

## Section 1. Identification

<b>GHS product identifier</b>	Hysol MB 50
<b>Product code</b>	465450-FR01
<b>SDS #</b>	465450
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	
<b>Use of the substance/ mixture</b>	Metalworking fluid - soluble. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
<b>Manufacturer Supplier</b>	Castrol India Ltd Technopolis Knowledge Park Office PO Box 19411 Mahakali Caves Rd Chakala, Andheri (E) Mumbai 400093
<b>EMERGENCY TELEPHONE NUMBER</b>	Telephone: +91 (022) 66984111/66984112 Toll free: 000800 100 7479 (for use in India only - 24/7) Carechem Singapore: +65 3158 1198 (24/7)

## Section 2. Hazards identification

<b>GHS Classification</b>	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
<b>GHS label elements</b>	
<b>Hazard pictograms</b>	
<b>Signal word</b>	Warning
<b>Hazard statements</b>	H315 - Causes skin irritation. H319 - Causes serious eye irritation. H401 - Toxic to aquatic life. H412 - Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	
<b>General</b>	Not applicable.
<b>Prevention</b>	P280 - Wear protective gloves. Wear eye or face protection. P273 - Avoid release to the environment. P264 - Wash hands thoroughly after handling.
<b>Response</b>	P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P332 + P313 - If skin irritation occurs: Get medical 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 attention.
<b>Storage</b>	Not applicable.
<b>Disposal</b>	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Other hazards which do not result in classification</b>	Defatting to the skin. This product contains complex ionic mixtures within the fluid matrix which are an intrinsic part of the product and cannot be separated from the fluid matrix. Toxicology testing has shown the ionic-mixture containing products exhibit skin and eye irritation properties that are notably attenuated when compared to the individual acid and base components.

## Section 3. Composition/information on ingredients

### Substance/mixture

Mixture

Highly refined base oil (IP 346 DMSO extract <3%), emulsifiers and additives.

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated heavy naphthenic	≥50 - ≤75	CAS: 64742-52-5
2-Amino-2-methylpropanol	≤10	CAS: 124-68-5
dicyclohexylamine	≤6	CAS: 101-83-7
Poly(oxy-1,2-ethanediyl), α-(9Z)-9-octadecen-1-yl-ω-hydroxy-, phosphate	≤3	CAS: 39464-69-2
2-aminobutan-1-ol	≤3	CAS: 96-20-8
neodecanoic acid	≤3	CAS: 26896-20-8
2,2',2"-nitrilotriethanol	≤3	CAS: 102-71-6
Boric acid	≤3	CAS: 10043-35-3
undecanedioic acid	≤3	CAS: 1852-04-6
Amines, tallow alkyl, ethoxylated	≤1	CAS: 61791-26-2

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

#### Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

#### Inhalation

If inhaled, remove to fresh air. 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. Get medical attention if symptoms occur.

#### Skin contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention. If skin irritation or rash occurs: Get medical advice/attention.

#### Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Wash out mouth with water if person is conscious. Get medical attention if adverse health effects persist or are severe.

#### 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.

### Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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

#### Specific treatments

No specific treatment.

#### Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects. 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 5. Firefighting measures

### Extinguishing media

#### Suitable

In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.

#### Not suitable

Do not use water jet.

## Section 5. Firefighting measures

### Specific hazards arising from the chemical

Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life. This material is harmful to aquatic life with long lasting effects.

### Hazardous thermal decomposition products

Combustion products may include the following:  
phosphorus oxides  
carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide)  
nitrogen oxides (NO, NO<sub>2</sub> etc.)

### Special precautions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

### Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Contact 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. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

#### For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. 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. 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 the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

## 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. Avoid contact of spilt material and runoff with soil and surface waterways. Avoid prolonged or repeated contact with skin. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid and as a result may induce allergic skin reactions. Evaporation of water from soluble cutting fluids during use may lead to an increase in concentration which may result in the development of skin conditions due to irritation and defatting. It is important to monitor fluid strength on a regular basis with a refractometer and maintain it at the recommended concentration. Lubricants from other sources and other contaminants should be minimised. Swarf and other debris should be removed. To maintain optimum performance and minimise bacterial spoilage, machine tool coolant systems should be cleaned on a regular basis.

