

SAFETY DATA SHEET**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Product name **Hysol SL 45 XBB**Product code **469239-FR01**SDS no. **469239**Original preparation date **07/06/2021**Product type **Liquid.****1.2 Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/
mixture **Metalworking fluid - soluble.**

For specific application advice see appropriate Technical Data Sheet or consult our company representative.

1.3 Details of the supplier of the safety data sheetSupplier **Castrol Madeni Yağlar Ticaret A.Ş
İçerenköy Mah. Değirmen Yolu Cad. Mengenler Blok No: 28/1 İç Kapı No: 12 Ataşehir/İstanbul**E-mail address **MSDSadvice@bp.com****1.4 Emergency telephone number**EMERGENCY **CASTROL DIRECT 0212 473 77 37**
TELEPHONE NUMBER **Carechem: +44 (0) 1235 239 670 (24/7)**
Ministry of Health National Poison Information Centre: 114 (24 hours)**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**Classification according to regulation SEA: RG.-10/12/2020-31330

Skin Irrit. 2, H315

Eye Irrit. 2, H319

The product is classified as hazardous according to Regulation SEA: RG.-10/12/2020-31330.

See Section 16 for the full text of the H statements declared above.

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

2.2 Label elements**Hazard pictograms****Signal word** **Warning****Hazard statements** **H315 - Causes skin irritation.****H319 - Causes serious eye irritation.****Precautionary statements****Prevention** **P280 - Wear protective gloves. Wear eye or face protection.****P264 - Wash hands thoroughly after handling.****Response** **P362 + P364 - Take off contaminated clothing and wash it before reuse.****P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.****P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.****Remove contact lenses, if present and easy to do. Continue rinsing.****P337 + P313 - If eye irritation persists: Get medical attention.****Storage** **Not applicable.****Disposal** **Not applicable.**

SECTION 2: Hazards identification

Supplemental label elements Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings Not applicable.

Tactile warning of danger Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification 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

3.2 Mixtures

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

Product/ingredient name	Identifiers	%	SEA: RG.-10/12/2020-31330	Type
Distillates (petroleum), hydrotreated heavy naphthenic	EC: 265-155-0 CAS: 64742-52-5 Index: 649-465-00-7	≥25 - ≤50	Not classified.	[2]
Alcohols, C16-18 and C18-unsatd., ethoxylated	EC: 500-236-9 CAS: 68920-66-1	≤10	Skin Irrit. 2, H315 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412	[1]
carbonic acid, compound with 2-aminoethanol (1:2)	CAS: 174125-97-4	≤5	Acute Tox. 4, H302	[1]
4-Octanol, 3-amino-	CAS: 1001354-72-8	≤5	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318	[1]
3,5,5-trimethylhexanoic acid	KKDIK #: Annex 5 EC: 221-975-0 CAS: 3302-10-1	≤3	Acute Tox. 4, H302 Skin Irrit. 2, H315	[1]
Benzotriazole	EC: 202-394-1 CAS: 95-14-7	≤3	Eye Dam. 1, H318 Acute Tox. 4, H302 Eye Irrit. 2, H319	[1]
2-aminobutan-1-ol	CAS: 96-20-8	≤3	Aquatic Chronic 2, H411 Acute Tox. 4, H302 Skin Corr. 1, H314 Eye Dam. 1, H318	[1]
2-aminoethanol	EC: 205-483-3 CAS: 141-43-5 Index: 603-030-00-8	≤3	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
Poly(oxy-1,2-ethanediyl), α-(carboxymethyl)-ω-[(9Z)-9-octadecen-1-yloxy]-Neodecanoic acid	CAS: 57635-48-0 EC: 248-093-9 CAS: 26896-20-8	≤3	Aquatic Chronic 3, H412 Eye Dam. 1, H318 Acute Tox. 4, H302	[1]

See Section 16 for the full text of the H statements declared above.

SECTION 3: Composition/information on ingredients

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.

Type

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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

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.
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.
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.
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.
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.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

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.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO ₂ etc.)

5.3 Advice for firefighters

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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 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".

6.2 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).

6.3 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.

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 5 for firefighting measures.

