SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Address/Phone No.: INEOS Chlor Americas Inc
2030 Foulk Road, Suite 204
Wilmington,
Delaware, 19810
Tel No (693) 295-0149

Emergency Phone No.: call CHEMTREC 1-800-424-9300
For medical emergencies call 1-800-317-9643

Synonyms: Alkanes, C14-17, chloro; Medium-chain chlorinated paraffins; Chlorinated paraffins.

Use of Substance / Preparation: Extreme pressure additive in metal working fluids
For details on specific grades please refer to technical literature.

2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT DESCRIPTION:
C14-17 chlorinated paraffin (containing < 1% C10-13) (chlorination: 40 - 60%)

2.1 HAZARDOUS INGREDIENT(S)

<table>
<thead>
<tr>
<th>Hazardous Ingredient(s)</th>
<th>CAS No.</th>
<th>% (w/w)</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>C14-17 Chlorinated paraffin</td>
<td>681738-76-8</td>
<td>100</td>
<td>Not established</td>
</tr>
</tbody>
</table>

Chlorinated paraffins are a group of compounds varying in molecular structure by carbon chain length and degree of chlorination. Various CAS numbers have been assigned to chlorinated paraffins and may represent specific isomers or reflect large categories.

3. HAZARDS IDENTIFICATION

3.1 Emergency Overview

Low acute toxicity under normal conditions of handling and use.
Slightly irritant to eyes. Repeated exposure to high levels may produce liver and kidney damage.

3.2 Potential Health Effects

Eye

May cause slight eye irritation.

Skin

Unlikely to cause skin irritation in man.

Ingestion

Unlikely to be hazardous if swallowed.

Inhalation

Unlikely to be hazardous by inhalation.

Chronic Effects

Repeated exposure to high levels may produce liver and kidney damage.

Carcinogenicity / Regulatory Status

See Regulatory Information (Section 15).
4. FIRST-AID MEASURES

Inhalation
Remove patient from exposure, keep warm and at rest.

Skin Contact
Remove contaminated clothing. Wash skin with soap and water.

Eye Contact
Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes.
Obtain medical attention.

Ingestion
Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

Note to Physicians
Unlikely to be required but if necessary treat symptomatically.

5. FIRE-FIGHTING MEASURES

Non-flammable. May decompose if heated above 200 Deg C with liberation of hydrogen chloride.

Flash Point (Deg F) None
Extinguishing Media As appropriate for surrounding materials/equipment.
Fire Fighting Protective Equipment A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Caution - spillages may be slippery.
Adsorb spillages onto sand, earth or any suitable absorbent material. Transfer to a container for disposal or recovery.
Do not allow to enter drains, sewers or waterways.
Spillages or uncontrolled discharges into waterways must be alerted to the Environment Agency or other appropriate regulatory body.

7. HANDLING AND STORAGE

7.1 Handling
Avoid contact with eyes.
Avoid prolonged skin contact.
Provide adequate ventilation where operational procedures demand it.
Do not allow to enter drains, sewers or waterways.

7.2 Storage
Keep only in original container at temperatures not exceeding 40 Deg C.
Keep container dry. Keep away from direct sunlight.
It is normally recommended that storage vessels made from mild steel are provided with an internal protective lining. Galvanised steel tanks should not be used.

Storage Life 2 years if stored in accordance with advice given above.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If prolonged or excessive skin contact is likely: Wear suitable protective clothing and gloves.
If splashing or mist is likely to occur: Wear eye/face protection.
Good working practice suggests gloves and goggles should be worn.

Exposure Guidelines

ACGIH, OSHA: Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

These properties are the most relevant and no other properties are available.
For specific physical properties of individual grades, please refer to technical literature and/or product specifications.

- Form: Mobile liquid - viscous liquid
- Odor: Low
- Boiling Point (Deg C): >200, Decomposes below boiling point
- Flash Point (Deg C): None
- Vapour Pressure (mm Hg): 1.10 - 1.38 at 25 Deg C
- Density (g/ml): Insoluble
- Solubility (Water): Soluble in most aromatic hydrocarbons, chlorinated solvents, esters and ketones
- Pour Point (Deg C): -40 to -20

10. STABILITY AND REACTIVITY

Hazardous Reactions
Can react with alkali metals and alkaline earth metals which have a strong affinity for chlorine. Can react with iron, zinc and aluminum at high temperatures leading to decomposition.
Conditions to avoid: Strong oxidising agents, heat and hot surfaces.
CERECLOR™ tends to soften or swell most rubbers.