## Section 7. Handling and storage

### Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. Contaminated work clothing should not be allowed out of the workplace. See also Section 8 for additional information on hygiene measures.

### Conditions for safe storage

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. Store and use only in equipment/containers designed for use with this product. 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. DO NOT ADD NITRITES TO THIS FLUID.

### Not suitable

Prolonged exposure to elevated temperature

Ensure product is stored in covered area away from direct sunlight, heat, rain and water exposure.



## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<input checked="" type="checkbox"/> Distillates (petroleum), hydrotreated heavy naphthenic	<b>Directorate General Factory Advice Service &amp; Labour Institutes, Factories Act (India, 4/2001) [oil mist mineral]</b> STEL 15 minutes: 10 mg/m <sup>3</sup> . Form: mist. TWA 8 hours: 5 mg/m <sup>3</sup> . Form: mist.
2,2',2''-nitrioltriethanol	<b>ACGIH TLV (United States, 1/2024)</b> TWA 8 hours: 5 mg/m <sup>3</sup> .
Boric acid	<b>ACGIH TLV (United States, 1/2024) [Borate compounds, Inorganic] A4.</b> TWA 8 hours: 2 mg/m <sup>3</sup> . Form: Inhalable fraction. STEL 15 minutes: 6 mg/m <sup>3</sup> . Form: Inhalable fraction.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

#### Biological exposure indices

Ingredient name	Exposure indices
No exposure indices known.	

### Recommended monitoring procedures

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

## Section 8. Exposure controls/personal protection

### 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 protection

Undiluted fluid: Chemical goggles.  
Diluted fluid: Safety glasses with side shields.

### Skin protection

#### Hand protection

Wear suitable gloves. Undiluted fluid: Wear chemical resistant gloves. Recommended: nitrile gloves.  
Diluted fluid: Wear protective gloves if prolonged or repeated contact is likely. Recommended: nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

#### Skin protection

Use of protective clothing is good industrial practice. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

#### Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m<sup>3</sup>), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m<sup>3</sup>). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

## Section 9. Physical and chemical properties

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

### Appearance

Physical state	Liquid.
Colour	Yellow. [Light]
Odour	Unfragranced
Odour threshold	Not available.
pH	9.65 [Conc. (% w/w): 5%]
Melting point/freezing point	Not available.

## Section 9. Physical and chemical properties

<b>Boiling point or initial boiling point and boiling range</b>	Not available.
<b>Drop Point</b>	Not available.
<b>Flash point</b>	Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point determination.]
<b>Evaporation rate</b>	Not available.
<b>Flammability</b>	Not available.
<b>Flammability</b>	Not applicable. Based on - Physical state
<b>Lower and upper explosion limit/flammability limit</b>	Not available.
<b>Vapour pressure</b>	<0.01 kPa
<b>Relative vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Density</b>	<1000 kg/m <sup>3</sup> (<1 g/cm <sup>3</sup> ) at 15°C
<b>Solubility(ies)</b>	

Media	Result
water	Emulsifies in water.

**Partition coefficient: n-octanol/water** Not applicable.

**Auto-ignition temperature**

Ingredient name	°C	°F	Method
<input checked="" type="checkbox"/> Amino-2-methylpropanol	438	820.4	ASTM D 2161
dicyclohexylamine	255	491	
neodecanoic acid	375	707	ASTM E 659
2,2',2"-nitrilotriethanol	324	615.2	

**Decomposition temperature** Not available.

**Viscosity** Kinematic: 70 mm<sup>2</sup>/s (70 cSt) at 40°C

**Particle characteristics**

**Median particle size** Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
<b>Conditions to avoid</b>	Avoid excessive heat.
<b>Incompatible materials</b>	Reactive or incompatible with the following materials: oxidising materials. Slightly reactive or incompatible with the following materials: acids.
<b>Hazardous decomposition products</b>	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**

Amino-2-methylpropanol

**Result**

**Rat - Oral - LD50**

2900 mg/kg  
OECD 401

**Rabbit - Dermal - LD50**

>2000 mg/kg  
OECD 402

dicyclohexylamine

**Rat - Oral - LD50**

200 mg/kg

**Rabbit - Dermal - LD50**

200 to 316 mg/kg

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## Section 11. Toxicological information