See Section 8 for information on appropriate personal protective equipment.

See Section 12 for environmental precautions.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 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.

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.

7.2 Conditions for safe storage, including any incompatibilities

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.

SECTION 7: Handling and storage

Not suitable

Prolonged exposure to elevated temperature

7.3 Specific end use(s)

Recommendations

Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Distillates (petroleum), hydrotreated heavy naphthenic	ACGIH TLV (United States). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m ³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
2-aminoethanol	TR ISGGM OEL (Turkey). Absorbed through skin. TWA: 2.5 mg/m ³ 8 hours. Issued/Revised: 3/2008 TWA: 1 ppm 8 hours. Issued/Revised: 3/2008 STEL: 7.6 mg/m ³ 15 minutes. Issued/Revised: 3/2008 STEL: 3 ppm 15 minutes. Issued/Revised: 3/2008

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

No exposure indices known.

Recommended monitoring procedures

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
4-Octanol, 3-amino- 3,5,5-trimethylhexanoic acid	DNEL	Long term Inhalation	29 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	14.69 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	4.17 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	2.08 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	4.4 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	10 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	10 mg/m ³	Workers	Local
	DNEL	Long term Dermal	1.25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.1 mg/m ³	General population	Systemic
Benzotriazole	DNEL	Long term Inhalation	5 mg/m ³	General population	Local
	DNEL	Short term Inhalation	5 mg/m ³	General population	Local
	DNEL	Long term Dermal	0.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	4.2 mg/m ³	Workers	Systemic
2-aminobutan-1-ol	DNEL	Long term Dermal	0.24 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.1 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.12 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.12 mg/kg bw/day	General population	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Long term Oral	bw/day 0.1 mg/kg bw/day	General population	Systemic
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PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
4-Octanol, 3-amino-	Fresh water	0.039 mg/l	-
	Marine water	0.004 mg/l	-
	Fresh water sediment	0.148 mg/kg dwt	-
	Marine water sediment	0.015 mg/kg dwt	-
	Soil	0.007 mg/kg dwt	-
3,5,5-trimethylhexanoic acid	Fresh water	0.068 mg/l	-
	Marine water	0.007 mg/l	-
	Sewage Treatment Plant	23 mg/l	-
	Fresh water sediment	1.08 mg/kg dwt	-
	Marine water sediment	0.108 mg/kg dwt	-
	Soil	0.176 mg/kg dwt	-
Benzotriazole	Fresh water	97 µg/l	-
	Marine water	9.7 µg/l	-
	Sewage Treatment Plant	9.4 mg/l	-
	Fresh water sediment	1.1 mg/kg dwt	-
	Marine water sediment	0.11 mg/kg dwt	-
	Soil	0.169 mg/kg dwt	-
2-aminobutan-1-ol	Fresh water	0.001 mg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	3.59 µg/kg dwt	-
	Marine water sediment	0.359 µg/kg dwt	-
	Soil	0.18 µg/kg dwt	-

8.2 Exposure controls**Appropriate engineering controls**

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. Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

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.

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.

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/m³), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m³). 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.

Eye/face protection

Undiluted fluid: Chemical goggles.

Diluted fluid: Safety glasses with side shields.

Skin protection

SECTION 8: Exposure controls/personal 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 and body

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.

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.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state Liquid.

Colour Yellow. [Light]

Odour

Unfragranced

Odour threshold

Not available.

pH

9.4 [Conc. (% w/w): 6%]

Melting point/freezing point

Not available.

Initial boiling point and boiling range

>100°C (>212°F)

Flash point

Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point determination.]

Evaporation rate

Not available.

Flammability

Upper/lower flammability or explosive limits

Not available.

Vapour pressure

<0.01 kPa

Vapour density

Not available.

Relative density

Not available.

Density

<1000 kg/m³ (<1 g/cm³) at 15°C

Solubility(ies)

Media	Result
water	Soluble

Partition coefficient: n-octanol/water Not applicable.

Auto-ignition temperature

Ingredient name	°C	°F	Method
hexyldecan-1-ol	238	460.4	DIN 51794
Benzotriazole	210	410	
2-aminoethanol	410	770	
neodecanoic acid	375	707	ASTM E 659

Decomposition temperature

Not available.

