

Safety Data Sheet (SDS)

LIQUIDS RESEARCH LTD

Date Issued: 27 March 2017

1 Product and Company Information

Product: Hydrocarbon oil based ferrofluid for rotary vacuum sealing applications.

Catalogue designation: VacuMAG-H3 series. Applicable to H3, and all low starting torque (LT) versions of the H3 series fluids.

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2 Hazards Identification

This product is not classified as dangerous according to NIOSH, IARC, NTP. This product does not require any hazard warning on the label under established regulatory criteria. May be harmful if ingested in quantity. May be irritating to eyes and may irritate skin. Repeated or prolonged skin contact may result in severe irritation.

3 Composition and Description

Magnetite: <70% by weight.
Hydrocarbon oil : <60% by weight
Dispersant: <30%

CAS: Not assigned
EINECS/ELINCS: Not assigned

4 First Aid

Eyes: Irrigate thoroughly with clean water or an eye wash solution for at least 15 minutes and seek medical attention.

Inhalation of smoke or mist: Remove patient to fresh air. Obtain medical attention

Skin: Wash with soap and water. Remove contaminated clothing.

Ingestion: Do not induce vomiting. Wash out mouth with water and give 200-300 ml of water to drink. Obtain medical attention.

5 Fire Fighting Measures

Low fire hazard. Thermal decomposition will evolve irritant vapours.

Extinguishing media: CO₂, foam, dry chemical, water spray with care to avoid possible violent production of steam. Avoid smoke inhalation.

Unusual fire and explosion hazards: none

6 Accidental Release Measures

(As appropriate to quantity handled.)

Avoid release into waterways or sewers. Spills should be taken up with absorbents.

7 Handling and Storage

No special measures required for handling. Avoid contact with eyes and skin. Store in HDPE bottles. Take precautions against static discharges.

Avoid contamination with tobacco products. Do not eat or drink in handling area.

8 Exposure Controls / Personal Protection

Engineering Controls

No extraction required at room temperature.

Exposure Limits: No data

Personal Protective Equipment

Avoid breathing vapour. If heated and ventilation is inadequate, use NIOSH certified respirator, which will protect against organic vapour.

Hand: Gloves

Eye: Safety goggles

Wash thoroughly after handling

9 Physical Data

Appearance: Black liquid

Melting Point: Not determined

Flash Point (free hydrocarbon oil): >180°C

Boiling Point : No data

Specific gravity: 1.0 to 1.7

Ignition temperature (free hydrocarbon oil): >200°C

Solubility in water: Largely insoluble.

Viscosity at 27°C (±15%): 1000cP to 2000 cP (See certificates of analysis for individual H3 series fluids)

Vapour pressure of oil (20°C): Not determined

Volatile content (20°C): Non volatile

Saturation magnetisation (±5%) in Gauss: 350 to 400.

Mean magnetic particle diameter: 10nm (100Å)

10 Stability and Reactivity

Stability

Stable

Incompatibility (carrier) : Strong oxidisers, heat and flame

Hazardous decomposition and by-products

Carbon monoxide

Hazardous Polymerisation

Will not occur

11 Toxicity data:

Sensitisation

Respiratory: Vapours may cause allergic respiratory reaction at high temperatures.

Skin: May cause allergic skin reaction

Eye: May cause irritation

Routes to exposure

Skin contact: Possible irritant

Eye contact: Irritation

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. Ingestion: May be harmful if swallowed.

LD50 oral and dermal (rat): > 2000 mg/kg
(oil component)

Chronic exposure

No data.

The components of this product are not known to be a mutagen or carcinogen.

12 Ecological Data

No data

13 Disposal Considerations

Contact a licensed professional waste disposal service. Observe all local environmental regulations. Not suitable for disposal by either landfill or via municipal sewers, drains, natural stream or rivers.

14 Transport Information

Not classed as hazardous for transport by RID/ADR, IATA

15 Regulatory Information

This product is not classified according to EU regulations.

The information provided in this SDS is to the best of our knowledge, accurate at the date of publication. Nothing herein is to be construed as a warranty, express or otherwise. In all cases, it is the responsibility of the user to determine the applicability of such information or the suitability of any products for their own particular purpose. No liability written or implied is accepted by Liquids Research Ltd for any losses or damage or death

to individuals or damage to equipment caused as the direct or indirect use of any material supplied by Liquids Research Ltd.

16 Other Information

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The information in this SDS applies only to fluid VacuMAG-H3 series. Individual SDS sheets apply to other products in our catalogue.

For further information please contact our technical department at the address given on page 1.