Poly(oxy-1,2-ethanediyl),  $\alpha$ -(9Z)-9-octadecen-1-yl- $\omega$ -hydroxy-, phosphate  
2-aminobutan-1-ol

Boric acid

undecanedioic acid

Amines, tallow alkyl, ethoxylated

**Rat - Inhalation - LC50 Vapour**

>1.4 mg/l [6 hours]

**Rat - Oral - LD50**

>2000 mg/kg

**Rat - Oral - LD50**

1800 mg/kg

OECD 401

**Rat - Oral - LD50**

3000 to 4000 mg/kg

**Rabbit - Dermal - LD50**

>2000 mg/kg

**Rat - Oral - LD50**

>5000 mg/kg

**Rabbit - Dermal - LD50**

>6000 mg/kg

**Rat - Oral - LD50**

500 mg/kg

Equivalent to OECD

### Skin corrosion/irritation

#### **Product/ingredient name**

-Amino-2-methylpropanol  
dicyclohexylamine  
Poly(oxy-1,2-ethanediyl),  $\alpha$ -(9Z)-9-octadecen-1-yl- $\omega$ -hydroxy-, phosphate  
2-aminobutan-1-ol  
undecanedioic acid

Amines, tallow alkyl, ethoxylated

#### **Result**

**Rabbit - Skin - Irritant**

**Rabbit - Skin - Corrosive**

**Rabbit - Skin - Irritant**

**Rabbit - Skin - Corrosive**

**Rabbit - Skin - Not irritant**

OECD 404

**Rabbit - Skin - Not irritant**

### Serious eye damage/eye irritation

#### **Product/ingredient name**

-Amino-2-methylpropanol  
dicyclohexylamine  
Poly(oxy-1,2-ethanediyl),  $\alpha$ -(9Z)-9-octadecen-1-yl- $\omega$ -hydroxy-, phosphate  
undecanedioic acid

Amines, tallow alkyl, ethoxylated

#### **Result**

**Rabbit - Eyes - Severe irritant**

**Rabbit - Eyes - Severe irritant**

**Rabbit - Eyes - Severe irritant**

**Rabbit - Eyes - Irritant**

OECD 405

**Rabbit - Eyes - Severe irritant**

### Respiratory corrosion/irritation

Not available.

### Respiratory or skin sensitization

#### **Product/ingredient name**

-Amino-2-methylpropanol

2-aminobutan-1-ol

undecanedioic acid

#### **Result**

**Guinea pig - skin**

OECD 406

Result: Not sensitising

**Guinea pig - skin**

Result: Not sensitising

**Guinea pig - skin**

OECD 406

Result: Not sensitising

### Germ cell mutagenicity

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## Section 11. Toxicological information

### Product/ingredient name

-Amino-2-methylpropanol

### Result

#### In vitro - Bacteria

OECD 471

Result: Negative

#### In vitro - Mammalian-Human

OECD 476

Result: Negative

#### In vivo - Mammalian-Human

OECD 474

Result: Negative

dicyclohexylamine

#### In vitro - Bacteria

Bacterial Reverse Mutation Test

Result: Negative

#### In vitro - Mammal - species unspecified

Result: Negative

#### In vitro - Mammal - species unspecified

Mammalian Erythrocyte Micronucleus Test

Result: Negative

#### In vivo - Mammal - species unspecified

Genetic Toxicology: Rodent Dominant Lethal Test

Result: Negative

2-aminobutan-1-ol

#### In vitro - Bacteria

Bacterial Reverse Mutation Test

Result: Negative

#### In vitro - Mammal - species unspecified

In vitro Mammalian Cell Gene Mutation Test

Result: Negative

#### In vivo - Mammal - species unspecified

Mammalian Erythrocyte Micronucleus Test

Result: Negative

undecanedioic acid

#### In vitro - Bacteria

Bacterial Reverse Mutation Test

Result: Negative

#### In vitro - Mammal - species unspecified

Result: Negative

#### In vivo - Mammal - species unspecified

Result: Negative

### Carcinogenicity

Not available.