Viscosity

Kinematic: 64 mm²/s (64 cSt) at 40°C

Explosive properties

Not available.

SECTION 9: Physical and chemical properties

Oxidising properties Not available.

Particle characteristics

Median particle size Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

10.2 Chemical stability The product is stable.

10.3 Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerisation will not occur.

10.4 Conditions to avoid Avoid excessive heat.

10.5 Incompatible materials Reactive or incompatible with the following materials: oxidising materials.
Slightly reactive or incompatible with the following materials: acids.

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result / Route	Test authority / Number	Species	Dose	Exposure	Remarks
Alcohols, C16-18 and C18-unsatd., ethoxylated	LC50 Inhalation Vapour	OECD 403	Rat	>100 mg/m ³	6 hours	-
	LD50 Dermal	OECD 402	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	>2000 mg/kg	-	-
	LD50 Dermal	OECD 402	Rabbit	2504 mg/kg	-	-
Amine carbamate	LD50 Oral	OECD 401	Rat - Female	1089 mg/kg	-	-
	LD50 Inhalation Vapour	-	Rat	1300 mg/m ³	6 hours	-
4-Octanol, 3-amino-	LD50 Oral	OECD 425	Rat	550 mg/kg	-	-
3,5,5-trimethylhexanoic acid	LD50 Dermal	-	Rat	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	1160 mg/kg	-	-
Benzotriazole	LD50 Dermal	-	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	OECD 423	Rat	500 mg/kg	-	-
2-aminobutan-1-ol	LD50 Oral	OECD 401	Rat	1800 mg/kg	-	-
2-aminoethanol	LC50 Inhalation Vapour	-	Rat	1487 mg/m ³	6 hours	-
	LD50 Dermal	OECD 402	Rat	2504 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	1089 mg/kg	-	-
	LD50 Oral	-	Rat	>2000 mg/kg	-	-

SECTION 11: Toxicological information

α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-

Acute toxicity estimates

Route	ATE value
Dermal	73603.05 mg/kg
Inhalation (vapours)	736.03 mg/l

Irritation/Corrosion

Product/ingredient name	Test authority / Test number	Species	Route / Result	Test concentration	Remarks
Alcohols, C16-18 and C18-unsatd., ethoxylated	OECD 405	Rabbit	Eyes - Not irritant	-	-
	OECD 404	Rabbit	Skin - Irritant	-	-
Amine carbamate	OECD 405	Rabbit	Eyes - Not irritant	-	-
	OECD 404	Rabbit	Skin - Not irritant	-	-
4-Octanol, 3-amino-	OECD 404	Rabbit	Skin - Corrosive	-	-
3,5,5-trimethylhexanoic acid	OECD 405	Rabbit	Eyes - Severe irritant	-	-
	OECD 404	Rabbit	Skin - Irritant	-	-
Benzotriazole	OECD 405	Rabbit	Eyes - Irritant	-	-
	OECD 404	Rabbit	Skin - Non-irritant to skin.	-	-
2-aminobutan-1-ol	-	Rabbit	Skin - Corrosive	-	-
2-aminoethanol	OECD -	Rabbit	Eyes - Corrosive	-	-
	OECD 404	Rabbit	Skin - Corrosive	-	-
Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-	OECD 405	Rabbit	Eyes - Severe irritant	-	Based on studies with similar substances.
	-	Rabbit	Skin - Non-irritant to skin.	-	Based on studies with similar substances.

