

SAFETY DATA SHEET

According to (EC) No 1907/2006

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY / UNDERTAKING

PREPARATION NAME : **14HF Aerosol**
USE : Fluorescent Magnetic Ink used in Magnetic Particle Inspection
COMPANY IDENTIFICATION : MAGNAFLUX® a Div of ITW LTD
 FARADAY RD, SOUTH DORCAN IND EST,
 SWINDON, ENGLAND, SN3 5HE
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2. HAZARDS IDENTIFICATION

Extremely flammable F+ R12 Extremely flammable
 R66 Repeated exposure may cause skin dryness or cracking.

Aerosols are pressurised containers.
 Vapours can form explosive mixtures with air.

3. COMPOSITION INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>EC No</u>	<u>CAS No</u>	<u>% W/W</u>	<u>SYMBOL</u>	<u>R PHRASES *</u>
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	265-149-8	64742-47-8	> 50 %	Xn	R65, R66
BUTANE	203-448-7	106-97-8	10 - 30 %	F+	R.12
ISOBUTANE	200-857-2	75-28-5	5 - 10 %	F+	R.12
PROPANE	200-827-9	74-98-6	5 - 10 %	F+	R.12

Other Ingredients : Iron oxide coated with fluorescent pigment

Note : Risk phrases in this section apply only to raw materials, not necessarily to finished products. See section 15.
 *See Section 16 for risk phrase text

4. FIRST AID

- EYE CONTACT** ➤ Flush eyes with large amounts of water for at least 10 minutes and seek medical attention.
SKIN CONTACT ➤ Flush with water, use soap if available. Contaminated clothing should be washed before re-use.
INHALATION ➤ Remove to fresh air. Keep at rest. Call for prompt medical attention.
INGESTION ➤ Do not induce vomiting. Seek prompt medical attention.

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5. FIRE FIGHTING MEASURES

- EXTINGUISHING MEDIA** ➤ Carbon dioxide, Foam, Dry chemical, Water fog or spray.
- SPECIAL FIRE FIGHTING PROCEDURES** ➤ Evacuate immediate area. Shut off “fuel” to fire. If possible keep unaffected containers cool with water spray. Aerosols may explode in a fire. Warn fire-fighters that aerosols are involved.
- HAZARDOUS DECOMPOSITION PRODUCTS** ➤ Aerosol contents are extremely flammable releasing smoke, soot, oxides of carbon on combustion.
- PROTECTIVE EQUIPMENT** ➤ Self contained breathing apparatus and suitable protective clothing should be worn in fire fighting conditions.

6. ACCIDENTAL RELEASE MEASURES

- SPILL CLEAN UP METHODS** ➤ Eliminate sources of ignition. Contain spilled liquid with sand or earth. Mop up or absorb onto an inert absorbent. Large spills should be pumped (Use explosion proof pump) into containers pending disposal.
- ENVIRONMENTAL PRECAUTIONS** ➤ Prevent liquid from entering drains sewers and watercourses. Notify the water authorities if a major spillage occurs.
- PERSONAL PRECAUTIONS** ➤ Wear suitable protective equipment to avoid inhaling solvent vapours.

7. HANDLING & STORAGE

- USAGE PRECAUTIONS** ➤ Aerosol contents are highly flammable. Keep away from sources of ignition. Wear suitable protective clothing such as chemical resistant gloves, apron & goggles / face mask to protect from splashes. Avoid contact with the skin. Do not breathe product spray or mist. Ensure adequate ventilation when in use.
- STORAGE PRECAUTIONS** ➤ Store in a cool dry area away from heat and sources of ignition. Recommended storage temperature $\geq 10^{\circ}\text{C}$ to 30°C . Keep containers out of direct sunlight. Keep containers closed when not in use. Protect aerosols from sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure figures have been set for some of the components of this preparation based on EH-40 (latest revision) or manufacturers recommendation.

TID = Total inhalable dust.

MRL = Manufacturers recommended limit

WEL = Workplace exposure limit

<u>INGREDIENT NAME</u>	<u>STD</u>	<u>LT Exp (8 Hrs)</u>	<u>ST Exp (15 Min)</u>
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	MRL	5 mg/m ³ (Oil Mist)	10 mg/m ³ (Oil Mist)
BUTANE	WEL	600 ppm	750 ppm
ISOBUTANE	WEL	800 ppm	

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WORKPLACE EXPOSURE

Concentrations of product mists and sprays in the working atmosphere must be kept as low as is reasonably practicable. Exposure should be minimised by the use of appropriate containment, engineering control and ventilation measures. Where this is not possible, personal protective equipment should be worn as indicated below where appropriate.