### Reproductive toxicity

#### Product/ingredient name

-Amino-2-methylpropanol

#### Result

##### Rat - Oral

OECD 443

Maternal toxicity: Negative

Fertility effects: Negative

Developmental: Negative

dicyclohexylamine

##### Rat - Oral

OECD 421

Maternal toxicity: Positive

Fertility effects: Negative

Developmental: Negative

2-aminobutan-1-ol

##### Rat - Oral

OECD 422

Maternal toxicity: Positive

Fertility effects: Negative

Developmental: Negative

### Specific target organ toxicity (single exposure)

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## Section 11. Toxicological information

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

#### Eye contact

Causes serious eye irritation.

#### Inhalation

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

#### Skin contact

Causes skin irritation. Defatting to the skin.

#### Ingestion

Irritating to mouth, throat and stomach.

### 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  
dryness  
cracking

#### Ingestion

No specific data.

### Potential chronic health effects

#### General

No known significant effects or critical hazards.

#### Carcinogenicity

No known significant effects or critical hazards.

#### Mutagenicity

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.

### Numerical measures of toxicity

#### Acute toxicity estimates

##### Route

##### ATE value

Dermal

5081.95 mg/kg

## Section 12. Ecological information

### Environmental effects

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

### Toxicity

#### Product/ingredient name

Amino-2-methylpropanol

#### Result

##### **Acute - ErC50**

OECD 201

Algae

>100 mg/l [72 hours]

##### **Acute - LC50**

OECD 202

Daphnia

>100 mg/l [48 hours]

##### **Acute - LC50**

OECD 203

Fish

>100 mg/l [96 hours]

## Section 12. Ecological information

dicyclohexylamine	<b>Chronic - NOEC</b> OECD 201 Algae 6.6 mg/l [72 hours]	
	<b>Acute - ErC50</b> OECD 201 Algae 1 mg/l [72 hours]	
	<b>Acute - EC50</b> DIN 38412 Part 11 Daphnia 43 mg/l [48 hours]	
	<b>Acute - LC50</b> OECD 203 Fish 62 mg/l [96 hours]	
	<b>Acute - EC50</b> DIN 38412 Part 8 Micro-organism 201 mg/l [17 hours]	
	<b>Chronic - NOEC</b> OECD 201 Daphnia 2 mg/l [72 hours]	
	<b>Chronic - NOEC</b> OECD 211 Fish 0.016 mg/l [21 days]	
	<b>Acute - LC50</b> Fish >100 mg/l [96 hours]	
	<b>Acute - ErC50</b> OECD 201 Algae 0.91 mg/l [72 hours]	
	<b>Acute - ErC50</b> OECD 202 Daphnia 115 mg/l [48 hours]	
Poly(oxy-1,2-ethanediyl), $\alpha$ -(9Z)-9-octadecen-1-yl- $\omega$ -hydroxy-, phosphate	<b>Acute - LC50</b> OECD 203 Fish 270 mg/l [96 hours]	
	<b>Acute - EC50</b> OECD 209 Micro-organism 329.2 mg/l [3 hours]	
	<b>Chronic - EC50</b> OECD 201 Algae 0.05 mg/l [72 hours]	
	<b>Acute - EL50</b> ISO 10253 Algae 38.7 mg/l [72 hours]	
	<b>Acute - EC50</b> OECD 202 Daphnia >100 mg/l [48 hours]	
	<b>Acute - LC50</b> OECD 203 Fish >100 mg/l [96 hours]	
	<b>Acute - EC20</b> ISO 8192 Micro-organism >1000 mg/l [3 hours]	
	2-aminobutan-1-ol	<b>Chronic - EC50</b> OECD 201 Algae 0.05 mg/l [72 hours]
		<b>Acute - EL50</b> ISO 10253 Algae 38.7 mg/l [72 hours]
		<b>Acute - EC50</b> OECD 202 Daphnia >100 mg/l [48 hours]
<b>Acute - LC50</b> OECD 203 Fish >100 mg/l [96 hours]		
<b>Acute - EC20</b> ISO 8192 Micro-organism >1000 mg/l [3 hours]		
undecanedioic acid		<b>Chronic - EC50</b> OECD 201 Algae 0.05 mg/l [72 hours]
		<b>Acute - EL50</b> ISO 10253 Algae 38.7 mg/l [72 hours]
		<b>Acute - EC50</b> OECD 202 Daphnia >100 mg/l [48 hours]
		<b>Acute - LC50</b> OECD 203 Fish >100 mg/l [96 hours]
		<b>Acute - EC20</b> ISO 8192 Micro-organism >1000 mg/l [3 hours]

