



BP Lubricants USA, Inc.
1500 Valley Road
Wayne, New Jersey, 07470
United States

12 Feb 2025

0050377982 - LUBUS9S03

CHRISTENSEN SEATTLE
1912 S 146TH ST
SEATTLE Washington 98930-3780
USA

Attention: Health, Environment, & Safety Officer

Thank you for your interest in Castrol products. Enclosed is a Safety Data Sheet (SDS) for the product(s) either purchased or requested by your company.

The SDS provides important health and safety information. Please review this document prior to handling the product. For the SDS to serve as an effective means of hazard communication, it must be made available to all those who handle and are responsible for operations involving this product. We strongly urge you to distribute an SDS to all employees, handlers and users of this product. If you resell the product, please provide a copy of this SDS to your customers.

The Regulatory Information section contains information to help you meet the requirements of SARA Title III and fulfils our supplier notification obligation under SARA Section 313 (40 CFR 372.45). Safety Data Sheets are provided to current customers with the initial purchase of a product and upon revision. In addition, for products containing components that are subject to SARA Section 313 reporting requirements, a SDS is provided to all current customers on an annual basis.

If you are interested in receiving SDSs electronically instead of being sent a hard copy OR if you would like to update the email address(es) receiving SDS, please email:
gcastrodatamanagement@bp.com.

It is preferable to use company group e-mail(s) to receive the SDSs instead of individual email accounts, where possible. You will receive SDSs via email from
MSDSDistributionUS@domino.bp.com.

SDSs in various languages are available upon request.

Sincerely,

BP Lubricants USA, Inc.
Customer Care Center:
877-641-1600



Section 1. Identification

Product name Techniclean MP Flex
 SDS # 468623
 Code 468623-US03

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

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

Supplier BP Lubricants USA Inc.
 1500 Valley Road
 Wayne, NJ 07470
 Telephone: +1-888-CASTROL

EMERGENCY HEALTH INFORMATION: +1-800-447-8735

EMERGENCY SPILL INFORMATION: +1-800-424-9300 (CHEMTREC USA)
 +1-703-527-3887 (CHEMTREC outside the US)

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 CORROSION - Category 1
 SERIOUS EYE DAMAGE - Category 1

GHS label elements

Hazard pictograms



Signal word

Danger

Hazard statements

Causes severe skin burns and eye damage.

Precautionary statements

Prevention

Wear protective gloves, protective clothing and eye or face protection. Wash hands thoroughly after handling.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

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.

Product name Techniclean MP Flex
 Version 6.01 Date of issue 12/19/2023.

Product code 468623-US03 Page: 1/10

Format US

Language ENGLISH



Section 2. Hazards identification

Section 3. Composition/information on ingredients

Substance/mixture Mixture

Alkalis and additives in aqueous solution.

Ingredient name	%	CAS number
Potassium hydroxide	≤10	1310-58-3
Silicic acid, sodium salt	≤10	1344-09-8
2-aminoethanol	≤10	141-43-5
nitrotrimethylenetris(phosphonic acid)	≤5	6419-19-8
sodium hydroxide	≤5	1310-73-2
octanoic acid	≤3	124-07-2

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

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 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 immediately. Chemical burns must be treated promptly by a physician.
Skin contact	Get medical attention immediately. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Clean shoes thoroughly before reuse. Chemical burns must be treated promptly by a physician.
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. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention immediately.
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 immediately. Chemical burns must be treated promptly by a physician.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

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.
Specific treatments	No specific treatment.

Section 5. Fire-fighting measures

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.

Specific hazards arising from the chemical

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:
phosphorus oxides
metal oxide/oxides
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
nitrogen oxides (NO, NO₂ etc.)

Special protective actions 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 spilled material. Do not breathe vapor 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 vapor, 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 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

Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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 spilled 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 get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Use only with adequate ventilation. Avoid contact of spilled material and runoff with soil and surface waterways.



