SAFETY DATA SHEET Castrol



Section 1. Identification			
Product name	Hysol MB 20		
SDS #	459406		
Historic SDS #:	03136		
Code	459406-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	Castrol Industrial North America, Inc. 150 W. Warrenville Road Naperville, IL 60563 Product Information: +1-877-641-1600		
	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: (973) 633-2200		
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)		

Section 2. nazarus identification

OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the	SKIN IRRITATION - Category 2
substance or mixture	EYE IRRITATION - Category 2A
GHS label elements	
Hazard pictograms	\wedge
Signal word	Warning
Hazard statements	Causes serious eye irritation. Causes skin irritation.
Precautionary statements	
Prevention	Wear protective gloves. Wear eye or face protection. Wash hands thoroughly after handling.
Response	I ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation 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	Not applicable.
Hazards not otherwise classified	Defatting to the skin.

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Section 3. Composition/information on ingredients

Mixture

Highly refined mineral oil, emulsifiers and additives.

Substance/mixture

Ingredient name	CAS number	%
Base oil - highly refined	Varies - See Key to abbreviations	≥25 - <50
Amine neutralized carboxylic acids	Not available.	≥7 - <10
(Z)-octadec-9-enol	143-28-2	≥1 - <3
Amine neutralised phosphoric acid esters	Not available.	≥2.2 - <3
Triethanolamine	102-71-6	≥1 - <3
2-amino-2-methylpropanol	124-68-5	≥1.5 - <3
Boric acid	10043-35-3	≥0.3 - <1
3-lodo-2-propynyl butylcarbamate	55406-53-6	≥0.1 - <0.3

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 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 In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eye contact Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention. In case of contact, immediately flush skin with plenty of water for at least 15 minutes Skin contact 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. Get medical attention. Inhalation Finhaled, 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. Do not induce vomiting unless directed to do so by medical personnel. Never give Ingestion 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

Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treatment should in general be symptomatic and directed to relieving any effects.
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.

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Section 5. Fire-fighting measures

Hazardous combustion products	Combustion products may include the following: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
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, protecti	ve equipment and emergency procedures
For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Contact emergency personnel.
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 con	tainment 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

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	Protective measures	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
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Section 7. Handling and storage

	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. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Sase oil - highly refined	ACGIH TLV (United States). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 6/1993
Amine neutralized carboxylic acids	None.
(Z)-octadec-9-enol	None.
Amine neutralised phosphoric acid esters	None.
Triethanolamine	ACGIH TLV (United States). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 9/1994
2-amino-2-methylpropanol	None.
Boric acid	ACGIH TLV (United States). STEL: 6 mg/m ³ 15 minutes. Issued/Revised: 1/2005 Form: Inhalable fraction TWA: 2 mg/m ³ 8 hours. Issued/Revised: 1/2005 Form: Inhalable fraction
3-lodo-2-propynyl butylcarbamate	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.

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.

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Section 8. Exposure controls/personal protection

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Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	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.
	Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions.
Body protection	Se of protective clothing is good industrial practice. 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. 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.
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. 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

Appearance	
Physical state	Liquid.
Color	Amber. [Light]
Odor	Mild.
Odor threshold	Not available.
рН	9.4 [Conc. (% w/w): 5%]
Melting point	Not available.
Boiling point	Not available.
Flash point	Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point determination.]
Evaporation rate	Not available.

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Section 9. Physical and chemical properties

Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Density	<1000 kg/m³ (<1 g/cm³) at 15°C
Solubility	Soluble in water.
Partition coefficient: n- octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

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	High temperatures
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

Product/ingredien	t name	OSHA	IARC	NTP	
riethanolamine		-	3	-	
Descriptors:	OSHA: + - Pote carcinog	ntial occupat gen	tional	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 (single exposure)

Name		Route of exposure	Target organs
3-lodo-2-propynyl butylcarbamate	Category 3	Not applicable.	Respiratory tract irritation

Information on the likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

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Section 11. Toxicological information

Eye contact	Causes serious eye irritation.
Skin contact	Causes skin irritation.
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 phys	sical, 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 effect	s 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 effe	<u>cts</u>
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 toxici	tv
Numerical measures of toxici Acute toxicity estimates	ty

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.

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Section 12. Ecological information

Bioaccumulative potential

Not available.

Mobility in soil	
Soil/water partition coefficient (Koc)	Not available.
Mobility	dquid. 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 auantities 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	ΙΑΤΑ
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user

Not available.

Transport in bulk according Not available. to Annex II of MARPOL 73/78 and the IBC Code

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Section 14. Transport information

Section 15. Regulatory information

U.S. Federal regulations	
United States inventory (TSCA 8b)	All components are listed or exempted.
<u>SARA 302/304</u>	
Composition/information o	n ingredients
No products were found.	
<u>SARA 311/312</u>	
Classification	Immediate (acute) health hazard
<u>SARA 313</u>	
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: 2-AMINO-2-METHYL-1-PROPANOL; TRIETHANOLAMINE
New Jersey	The following components are listed: 2-AMINO-2-METHYL-1-PROPANOL; 1-PROPANOL, 2-AMINO-2-METHYL-; TRIETHANOLAMINE; ETHANOL, 2,2',2"- NITRILOTRIS-
Pennsylvania	The following components are listed: 1-PROPANOL, 2-AMINO-2-METHYL-; ETHANOL, 2,2',2"-NITRILOTRIS-
California Prop. 65	WARNING: This product contains a chemical known to the State of California to cause cancer. 2,2'-iminodiethanol; Aniline
Other regulations	
Australia inventory (AICS)	At least one component is not listed.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (ENCS)	At least one component is not listed.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.
Taiwan inventory (CSNN)	🕅 least one component is not listed.
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.)



Date of issue/Date of revision
Date of previous issue
Prepared by

History

02/03/2016.

10/02/2014. Product Stewardship

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Section 16. Other information

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 73/78 = 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 101316-69-2, 101316-70-5,
	101316-71-6, 101316-72-7, 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4,
	64741-97-5, 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, 64742-64-9,
	64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1, 74869-22-0, 90669-74-2

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.

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