

# Material Safety Data Sheet (MSDS)

## LIQUIDS RESEARCH LTD

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

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

**IN VITRO USE ONLY**

Catalogue designation: BKS31

Liquids Research Limited.  
UNIT 3B, Mentec, Deiniol Road,  
BANGOR, Gwynedd. LL57 2UP.  
United Kingdom.

Telephone: +44 (0)1248 352204 / 354103

Facsimile: +44 (0)1248 352204 / 352497

Email: help@liquidsresearch.co.uk

### **2 Composition and Description**

Magnetite: <10% by weight.

Water: >90% by weight

Additives: <30% by weight

CAS: 7732-18-5 (water component only),

CAS: 9006-59-1 (albumin)

EINECS/ELINCS: No data

### **3 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.

### **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: Ambient

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: 10nm (100Å)

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, albumin residue may react with oxidising agents.

#### Hazardous Polymerisation

Will not occur.

### **11 Toxicity data (free form albumin only):**

To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated.

#### 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.

Ingestion: May be harmful if swallowed.

Minimal toxicity

#### Chronic exposure

No data.

### **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 albumin only)

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