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. See also Section 8 for additional information on hygiene measures.

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. Store locked up. Separate from acids. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. DO NOT ADD NITRITES TO THIS FLUID.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Potassium hydroxide	ACGIH TLV (United States). C: 2 mg/m ³ Issued/Revised: 9/1994
Silicic acid, sodium salt	None.
2-aminoethanol	ACGIH TLV (United States). TWA: 3 ppm 8 hours. Issued/Revised: 9/1994 TWA: 7.5 mg/m ³ 8 hours. Issued/Revised: 9/1994 STEL: 6 ppm 15 minutes. Issued/Revised: 9/1994 STEL: 15 mg/m ³ 15 minutes. Issued/Revised: 9/1994 OSHA PEL (United States). TWA: 3 ppm 8 hours. Issued/Revised: 6/1993 TWA: 6 mg/m ³ 8 hours. Issued/Revised: 6/1993
nitritotrimethylenetris(phosphonic acid)	None.
sodium hydroxide	ACGIH TLV (United States). C: 2 mg/m ³ Issued/Revised: 9/1994 OSHA PEL (United States). TWA: 2 mg/m ³ 8 hours. Issued/Revised: 6/1993
octanoic acid	None.

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor 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.

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.

Section 9. Physical and chemical properties

Evaporation rate	Water content interferes with flash point determination.
Flammability	Not available.
Lower and upper explosion limit/flammability limit	Not applicable. Based on - Physical state
Vapor pressure	Not available.

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Water	23.8	3.2				
2-aminoethanol	0.4	0.053				
nitrotrimethylenetris (phosphonic acid)	0	0				
octanoic acid	0	0				

Relative vapor density	Not available.
Density	>1000 kg/m ³ (>1 g/cm ³) at 15.6°C
Solubility(ies)	Not available.

Partition coefficient: n-octanol/water	Not applicable.
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Auto-ignition temperature	
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Ingredient name	°C	°F	Method
2-aminoethanol	410	770	
octanoic acid	>300	>572	

Decomposition temperature	Not available.
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Viscosity	Not available.
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Particle characteristics

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

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
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Chemical stability	The product is stable.
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Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
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Conditions to avoid	Avoid excessive heat.
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Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials. Slightly reactive or incompatible with the following materials: acids.
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Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
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Section 11. Toxicological information

Information on toxicological effects

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Additional information Alkanolamine: This product contains an alkanolamine. In all metalworking fluids containing amines, there is a potential for forming nitrosamines which are animal carcinogens. Therefore, no nitrites or related nitrosating agents should be added to such compositions.

Section 12. Ecological information

Toxicity
No testing has been performed by the manufacturer.

Persistence and degradability
Expected to be biodegradable.

Bioaccumulative potential
Not available.





Mobility in soil
Soil/water partition coefficient (K_{oc}) Not available.
Mobility Liquid. Soluble 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 minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1760	UN1760	UN1760	UN1760
UN proper shipping name	Corrosive liquid, n.o.s. (Potassium hydroxide, 2-aminoethanol) RQ (Potassium hydroxide, sodium hydroxide)	Corrosive liquid, n.o.s. (Potassium hydroxide, 2-aminoethanol)	Corrosive liquid, n.o.s. (Potassium hydroxide, 2-aminoethanol)	Corrosive liquid, n.o.s. (Potassium hydroxide, 2-aminoethanol)
Transport hazard class(es)	8 	8 	8 	8 
Packing group	II	II	II	II

Section 15. Regulatory information

Philippines inventory (PICCS)	At least one component is not listed.
Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.
REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

National Fire Protection Association (U.S.A.)



History

Date of issue/Date of revision	12/19/2023.
Date of previous issue	01/06/2022.
Prepared by	Product Stewardship
Key to abbreviations	ACGIH = American Conference of Industrial Hygienists ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number 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) OEL = Occupational Exposure Limit SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average UN = United Nations 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

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

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.