Decomposition Product(s)
Prolonged heating at temperatures in excess of 70 Deg C or heating above 200 Deg C for short periods of time will result in decomposition and liberation of hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

This health hazard assessment is based on information available on similar products.

Inhalation
Unlikely to be hazardous by inhalation.

Skin Contact
Unlikely to be hazardous by skin absorption.

Eye Contact
By analogy with a similar substance this material is likely to cause slight eye irritation.

Ingestion
Unlikely to be hazardous if swallowed.

Long Term Exposure
Repeated exposure to high levels may produce liver and kidney damage. Chronic ingestion studies in animals have shown that repeated doses of similar chlorinated paraffin (C14-17 52%) gave no effect levels in the range of 250-300ppm.
Slight effects on the liver were seen at higher doses. Adverse effects (blood disorders) have been seen in newborn rats, reared by dams fed on high doses of a similar chlorinated paraffin. Chlorinated paraffins, as a group of chemicals are not genotoxic.
Their lack of genotoxic activity together with the results of other studies leads us to conclude that chlorinated paraffins are unlikely to present a carcinogenic hazard to man under normal conditions of handling and use.
12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution
High tonnage material produced in partially contained systems. High tonnage material used in partially contained systems. Liquid with low volatility. The product is essentially insoluble in water. The product has potential for limited bioaccumulation.

Persistence and Degradation
There is evidence of partial hydrolysis in water. There is evidence of slow degradation in soil and water.

Bioaccumulative Potential
The product is not bioaccumulative in plants or animals.

Bioconcentration
The product is not bioconcentrated in aquatic organisms.

Biochemical Oatactivity
The product is not biochemically oxidized in soil.

Biodegradable
The product is not readily biodegradable under aerobic conditions.

Bioaccumulative Potential
The product is not bioaccumulative in plants or animals.

Bioconcentration
The product is not bioconcentrated in aquatic organisms.

Biochemical Oxidation
The product is not biochemically oxidized in soil.

Biodegradable
The product is not readily biodegradable under aerobic conditions.

13. DISPOSAL CONSIDERATIONS

This material and/or its container must be disposed of as hazardous waste. Do not discharge into drains or the environment, dispose to an authorized waste collection point. Disposal should be in accordance with local, state or national legislation.

14. TRANSPORT INFORMATION

TDG / DOT
Hazardous Class
Not regulated.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA Classification
This product is not classified as a "Hazardous Chemical" by definition of Hazard Communication Standard (29 CFR 1910.1200).

Carcinogen Status
This product is not classified as a carcinogen by IARC, NTP or OSHA.

TSCA Inventory Status
Yes

SARA
Regulations: Sections 313 and 40 CFR 372: This product is not subject to reporting requirements.

Hazard Categories
SARA SECTIONS 311/312 (40 CFR 372.21):
ACUTE: N
CHRONIC: N
FIRE: N
REACTIVE: N
SUDDEN RELEASE: N
Ozone Protection and 40 CFR 42: This product does not contain nor is it manufactured with ozone depleting substances.

Canadian Regulations
This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

Controlled Products Regulations (WHMIS) Classification: Not regulated.

CEPA / Canadian Domestic Substances List (DSL): The substances in this product are on the Canadian Domestic Substances List (CEPA DSL).
PRODUCT NAME:

EU

EINECS: 287-477-0

Inventory Status

United States, Australia, Canada, China, EU, Korea, Philippines

16. OTHER INFORMATION

The following sections contain revisions or new statements: 2, 3, 7, 10, 11, 12, 14, 16

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REFERENCES

Bulk storage and Handling of CERECLOR™ - CERECLOR™ brochure CC5000/17056/1Ed/23/493.

GLOSSARY

ACGIH - American Conference of Governmental Industrial Hygienists
CAS - Chemical Abstracts Service Registry Number
CFR - Code of Federal Regulations
CCM - The company aims to control exposure in its workplace to this level
DOT - Department of Transportation
EINECS - European Inventory of Existing Commercial Chemical Substances
OSHA - Occupational Safety & Health Administration
SARA - Superfund Amendments and Reauthorization Act of the U.S. EPA
TDG - Transportation of Dangerous Goods Act/Regulations
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time-Weighted Average