



SAFETY DATA SHEET

According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 083704

MOLAC TM

Date of the previous version: 2015-06-04

Revision Date: 2015-10-13

Version 1.01

1. IDENTIFICATION

Product identifier

Product name MOLAC TM

Other means of identification

Product Code(s) 083704

Number OMP
Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Lubricant. Industrial applications .

Uses advised against Do not use for any purpose other than the one for which it is intended

Details of the supplier of the safety data sheet

Supplier Address TOTAL Specialties USA Inc
 1201 Louisiana Street, Suite 1800
 Houston, TX 77002
 Phone: +1 800 323 3198

Contact Point Technical/ HSEQ

E-mail Address USRMLIN-info@total.com

Emergency telephone number

Company Phone Number +1 (908) 862-9300
Emergency telephone CHEMTREC: +1 800 424 9300 (24h)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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Unknown Acute Toxicity

No information available

Hazards not otherwise classified (HNOC)

Not applicable

Other information**Physical-Chemical Properties** Contaminated surfaces will be extremely slippery.**Environmental properties** Should not be released into the environment.**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No	Weight %
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	30-45
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5-25
Polysulfides, di-tert-dodecyl	68425-15-0	1-4

Additional information Product containing mineral oil with less than 3% DMSO extract as measured by IP 346** The exact percentage (concentration) of composition has been withheld as a trade secret******4. FIRST AID MEASURES****First aid measures for different exposure routes**

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Rinse immediately with plenty of water and seek medical advice. Keep eye wide open while rinsing.
Skin contact	Remove contaminated clothing and shoes. Wash skin with soap and water. Wash contaminated clothing before reuse. High pressure jets may cause skin damage. Take victim immediately to hospital. Wash off with soap and water.
Inhalation	Inhalation of high concentrations of vapor or aerosols may cause irritation of the upper respiratory tract.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

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Most important symptoms/effects, acute and delayed

Skin contact	Not classified. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Eye contact	Not classified.
Inhalation	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

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

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Suitable Extinguishing Media</u>	Foam. Carbon dioxide (CO ₂). ABC powder.
<u>Unsuitable Extinguishing Media</u>	Do not use a solid water stream as it may scatter and spread fire.
<u>Special Hazard</u>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Thermal decomposition can lead to release of irritating gases and vapors; Sulfur oxides.
<u>Explosion Data</u>	
<u>Sensitivity to Mechanical Impact</u>	None.
<u>Sensitivity to Static Discharge</u>	None.
<u>Protective Equipment and Precautions for Firefighters</u>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

General Information	Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.***
Other information	See Section 12 for additional information.
<u>Environmental precautions</u>	

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General Information

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Try to prevent the material from entering drains or water courses. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Powdered material may form explosive dust-air mixtures. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Prevention of fire and explosion

Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep away from food, drink and animal feedingstuffs. Keep in a bunded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.

Materials to Avoid

Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Mineral oil mist:
USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined).

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Exposure controls**Engineering Measures**

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment**General Information**

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Eye/Face Protection

If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots.

Hand Protection

Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Respiratory protection

None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

9. PHYSICAL AND CHEMICAL PROPERTIES**Physical and chemical properties**

Appearance			
Color			paste
Physical State @20°C			black
Odor			solid
Odor Threshold			Characteristic
			No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	

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Melting point/range	No information available	
Boiling point/boiling range	Not applicable	
Flash point	>= 149 °C	Cleveland Open Cup (COC)
	>= 300 °F	ASTM D 92
		Cleveland Open Cup (COC).
		ASTM D 92.
Evaporation rate	< 1 (n-Butyl acetate=1)	@ 25 °C
Flammability Limits in Air		No information available
upper	-	No information available
Lower	-	No information available
Vapor Pressure	< 0.15 hPa	@ 38 °C
Vapor density	> 5	(Air = 1)
Relative density	< 1	@ 25 °C
Density	< 1 g/cm ³	@ 25 °C
Water solubility		Insoluble
Solubility in other solvents		Soluble in many common organic solvents
logPow		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, kinematic		Not applicable
Explosive properties	Not explosive	
Oxidizing Properties	No information available	
Possibility of hazardous reactions	See section 10	
Other information		
Freezing Point	No information available	
Note	• Please refer to Technical Data Sheet for further information	

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur. None under normal processing.
Conditions to Avoid	Take precautionary measures against static discharges. Heat (temperatures above flash point), sparks, ignition points, flames, static electricity. Heat, flames and sparks.
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Sulfur oxides, Hydrogen sulphide.

