

# Safety Data Sheet (SDS)

## LIQUIDS RESEARCH LTD

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### **1. Product and Company Information**

Product: Magnetite particles dispersed in water with dextran. Ferrofluid.

**IN VITRO USE ONLY. FILTER STERILISED.**

Catalogue designation: DexoMAG (Dextran  $M_w$  = 500, 200, 40, 10 and 3.5 kDa)

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### **2. Hazards Identification**

This product is not classified as dangerous. 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: <10% by weight.  
Water: >90% by weight  
Additives: <30% by weight  
CAS: 7732-18-5 (water component only),  
CAS: 9004-54-0 (dextran)  
EINECS/ELINCS: No data

### **4. First Aid**

Eyes: Irrigate thoroughly with clean water or an eye wash solution for at least 10 minutes.

Inhalation of smoke or mist: Remove from exposure, and seek medical attention.

Skin: Wash with soap and water. In severe cases obtain medical attention.

Ingestion: Do not induce vomiting, keep at rest and seek medical attention.

Effects of overexposure: No experience of overexposure.

### **5. Fire Fighting Measures**

Unusual fire and explosion hazards: No data.

### **6. Accidental Release Measures**

(As appropriate to quantity handled.)

Prevent spreading by diking, ditching, or absorbing on inert materials. Keep out of sewers and waterways.

## **7. Handling and Storage**

Avoid contact with eyes and skin. Store in glass or HDPE bottles.

Storage temperature: Store between 4-8 °C. **Do not freeze!**

Transport temperature: Ambient

Electrostatic accumulation hazard: No data.

## **8. Exposure Controls / Personal Protection**

### Engineering Controls

Local exhaust ventilation: Not required

Exposure Limits: No data

### Personal Protective Equipment

Avoid breathing vapour If heated.

Hand: Gloves

Eye: Safety goggles.

Wash thoroughly after handling.

## **9. Physical Data**

Appearance: Black liquid

Melting Point: Not determined

Flash Point (carrier): Not applicable.

Boiling Point : 100°C (free form water)

Specific gravity: 1.0 to 1.3

Ignition temperature: Not applicable

Solubility in water: Soluble

Viscosity at 27°C: <5 cp

Vapor Pressure (mm Hg): 17.5 @ 20C (68F)

Volatile content: Water

Saturation magnetisation in Gauss: 10

Mean magnetic particle diameter: 9nm (90Å)

Magnetite concentration(approximate): 10 mg / mL of ferrofluid

## **10. Stability and Reactivity**

### Stability

Stable.

Incompatibility: Not known

### Hazardous decomposition and by-products

If evaporated to dryness, dextran residue may react with oxidising agents.

### Hazardous Polymerisation

Will not occur.

## **11. Toxicity data:**

### Sensitisation

Respiratory: No data

Skin: May cause allergic skin reaction.

Eye: Irritating.

### Routes to exposure

Skin contact: Possible irritant.

Eye contact: Irritation.

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

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Ingestion: May be harmful if swallowed.

Minimal toxicity

Chronic exposure

Carcinogen (free form dextran) - Rat

Route of application: Intraperitoneal

**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 AND/R.

**15. Regulatory Information**

Not hazardous according to directive 67/548/EEC. (Free form dextran only)

**16. Other information**

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

The information in this SDS applies only to fluid DexoMAG. Individual SDS sheets apply to other products in our catalogue.

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