Sensitiser

Product/ingredient name	Route	Test authority / Test number	Species	Result	Remarks
Alcohols, C16-18 and C18-unsatd., ethoxylated	skin	OECD 406	Guinea pig	Not sensitising	Based on studies with similar substances.
Amine carbamate	skin	OECD 406	Guinea pig	Not sensitising	-
4-Octanol, 3-amino-	skin	OECD 406	Guinea pig	Not sensitising	-
3,5,5-trimethylhexanoic acid	skin	OECD 406	Guinea pig	Not sensitising	-
Benzotriazole	skin	OECD 406	Guinea pig	Not sensitising	-
2-aminobutan-1-ol	skin	-	Guinea pig	Not sensitising	Based on studies with similar substances.
2-aminoethanol	skin	OECD 406	Guinea pig	Not sensitising	-

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SECTION 11: Toxicological information

Product/ingredient name	Test authority / Test number	Cell	Type	Result	Remarks
Alcohols, C16-18 and C18-unsatd., ethoxylated	OECD 471	-	Experiment: In vitro	Subject: Bacteria Negative	Based on studies with similar substances.
	OECD 476	-	Experiment: In vitro	Subject: Mammalian-Animal Negative	Based on studies with similar substances.
	OECD 473	-	Experiment: In vitro	Subject: Mammalian-Animal Negative	Based on studies with similar substances.
	OECD 474	-	Experiment: In vivo	Subject: Mammalian-Animal Negative	Based on studies with similar substances.
Amine carbamate	OECD 471	-	Experiment: In vitro	Subject: Bacteria Negative	-
	OECD 473	-	Experiment: In vitro	Subject: Mammalian-Animal Negative	-
	OECD 474	-	Experiment: In vivo	Subject: Mammalian-Animal Negative	-
4-Octanol, 3-amino-	471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria Negative	-
	476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Mammal - species unspecified Negative	-
	473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified Negative	-
	474 Mammalian Erythrocyte Micronucleus Test	-	Experiment: In vivo	Subject: Mammal - species unspecified Negative	-
3,5,5-trimethylhexanoic acid	471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria Negative	-
	473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified Negative	-
	476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Mammal - species unspecified Negative	-
Benzotriazole	-	-	Experiment: In vitro	Subject: Bacteria Negative	-
	476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Mammal - species unspecified Negative	-
	474 Mammalian Erythrocyte Micronucleus	-	Experiment: In vivo	Subject: Mammal - species Negative	-

SECTION 11: Toxicological information

	Test		unspecified				
2-aminobutan-1-ol	471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	-	
	476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.	
	474 Mammalian Erythrocyte Micronucleus Test	-	Experiment: In vivo	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.	
2-aminoethanol	OECD 471	-	Experiment: In vitro	Subject: Bacteria	Negative	-	
	OECD 473	-	Experiment: In vitro	Subject: Mammalian-Animal	Negative	-	
	OECD 476	-	Experiment: In vitro	Subject: Mammalian-Animal	Negative	-	

Carcinogenicity

Product/ingredient name	Test authority / Test number	Species	Route	Exposure	Result	Remarks
Benzotriazole	OECD 451	Rat	Oral	-	Negative	-

Reproductive toxicity

Product/ingredient name	Test authority / Test number	Species	Route	Exposure	Developmental	Maternal toxicity	Fertility	Remarks
Alcohols, C16-18 and C18-unsatd., ethoxylated	OECD 416	Rat	Dermal	-	Negative	Negative	Negative	Based on studies with similar substances.
Amine carbamate	OECD 416	Rat	Oral	-	Negative	Negative	Negative	-
4-Octanol, 3-amino-	OECD 421	Rat	Oral	-	Negative	Negative	Negative	-
3,5,5-trimethylhexanoic acid	OECD 443	Rat	Oral	-	Negative	Positive	Negative	-
Benzotriazole	OECD 421	Rat	Oral	-	Negative	Negative	Negative	-
2-aminobutan-1-ol	OECD 422	Rat	Oral	-	Negative	Positive	Negative	Based on studies with similar substances.
2-aminoethanol	OECD 416	Rat	Oral	-	Negative	Negative	Negative	Based on studies with similar substances.

Information on likely routes of exposure

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

Potential acute health effects

Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	Irritating to mouth, throat and stomach.
Skin contact	Causes skin irritation. Defatting to the skin.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	No specific data.
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SECTION 11: Toxicological information

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

Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.

