section 1. Identification

GHS product identifier : Blaser TP 334

Article No. : 40334-01

Product type : Liquid.

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

Identified uses
Industrial use only. Metal working fluids Experiment

Uses advised against
Consumer use.

Manufactured/supplied : BLASER SWISSLUBE AG
Winterseistrasse 22
CH-3415 Hasle-Rüegsau
Switzerland
Tel:+41 (0)34 460 01 01
Mail: contact@blaser.com

Blaser Swisslube Inc.
31 Hatfield Lane
Goshen, NY 10924
Tel:+1 845 294 32 00
Mail: mailboxusa@blaser.com

e-mail address of person responsible for this SDS : reach@blaser.com

Emergency telephone number (with hours of operation) : +1 866 928 0789 (Toll free)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :

Signal word : Warning

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

Precautionary statements

Section 2. Hazards identification

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

Response : P302 + P352 - IF ON SKIN: Wash with plenty of water.
P332 + P313 - If skin irritation occurs: Get medical advice or attention.
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 + P313 - If eye irritation persists: Get medical advice or attention.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	Identifiers
1-phenoxypropan-2-ol	≤5	CAS: 770-35-4
2-amino-2-methylpropanol	≤3	CAS: 124-68-5
2-[2-(dimethylamino)ethoxy]ethanol	≤3	CAS: 1704-62-7
Phosphoric acid, isotridecyl ester	≤3	CAS: 52933-07-0
2-dibutylaminoethanol	≤3	CAS: 102-81-8
2,2'-(methylimino)diethanol	≤3	CAS: 105-59-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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 and would 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

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 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 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.

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.

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 : 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. Fire-fighting 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
carbonyl halides

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.

Section 5. Fire-fighting measures

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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized 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 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).

Methods and materials for containment and cleaning up

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. 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: 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 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

NIOSH Recommended exposure limit for Metalworking fluids: 0.5 mg/m3 (particulate)

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
1-phenoxypropan-2-ol	None.
2-amino-2-methylpropanol	None.
2-[2-(dimethylamino)ethoxy]ethanol	None.
Phosphoric acid, isotridecyl ester	None.
2-dibutylaminoethanol	**NIOSH REL (United States, 10/2020)** Absorbed through skin. TWA 10 hours: 2 ppm. TWA 10 hours: 14 mg/m³. **CAL OSHA PEL (United States, 5/2018)** Absorbed through skin. TWA 8 hours: 14 mg/m³. TWA 8 hours: 2 ppm. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 2 ppm. TWA 8 hours: 14 mg/m³. **ACGIH TLV (United States, 1/2024)** Absorbed through skin. TWA 8 hours: 0.5 ppm. TWA 8 hours: 3.5 mg/m³.
2,2'-(methylimino)diethanol	None.

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.

Section 8. Exposure controls/personal protection

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.

Color : Brown.

Odor : Strong.

Odor threshold : Not available.

pH : 9.1 [Conc. (% w/w): 5%]

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : Not available.

Flash point : Open cup: Not applicable.

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 : 1.021 g/cm³ [68°F (20°C)]

Solubility(ies) :

Media	Result
cold water	Dispersible
hot water	Dispersible

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 (104°F (40°C)): 235 mm^2/s (235 cSt)

VOC content : 104 g/l (ASTM E1868-10); Concentrate in the packaging as sold.
14.7 g/l (ASTM E1868-10); @ Maximum concentration

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.

Section 10. Stability and reactivity

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	Species	Dose	Exposure
1-phenoxypropan-2-ol	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	2830 mg/kg	-
2-amino-2-methylpropanol	LD50 Dermal	Rabbit	>2000 mg/kg	-
Phosphoric acid, isotridecyl ester	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
2-dibutylaminoethanol	LD50 Dermal	Rabbit	1680 mg/kg	-
	LD50 Oral	Rat	1070 mg/kg	-
2,2'-(methylimino)diethanol	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	4780 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-[2-(dimethylamino)ethoxy] ethanol	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	264 hours 100 mg l	-
2-dibutylaminoethanol	Skin - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Severe irritant	Rabbit	-	500 mg	-

Respiratory or skin sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification IARC/OSHA/NTP

Not applicable.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
2-dibutylaminoethanol	Category 3	-	Respiratory tract irritation

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

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 : 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.

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.

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

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Blaser TP 334	>2000	>2000	N/A	N/A	N/A
1-phenoxypropan-2-ol	2830	2500	N/A	N/A	N/A
2-amino-2-methylpropanol	N/A	2500	N/A	N/A	N/A
2-[2-(dimethylamino)ethoxy]ethanol	N/A	1100	N/A	N/A	N/A
Phosphoric acid, isotridecyl ester	2500	2500	N/A	N/A	N/A
2-dibutylaminoethanol	1070	1680	N/A	N/A	N/A
2,2'-(methylimino)diethanol	4780	2500	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
1-phenoxypropan-2-ol	EC50 >100 mg/l	Algae	96 hours
	EC50 220 to 460 mg/l	Fish	96 hours
	LC50 370 mg/l	Daphnia	48 hours
2-amino-2-methylpropanol	LC50 193 mg/l	Daphnia	48 hours
Phosphoric acid, isotridecyl ester	EC50 150 mg/l	Algae	72 hours
	EC50 6.3 mg/l	Daphnia	48 hours
	LC50 24 mg/l	Fish	96 hours
	NOEC 110 mg/l	Algae	-
2-dibutylaminoethanol	Acute EC10 6.9 mg/l	Aquatic plants	72 hours
	Acute EC50 21 mg/l	Aquatic plants	72 hours
	Acute EC50 73.7 mg/l Fresh water	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 29 mg/l	Fish	96 hours
	Chronic NOEC 4.4 mg/l	Daphnia	21 days

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
1-phenoxypropan-2-ol	1.41	-	Low
2-amino-2-methylpropanol	-0.63	-	Low
2-dibutylaminoethanol	-	<39	Low
2,2'-(methylimino)diethanol	-1.08	-	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 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

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
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

U.S. Federal regulations : **TSCA 4(a) proposed test rules**: benzotriazole

TSCA 8(a) PAIR: 1-phenoxypropan-2-ol; dodecamethylcyclohexasiloxane; decamethylcyclopentasiloxane; octamethylcyclotetrasiloxane

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Commerce control list precursor: 2,2',2''-nitrilotriethanol

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

Section 15. Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A

Composition/information on ingredients

Name	%	Classification
1-phenoxypropan-2-ol	≤5	EYE IRRITATION - Category 2A
2-amino-2-methylpropanol	≤3	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
2-[2-(dimethylamino)ethoxy]ethanol	≤3	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1
Phosphoric acid, isotridecyl ester	≤3	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
2-dibutylaminoethanol	≤3	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2,2'-(methylimino)diethanol	≤3	EYE IRRITATION - Category 2A

California Prop. 65

This product contains one or more chemicals listed under California Proposition 65. Such chemicals are not used as raw materials in the product formulation but rather are typical impurities.

California SCAQMD Rule 1144:

Category: Metalworking Fluid – Metal Removal – General. Recordkeeping requirement: Super Compliant. (< 50 g/L VOC @ max. use concentration)

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

List name	Ingredient name	Status
Schedule III	Methyldiethanolamine Triethanolamine	Listed Listed

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Section 15. Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Canada : All components are listed or exempted.

United States : All components are active or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A	Calculation method Expert judgment

History

Date of printing : 11/25/2024

Date of issue/Date of revision : 11/25/2024

Date of previous issue : No previous validation

Version : 1

Prepared by : Product Stewardship Blaser Swisslube 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

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.