Section 1. Identification

Product name Hysol MB 50
 SDS # 465450
 Code 465450-US03

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

Product use Metalworking fluid - soluble.
 For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Supplier BP Lubricants USA Inc.
 1500 Valley Road
 Wayne, NJ 07470
 Telephone: +1-888-CASTROL

EMERGENCY HEALTH INFORMATION:

+1-800-447-8735

EMERGENCY SPILL INFORMATION:

+1-800-424-9300 (CHEMTREC USA)
 +1-703-527-3887 (CHEMTREC outside the US)

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
 SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms



Signal word

Warning

Hazard statements

Causes skin irritation.
 May cause an allergic skin reaction.
 Causes serious eye irritation.

Precautionary statements

Prevention

Wear protective gloves. Wear eye or face protection. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response

Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage

Not applicable.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.



Section 2. Hazards identification

Hazards not otherwise classified

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.

This product contains less than 5.5% 'free' boric acid. Based on toxicology and epidemiology studies, high doses of boric acid and borates have caused adverse effects on fertility and developmental toxicity in laboratory animals, but these effects were not seen in human studies (epidemiology and highly exposed workers studies). A Specific Concentration Limit (SCL) of 5.5% has been derived for boric acid and similar borate substances based upon a NOAEL of 9.6 mg boron/kg therefore mixtures containing boric acid or borates below 5.5% are not classified as reproductive hazards.

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Highly refined mineral oil, emulsifiers and additives.

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated heavy naphthenic	≥25 - ≤50	64742-52-5
2-Amino-2-methylpropanol	≤10	124-68-5
dicyclohexylamine	≤6	101-83-7
Poly(oxy-1,2-ethanediyl), α-(9Z)-9-octadecen-1-yl-ω-hydroxy-, phosphate	≤5	39464-69-2
2,2',2"-nitrilotriethanol	≤3	102-71-6
Boric acid	≤3	10043-35-3
neodecanoic acid	≤3	26896-20-8
Oleic acid	≤3	112-80-1
undecanedioic acid	≤3	1852-04-6
3-Iodo-2-propynyl butylcarbamate	≤0.3	55406-53-6

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

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 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.
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 recognized skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. In the event of any complaints or symptoms, avoid further exposure. Get medical attention. If skin irritation or rash occurs: Get medical advice/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.
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.

Section 4. First aid measures

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

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.

Specific treatments No specific treatment.

Section 5. Fire-fighting measures

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.

Specific hazards arising from the chemical

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:
phosphorus oxides
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
nitrogen oxides (NO, NO₂ etc.)

Special protective actions 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 spilled material. Avoid breathing vapor 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 vapor, 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 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

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.

Product name Hysol MB 50

Product code 465450-US03

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Format US

Language ENGLISH



Section 6. Accidental release measures

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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 spilled 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. 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. Avoid contact of spilled 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 minimized. Swarf and other debris should be removed. To maintain optimum performance and minimize 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.

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 unlabeled containers. Use appropriate containment to avoid environmental contamination. DO NOT ADD NITRITES TO THIS FLUID.

Not suitable

Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	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 OSHA PEL (United States). [Oil mist, mineral] TWA: 5 mg/m ³ 8 hours. Issued/Revised: 6/1993
2-Amino-2-methylpropanol	None.
dicyclohexylamine	None.
Poly(oxy-1,2-ethanediyl), α-(9Z)-9-octadecen-1-yl-ω-hydroxy-, phosphate	None.

Section 8. Exposure controls/personal protection

Body 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 ³), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m ³). 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.
Color	Yellow.
Odor	Mild.
Odor threshold	Not available.
pH	9.7 [Conc. (% w/w): 5%]
Melting point/freezing point	Not available.
Boiling point, initial boiling point, and boiling range	Not available.
Flash point	Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point determination.]
Evaporation rate	Not available.
Flammability	Not applicable. Based on - Physical state
Lower and upper explosion limit/flammability limit	Not available.
Vapor pressure	

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Distillates (petroleum), hydrotreated heavy naphthenic	<0.07501	<0.01	ASTM D 5191			
Water	17.5	2.3				
2-Amino-2-methylpropanol	0.33753	0.045	ASTM E 1194			
dicyclohexylamine	0.056	0.0075	EU A.4			
undecanedioic acid	<0.075	<0.01	OECD 104			

Relative vapor density Not available.