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.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Test authority / Test number	Species	Type / Result	Exposure	Effects	Remarks
Alcohols, C16-18 and C18-unsatd., ethoxylated	OECD 202	Daphnia	Acute EL50 51 mg/l	48 hours	-	-
	OECD 201	Algae	Acute ErL50 >11.3 mg/l	72 hours	-	-
	OECD 203	Fish	Acute LC50 10 to 100 mg/l	96 hours	-	-
	OECD 201	Algae	Chronic EL10 3.01 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 32 mg/l	48 hours	-	-
	OECD 203	Fish	Acute EC50 >100 mg/l	96 hours	-	-
	OECD 201	Algae	Acute ErC50 39 mg/l	72 hours	-	-
	OECD 201	Algae	Chronic NOEC 6.25 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 44 mg/l	48 hours	-	-
	OECD 201	Algae	Acute ErC50 38 mg/l	72 hours	-	-
	OECD 203	Fish	Acute LC50 68 mg/l	96 hours	-	-
	OECD 201	Algae	Chronic NOEC 0.81 mg/l	72 hours	-	-
Amine carbamate	OECD 201	Algae	Acute EC50 81 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 68 mg/l	48 hours	-	-
	OECD 203	Fish	Acute LC50 123 mg/l	96 hours	-	-
	OECD 209	Micro-organism	Acute EC50 470 mg/l	3 hours	-	-
	OECD 203	Fish	Chronic NOEC 10 mg/l	72 hours	-	-
4-Octanol, 3-amino-	OECD 201	Algae	Chronic NOEC 10 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 15.8 mg/l	48 hours	-	-
	OECD 209	Micro-	Acute EC50 940 mg/l	3 hours	-	-
	OECD 203	Fish	Chronic NOEC 10 mg/l	96 hours	-	-
3,5,5-trimethylhexanoic acid	OECD 201	Algae	Chronic NOEC 10 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 44 mg/l	48 hours	-	-
	OECD 209	Micro-organism	Acute EC50 38 mg/l	3 hours	-	-
	OECD 203	Fish	Chronic NOEC 10 mg/l	96 hours	-	-
Benzotriazole	OECD 201	Algae	Chronic NOEC 10 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 15.8 mg/l	48 hours	-	-
	OECD 209	Micro-	Acute EC50 940 mg/l	3 hours	-	-
	OECD 203	Fish	Chronic NOEC 10 mg/l	96 hours	-	-

SECTION 12: Ecological information

organism							
2-aminobutan-1-ol	OECD	201	Algae	Acute ErC50 75 mg/l	72 hours	-	-
	OECD	203	Fish	Acute LC50 180 mg/l	96 hours	-	-
	OECD	201	Algae	Chronic EC10 1.18 mg/l	72 hours	-	-
	OECD	211	Daphnia	Chronic EC10 0.97 mg/l	21 days	-	-
	OECD	209	Micro-organism	Acute EC50 329.2 mg/l	3 hours	-	-
	OECD	201	Algae	Acute ErC50 0.91 mg/l	72 hours	-	-
2-aminoethanol	OECD	202	Daphnia	Acute ErC50 115 mg/l	48 hours	-	-
	OECD	203	Fish	Acute LC50 270 mg/l	96 hours	-	-
	OECD	201	Algae	Chronic EC50 0.05 mg/l	72 hours	-	-
	OECD	202	Daphnia	Acute EC50 27.04 mg/l	48 hours	-	-
	OECD	201	Algae	Acute ErC50 2.8 mg/l	72 hours	-	-
	OECD	203	Fish	Acute LC50 >100 mg/l	96 hours	-	-
Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-	-	-	Algae	Chronic EC ₁₀ 0.7 mg/l	72 hours	-	-
	OECD	211	Daphnia	Chronic NOEC 0.85 mg/l	21 days	-	-
	OECD	210	Fish	Chronic NOEC 1.24 mg/l	41 days	-	-
	OECD	202	Daphnia	Acute EC50 28.2 mg/l	48 hours	-	-
	OECD	209	Micro-organism	Acute EC50 620 mg/l	3 hours	-	-
	OECD	201	Algae	Acute ErC50 >200 mg/l	72 hours	-	-
	OECD	203	Fish	Acute LC50 5 to 10 mg/l	96 hours	-	-

Environmental hazards Not classified as dangerous

12.2 Persistence and degradability

Not expected to be rapidly degradable.

