



SAFETY DATA SHEET
According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 084041

CORTIS MS 460

Date of the previous version: 2015-05-20

Revision Date: 2015-10-13

Version 1.01

1. IDENTIFICATIONProduct identifier

Product name CORTIS MS 460

Other means of identification

Product Code(s) 084041

Number 219
Substance/mixture MixtureRecommended use of the chemical and restrictions on use

Identified uses Hydraulic Fluid.

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 sheetSupplier 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 numberCompany 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)

None known

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

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). The product contains no substances which at their given concentration, are considered to be hazardous to health.

Additional information Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

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.
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. In this case, the casualty should be sent immediately to hospital.
Inhalation	Move to fresh air.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

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.

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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>	Carbon dioxide (CO ₂). ABC powder. Foam. Water spray or fog.
<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.
<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.

Environmental precautions

General Information	Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.
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Methods and materials for containment and cleaning up

Methods for cleaning up	Dam up. 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.
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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.
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Materials to Avoid	Strong oxidizing agents.
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits	Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m ³ , NIOSH (REL) TWA 5 mg/m ³ , STEL 10 mg/m ³ , ACGIH (TLV) TWA 5 mg/m ³ (highly refined).
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Exposure controls

Engineering Measures	Apply technical measures to comply with the occupational exposure limits.
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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.
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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**

Color		clear	
Physical State @20°C		liquid	
Odor		No information available	
Odor Threshold		No information available	
Property	Values	Remarks	Method
pH		Not applicable	
Melting point/range		No information available	
Boiling point/boiling range		Not applicable	
Flash point	288 °C 550 °F		Cleveland Open Cup (COC) Cleveland Open Cup (COC).
Evaporation rate		No information available	
Flammability Limits in Air			
upper	-	No information available	
Lower	.	No information available	
Vapor Pressure		No information available	
Vapor density		No information available	
Relative density	7.48	@ 15 °C	ASTM D 1298
Density	748 kg/m ³	@ 15 °C	ASTM D 1298
Water solubility		No information available	

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Solubility in other solvents	No information available		
logPow	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Viscosity, kinematic	460 mm ² /s	@ 40 °C	ISO 3104
	30.5 mm ² /s	@ 100 °C	ISO 3104
Explosive properties	No information available		
Oxidizing Properties	No information available		
Possibility of hazardous reactions	No information available		
Other information			
Freezing Point	No information available		
Pour point	- 15 °C		ASTM D 97

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to Avoid	Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition Products	None under normal use.

11. TOXICOLOGICAL INFORMATION**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)	5069 mg/kg
ATEmix (dermal)	5069 mg/kg
Inhalation	
ATEmix (inhalation-dust/mist)	5.2 mg/l
ATEmix (inhalation-vapor)	20.4 mg/l

Information on toxicological effects

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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.

Mutagenicity	This product is not classified as mutagenic.
Reproductive toxicity	This product does not present any known or suspected reproductive hazards.
Aspiration Hazard	Not classified.

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

No information available

Acute aquatic toxicity - Component Information

No information available

Chronic aquatic toxicity - Product Information

No information available

Chronic aquatic toxicity - Component Information

No information available

Effects on terrestrial organisms No information available.**Persistence and degradability**

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General Information No information available.

Bioaccumulative potential

Product Information No information available.

logPow No information available

Component Information No information available.

Mobility

Soil Given its physical and chemical characteristics, the product generally shows low soil mobility

Air Loss by evaporation is limited

Water Insoluble The product spreads on the surface of the 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 Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO/IATA Not regulated

IMDG/IMO Not regulated

ADR/RID Not regulated

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ADN

Not regulated

15. REGULATORY INFORMATION**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.

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

This product contains the following Proposition 65 chemicals:***

Chemical Name	Weight %	California Prop. 65
Naphthalene - 91-20-3	<0.1	Carcinogen
Cumene - 98-82-8	<0.1	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois

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Paraffin oils (petroleum), catalytic dewaxed heavy 64742-70-7	X			
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16. OTHER INFORMATION

NFPA	Health Hazard 0	Flammability 0	Instability 0	Physical and chemical hazards -
HMIS	Health Hazard 0	Flammability 0	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

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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