## Section 12. Ecological information

Amines, tallow alkyl, ethoxylated

**Chronic - NOEC**  
ISO 10253  
Algae  
3 mg/l [72 hours]  
**Acute - EC50**  
Daphnia  
5.2 mg/l [48 hours]  
**Acute - LC50**  
Fish  
0.11 to 1 mg/l [96 hours]

### Persistence and degradability

Expected to be biodegradable.

#### Product/ingredient name

#### Result

Amino-2-methylpropanol

OECD 301F  
89.3% [28 days] - Readily

dicyclohexylamine

OECD 301D  
96% [20 days] - Readily

Poly(oxy-1,2-ethanediyl),  $\alpha$ -(9Z)-9-octadecen-1-yl- $\omega$ -hydroxy-, phosphate  
2-aminobutan-1-ol

OECD 302  
98% [28 days] - Readily

undecanedioic acid

OECD 301F  
93% [28 days] - Readily

Amines, tallow alkyl, ethoxylated

OECD 301D  
71% [28 days] - Readily

OECD 302B  
70% [28 days] - Readily

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> dicyclohexylamine	-	-	Readily

### Bioaccumulative potential

Not available.

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<input checked="" type="checkbox"/> Amino-2-methylpropanol	-0.63	-	Low
dicyclohexylamine	2.724	-	Low
2-aminobutan-1-ol	-0.45	<100	Low
neodecanoic acid	2.1	-	Low
2,2',2''-nitrilotriethanol	-1	-	Low
Boric acid	-1.09	-	Low
undecanedioic acid	2.8	-	Low

#### Mobility

Liquid. Emulsifies in water.

#### 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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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. Diluted Fluid The spent diluted fluid comprises a relatively stable emulsion. Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques (e.g. emulsion splitting, coagulation and filtration) approved by the local authority. Spent fluid should never be disposed of down the drain. The aqueous phase should not be discharged into sewage systems unless provided for by local regulations; the non-aqueous phase should be disposed of as undiluted fluid. Note that separated aqueous solutions or effluents may contain metal salts as well

## Section 13. Disposal considerations

as traces of oil and must be checked for conformity in these respects against consents given by the authorities before disposal. Further treatment may be required.

## Section 14. Transport information

	IMDG	IATA
UN number	Not regulated.	Not regulated.
UN proper shipping name	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No.	No.
Additional information	-	-

**Special precautions for user** Not available.

**Transport in bulk according to IMO instruments** Not available.

## Section 15. Regulatory information

### Regulation according to other foreign laws

<b>REACH Status</b>	The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.
<b>Australia inventory (AIC)</b>	At least one component is not listed.
<b>Canada inventory status</b>	All components are listed or exempted.
<b>China inventory (IECSC)</b>	All components are listed or exempted.
<b>Japan inventory (CSCL)</b>	All components are listed or exempted.
<b>Korea inventory (KECI)</b>	All components are listed or exempted.
<b>Philippines inventory (PICCS)</b>	At least one component is not listed.
<b>Taiwan Chemical Substances Inventory (TCSI)</b>	All components are listed or exempted.
<b>United States inventory (TSCA 8b)</b>	All components are active or exempted.

## Section 16. Other information

### History

**Date of issue/Date of revision** 29/09/2025.

**Date of previous issue** 25/10/2024.

**Prepared by** Product Stewardship

**Key to abbreviations**  
ACGIH = American Conference of Industrial Hygienists  
CAS Number = Chemical Abstracts Service Registry Number  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IMDG = International Maritime Dangerous Goods  
OEL = Occupational Exposure Limit  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]  
SDS = Safety Data Sheet  
STEL = Short term exposure limit

## Section 16. Other information

TWA = Time weighted average

UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.