11. TOXICOLOGICAL INFORMATION

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Acute toxicity**Product Information**

Product does not present an acute toxicity hazard based on known or supplied information.

Information on likely routes of exposure**Principle Routes of Exposure**

Inhalation, Ingestion, Eye contact, Skin contact.

Numerical measures of toxicity

ATEmix (oral)	9808 mg/kg
ATEmix (dermal)	4226 mg/kg
Inhalation	
ATEmix (inhalation-dust/mist)	10.2 mg/l
ATEmix (inhalation-vapor)	1005 mg/l

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	LC50 (4h) 5.53 mg/l (Rat - Aerosol - OECD 403)
Polysulfides, di-tert-dodecyl 68425-15-0	LD50 19500 mg/kg (Rat - OECD 401)	LD50 2000 mg/kg (Rat - OECD 402)	LC50 (4h) > 15.5 mg/l (Rat - OECD 403)

Information on toxicological effects**Symptoms**

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Skin contact

Not classified. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.

Eye contact

Not classified.

Inhalation

Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Ingestion

Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

Not classified as a sensitizer.

Carcinogenicity

This product is not classified carcinogenic.

Chemical Name	ACGIH	IARC	NTP	OSHA
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Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	-	-	-	-
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	-	-	-	-

Mutagenicity

This product is not classified as mutagenic.

Reproductive toxicity

This product does not present any known or suspected reproductive hazards.

Other adverse effects

Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

Aspiration Hazard

Not classified.

12. ECOLOGICAL INFORMATION**Ecotoxicity****Acute aquatic toxicity - Product Information**

No experimental data available

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6		LC50 (96h) > 5000 mg/L Oncorhynchus mykiss ()	EC50 (48h) > 1000 mg/L Daphnia magna	
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5		LC50 (96h) > 100 mg/l (Pimephales promelas - static - OECD 203)	EL50 (48h) > 10000 mg/l (Daphnia magna - static - OECD 202)	
Polysulfides, di-tert-dodecyl 68425-15-0		LC50 (96h) > 100 mg/l (Danio rerio-OCDE 203) LOEC: 100 mg/l		IC50 (16h) : 10.000 mg/l (Pseudomonas putida)

Chronic aquatic toxicity - Product Information

No experimental data available

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5		NOEL (21d) 10 mg/l (Daphnia magna - semi static - OECD 211)		

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Polysulfides, di-tert-dodecyl 68425-15-0	NOEC (72h) < 0.08 mg/l (Pseudokirchneriella subcapitata-OECD 201)	NOEC (48h) < 0.1 mg/l (daphnia magna)		
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Effects on terrestrial organisms No experimental data available .*****Persistence and degradability****General Information** No information available.**Bioaccumulative potential****Product Information** No information available.*****logPow** No information available**Component Information**

Chemical Name	log Pow
Polysulfides, di-tert-dodecyl 68425-15-0	6.2

Mobility**Soil** Given its physical and chemical characteristics, the product has no soil mobility.**Air** Loss by evaporation is limited**Water** The product is insoluble and floats on water**Other adverse effects****General Information** No information available*****13. DISPOSAL CONSIDERATIONS****Waste treatment****Waste Disposal Methods** Dispose of in accordance with local regulations.**Contaminated packaging** Dispose of in accordance with local regulations.**California Hazardous Waste Codes 221**

This product contains one or more substances that are listed with the State of California as a hazardous waste.

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<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>ADR/RID</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATIONInternational Inventories No information available*****U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	no
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

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U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	X			
Asphalt 8052-42-4	X	X	X	
Graphite 7782-42-5	X	X	X	

16. OTHER INFORMATION

NFPA	Health Hazard 1	Flammability 1	Instability 0	Physical and chemical hazards -
HMIS	Health Hazard 1	Flammability 1	Physical Hazard 0	Personal protection X

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

Revision Date: 2015-10-13
Revision Note *** Indicates updated section
Abbreviations, acronyms

Legend

Section 8
 ACGIH - American Conference of Governmental Industrial Hygienists
 OSHA - Occupational Safety and Health Administration
 NIOSH - National Institute for Occupational Safety and Health
 TLV - Threshold Limit Values
 PEL - Permissible Exposure Limits
 IDHL - Immediately Dangerous to Life or Health concentrations
 TWA - Time Weight Average
 STEL - Short Term Exposure Limits
 S* - Skin notation
 TSCA - Toxic Substance Control Act

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This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet

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