Section 9. Physical and chemical properties

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
Amino-2-methylpropanol	438	820.4	ASTM D 2161
dicyclohexylamine	255	491	
2,2',2"-nitrioltriethanol	324	615.2	
neodecanoic acid	375	707	ASTM E 659
Oleic acid	363	685.4	

Decomposition temperature Not available.

Viscosity Kinematic: 80 mm²/s (80 cSt) at 40°C

VOC 159.6 g/l

Particle characteristics

Median particle size Not applicable.

Section 10. Stability and reactivity

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

Chemical stability The product is stable.

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

Conditions to avoid Avoid excessive heat.

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

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

Classification

Product/ingredient name	OSHA	IARC	NTP
dicyclohexylamine	-	3	-
2,2',2"-nitrioltriethanol	-	3	-

Descriptors: OSHA:
+ - Potential occupational carcinogen

IARC:
1 - Carcinogenic to human.
2A - Probable human carcinogen.
2B - Possible carcinogen to human.
3 - Not classifiable as a human carcinogen.
4 - Probably not a human carcinogen.

NTP:
Proven - Known to be human carcinogens.
Possible - Reasonably anticipated to be human carcinogens.

Specific target organ toxicity (repeated exposure)

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Name	Category	Route of exposure	Target organs
3-Iodo-2-propynyl butylcarbamate	Category 1	-	larynx

Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated heavy naphthenic	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

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

Potential acute health effects

Eye contact	Causes serious eye irritation.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
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
Skin contact	Adverse symptoms may include the following: irritation redness dryness cracking
Inhalation	No specific data.
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

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Dermal	5051.51 mg/kg

Section 11. Toxicological information

Additional information Alkanolamine: This product contains an alkanolamine. In all metalworking fluids containing amines, there is a potential for forming nitrosamines which are animal carcinogens. Therefore, no nitrites or related nitrosating agents should be added to such compositions.

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Persistence and degradability

Expected to be biodegradable.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc})

Not available.

Mobility

Liquid. Soluble 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 minimized 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 spilled 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 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

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-

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Section 14. Transport information

Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user Not available.

Transport in bulk according to IMO instruments Not available.

Section 15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b) All components are active or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1

SARA 313

Form R - Reporting requirements This product does not contain any hazardous ingredients at or above regulated thresholds.

Supplier notification This product does not contain any hazardous ingredients at or above regulated thresholds.

State regulations

Massachusetts The following components are listed: OIL MIST, MINERAL; 2-AMINO-2-METHYL-1-PROPANOL; DICYCLOHEXYLAMINE; TRIETHANOLAMINE

New Jersey The following components are listed: 2-AMINO-2-METHYL-1-PROPANOL; DICYCLOHEXYLAMINE; TRIETHANOLAMINE; BORATE COMPOUNDS, Inorganic

Pennsylvania The following components are listed: 1-PROPANOL, 2-AMINO-2-METHYL-; CYCLOHEXANAMINE, N-CYCLOHEXYL-; ETHANOL, 2,2',2"-NITRILOTRIS-; 9-OCTADECENOIC ACID (Z)-

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Ethylene oxide and Ethylene oxide, which are known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Diethanolamine, 1,4-Dioxane and Propylene oxide, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Other regulations

Australia inventory (AIC) 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) All components are listed or exempted.

Philippines inventory (PICCS) All components are listed or exempted.

Taiwan Chemical Substances inventory (TCSI) All components are listed or exempted.

REACH Status For the REACH status of this product please consult your company contact, as identified in Section 1.

