

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND IDENTIFICATION

- 1). PRODUCT NAME : Houghton DC-42S
- 2). APPLICATION : Hydraulic System Fluid
- 3). INFORMATION OF MANUFACTURER
 - Name of manufactures : KOREA HOUGHTON CO. LTD.
 - Telephone / Fax numbers : Tel) 02)3784-3350
Fax) 02)3784-3333
 - Address : 19th Floor, KSCFC Bldg 395-70 Shin Dae Bang-Dong, Dongjak-Ku, Seoul, Korea Yoido P.O.
Box 185.
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 - Completed by : Kim Dongjin (2001. 9. 24)

2. COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL	CAS. NO	% BY WT.
Petroleum Lubricating	64742-54-7	70 - 85
Oil Base Stock		
Alkyl Benzene	68648-86-2	5 - 20
Alkyl Methacrylate Polymer	104218-13-5	3 - 10
Extra	-	Max. 5%

3. HAZARDS IDENTIFICATION

- 1) Emergency hazardous information : No information
- 2) Eye Contact : Mild Irritant
- 3) Skin Contact : May be a mild irritant on prolonged contact.
- 4) Inhalation : Breathing mists in excess may cause irritation of upper respiratory.
- 5) Ingestion : No significant effects known.
- 6) Chronic State Symptom : No reference

4. FIRST-AID MEASURES

- 1) Eyes Contact
Throughly flush eyes with water; Consult physician.
- 2) Skin Contact
Immediately wash with soap or soft cleaner / and plenty of water.
- 3) Inhalation
Immediately move victim to fresh air.
- 4) Ingestion
Do not induce vomiting; give liquids, consult physician. Product is mainly mineral oil.

5. FIRE-FIGHTING MEASURES

- 1) Flash Point : 170 ° min.
- 2) Natural Ignition Point : No reference
- 3) Lower Flash Limit / Upper Flash Limit : No reference
- 4) Classification and Regulation by Fire Service Act : No reference
- 5) Extinguishing media
Use dry chemical, CO₂, water spray or standard foam. In big fire, use water spray or fog or standard foam.
- 6) Fire fighting Methods and Equipment : N/A
- 7) Fire Cased hazardous Substance : No reference
- 8) Unsuitable Extinguishing Media : No reference

6. ACCIDENTAL RELEASE MEASURES

- 1) Body protection
Use proper personal protective equipment as outlined in section 8.
- 2) Environmental protection
Block the released material. Use flashes or cement powder to absorb liquid material.

7. HANDLING AND STORAGE

- 1) Handling precautions : Provides suitable mechanical equipment for the easy drum handling.
Handle and open container with care. Avoid contact with skin and eyes.
- 2) Storage precautions : Cool dry are not subject to the extremes of temperature.
Keep container tightly closed.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

- 1) Eyes : Safety goggles or safety glasses with side shields
- 2) Skin : Chemically resistant gloves should be worn when handling this material.
- 3) Inhalation : Local exhaust ventilation is recommended when excessive product misting occurs.
- 4) Industrial hygiene : Good standards of industrial hygiene together with the use of moisturizing creams are recommended for use of the diluted product.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 1) Physical Form : Brown liquid
- 2) Odor : Slight mineral oil
- 3) pH neat : N/A
- 4) Solution in water : N/A
- 5) Boiling point : N/A
- 6) Melting point : Max -40.0 °
- 7) Explosive properties : N/A
- 8) Vapor pressure : N/A
- 9) Specific gravity : 0.85 ± 0.05 (15/4 °)
- 10) Vapor density (air=1) : N/A
- 11) Viscosity : 42 ± 4.2 cSt (40 °)
- 12) Molecular weight : N/A
- 13) Autoflammability : N/A

10. STABILITY AND REACTIVITY

- 1) Chemical stability : The product is stable and not subject to polymerization.
- 2) Conditions to avoid : Mixing of high pressure oxygen gas in high temperature
Mixing of water in high temperature
- 3) Hazardous decomposition products : product does not decompose at ambient temperature.

11. TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on a knowledge of the toxicity of the product's components.

- 1) Eyes : Irritating to eyes.
- 2) Skin : Irritating to skin.
- 3) Inhalation : Inhalation of mists may cause irritating
- 4) Ingestion : Ingestion of large quantities may cause nausea and sickness.
- 5) Chronic : Frequent and prolonged contact may lead to skin disorders
- 6) Special hazards of product after use : Product may become contaminated with hazardous metals depending upon conditions of use.

These may introduce an increased risk to health via allergic skin reaction or exposure to excessive mist.

12. ECOLOGICAL INFORMATION

- 1) Mobility : Mobile liquid.
- 2) Persistence and degradability : Biodegradable
- 3) Bioaccumulative potential : N/A

13. DISPOSAL CONSIDERATION

Disposal must be in accordance with local and national legislation.

- 1) The product should be removed by approved waste contractors.
- 2) 200liter unlined steel drums may be returned for recycling.

All other packaging should be disposed of in a manner acceptable to the authorities

The container may contain combustible residues.

14. TRANSPORT INFORMATION

- 1) Classification for transport : Not classified.
- 2) UN number : Not applicable
- 3) Packing group : Not applicable
- 4) Marine pollutant : No.
- 5) ICAO/IATA class : Not applicable

15. REGULATORY INFORMATION

- 1) OSHA STATUS : Product is not considered hazardous by OSHA standards.
- 2) TSCA STATUS : This product is not listed on the TSCA Inventory.

The Raw material of the product is listed on the TSCA Inventory

- 3) CERCLA : Not regulated.
- 4) SARA TITLE III : None.

16. OTHER INFORMATION

The information contained herein relates only to the specific material identified.

Korea Houghton Company believes that such information is accurate and reliable as the date of this

material safety data sheet.

But no representation, guarantee or warranty, express or limited, is made as to the accuracy, reliability or completeness of the information.

Korea Houghton Company urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.

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