Product/ingredient name	Test authority / Test number	Result - Exposure	Remarks
Alcohols, C16-18 and C18-unsatd., ethoxylated	OECD 301B	73 % - Readily - 28 days	-
Amine carbamate	OECD 301D	100 % - Readily - 28 days	-
4-Octanol, 3-amino-	OECD 301F	100 % - Readily - 28 days	-
3,5,5-trimethylhexanoic acid	OECD 301A	96 % - Readily - 21 days	-
Benzotriazole	OECD 301D	0 % - Not readily - 28 days	-
2-aminobutan-1-ol	OECD 301F	93 % - Readily - 28 days	-
2-aminoethanol	OECD 301A	>90 % - Readily - 21 days	-
Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-	OECD 301E	73 % - Readily - 28 days	-

12.3 Bioaccumulative potential

Not available.

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Alcohols, C16-18 and C18-unsatd., ethoxylated	4.2	-	High
Amine carbamate	-1.78	-	Low
4-Octanol, 3-amino-	1.3	2.8	Low
3,5,5-trimethylhexanoic acid	3.2	-	Low
Benzotriazole	1.44	2.8	Low
2-aminobutan-1-ol	-0.45	<100	Low
2-aminoethanol	-2.3	-	Low
neodecanoic acid	2.1	-	Low

12.4 Mobility in soil

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

Mobility Liquid. Soluble in water.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal 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.

Hazardous waste

Yes.

Waste list

Waste code	Waste code definition
12 01 07*	mineral-based machining oils free of halogens (except emulsions and solutions)
12 01 09*	machining emulsions and solutions free of halogens

Packaging

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Waste code	Waste list
15 01 10*	packaging containing residues of or contaminated by hazardous substances

Special precautions

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

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user Not available.

14.7 Transport in bulk according to IMO instruments Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Turkey Regulation No. 30105, KKDIK

None of the components are listed.

Substances of very high concern

None of the components are listed.

Regulation on the prevention of major industrial accidents and reduction of their effects

This product is not controlled under the Regulation on the prevention of major industrial accidents and reduction of their effects.

Annex 17 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Hysol SL 45 XBB	≥90	3

Labelling Not applicable.

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

National inventory

Australia inventory (AIIIC) At least one component is not listed.

Canada inventory At least one component is not listed in DSL but all such components are listed in NDSL.

China inventory (IECSC) All components are listed or exempted.

Japan inventory (CSCL) All components are listed or exempted.

Korea inventory (KECI) At least one component is not listed.

Philippines inventory (PICCS) At least one component is not listed.

REACH Status The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

SECTION 15: Regulatory information

Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.
United States inventory (TSCA 8b)	All components are active or exempted.
15.2 Chemical safety assessment	This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms	ACGIH = American Conference of Industrial Hygienists ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS = Chemical Abstracts Service 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) OECD = Organisation for Economic Co-operation and Development PBT = Persistent, Bioaccumulative and Toxic RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail SADT = Self-Accelerating Decomposition Temperature STOT-RE = Specific Target Organ Toxicity - Repeated Exposure STOT-SE = Specific Target Organ Toxicity - Single Exposure TWA = Time weighted average UN = United Nations UVCB = Complex hydrocarbon substance VOC = Volatile Organic Compound vPvB = Very Persistent and Very Bioaccumulative 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
Full text of abbreviated H statements	H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
Full text of classifications [CLP/GHS]	Acute Tox. 4 ACUTE TOXICITY - Category 4 Aquatic Acute 1 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 Aquatic Chronic 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 Aquatic Chronic 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 Skin Corr. 1 SKIN CORROSION/IRRITATION - Category 1 Skin Corr. 1B SKIN CORROSION/IRRITATION - Category 1B Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2 STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
History	
Date of issue/ Date of revision	21 July 2025
Date of previous issue	6 November 2024.
Prepared by	Product Stewardship Çağnur Çelik, no ve Tarihi: GBF11.217.02 / 27.12.2023 cagnur.celik@bp.com, +90 216 571 2937

SECTION 16: Other information

► Indicates information that has changed from previously issued version.

Notice to reader

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