- Respiratory protection** ➤ Use a respirator with appropriate canister type filter cartridge if spraying in confined or unventilated area's.
- Hand protection** ➤ Use chemical resistant gloves recommended by glove manufacturer as being suitable for kerosenes, if hand exposure is unavoidable. Marigold blue nitrile, Long Nitrosolve or Green Supersolve (Breakthrough time 480 minutes, permeation rate 96 mg m² after breakthrough, degradation level 2) are suitable, although other types may be more suitable in other circumstances.
- Eye protection** ➤ Wear goggles/face mask to protect eyes from splashes.
- Skin protection** ➤ Wear chemical resistant overalls if skin contact is likely.

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE	:	AEROSOL CONTAINING MOBILE BROWN LIQUID
ODOUR	:	MILD HYDROCARBON
pH	:	NEUTRAL
BOILING POINT	:	230°C
MELTING POINT	:	N/A
FLASH POINT (PMCC)	:	-40°C (Aerosol Propellant)
FLAMMABILITY (Limits in Air)	:	1.0% TO 6% (VOL %)
AUTOFLAMMABILITY	:	> 200°C
EXPLOSIVE PROPERTIES	:	N/A
OXIDISING PROPERTIES	:	N/A
VAPOUR PRESSURE	:	< 0.5 mm Hg @ 20°C
VAPOUR DENSITY (Air = 1)	:	> 1
RELATIVE DENSITY	:	0.80 g/ml
SOLUBILITY IN WATER	:	NEGLIGIBLE
PARTITION COEFFICIENT	:	N/D
EVAPORATION RATE (BuAc = 100)	:	< 0.1
VISCOSITY (ASTM D-445)	:	2.5 cSt @ 38°C

N/A = Not Applicable. N/D = Not Determined. Properties relate to the bulk liquid only unless otherwise stated.

10. STABILITY & REACTIVITY

- STABILITY** ➤ Stable under normal conditions of use and applications.
- HAZARDOUS POLYMERISATION** ➤ None.
- MATERIALS & CONDITIONS TO AVOID** ➤ Strong oxidising agents.
- HAZARDOUS DECOMPOSITION PRODUCTS** ➤ None under normal conditions of storage and use. Smoke, soot, oxides of Carbon on combustion.

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11. TOXICOLOGICAL INFORMATION

- INHALATION** > Inhalation of high product concentrations when spraying can be irritating to the respiratory tract.
- INGESTION** > Not a likely route of entry, however, ingestion may cause irritation of the mouth, throat and digestive tract.
Small amounts of product aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary edema.
- EYE CONTACT** > May produce irritation due to solvent action.
- SKIN CONTACT** > Frequent or prolonged contact with the product may produce irritation and /or skin dryness and cracking. No evidence of sensitisation potential.
- CHRONIC TOXICITY** > Ingredients in this preparation are not classified as carcinogenic or mutagenic according to the CHIP 3 regulations.

12. ECOLOGICAL INFORMATION

Based on data for component materials.

This product is not soluble in water and will float on the surface if released into the environment. The product is predicted to have a low / medium potential to bioaccumulate. Has the potential to biodegrade at low concentrations.

13. DISPOSAL

Seek the advice of an approved waste disposal contractor for disposal in accordance with local, state or national legislation.

Empty aerosol cans fully before disposing. Pressurised aerosol cans are not an acceptable waste. The Special Waste Regulations 1996 apply to the disposal of this material. Other provisions are the Waste Framework Directive (75/442/EEC), the Hazardous Waste Directive (91/689/EEC), the Environmental Protection Act 1990 and the Environment Act 1995.

14. TRANSPORT INFORMATION

This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR & IMDG. These provisions allow transport of aerosols of less than 1 litre packed in cartons of less than 30 kg gross weight to be exempt from control providing that they are labelled in accordance with the requirements of these regulations to show that they are being transported as Limited Quantities. Aerosols not so packed and labelled must show the following.

UN Number	1950
I.M.C.O / I.M.D.G Class	2.1
I.A.T.A / I.C.A.O	2.1
LABEL FOR ROAD CONVEYANCE	FLAMMABLE GAS



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15. REGULATORY INFORMATION

LABEL FOR SUPPLY



Extremely
Flammable

RISK PHRASES	R12 R66	Extremely flammable Repeated exposure may cause skin dryness or cracking.
SAFETY PHRASES	S2 S16 S23 S24 S51	Keep out of reach of children. Keep away from sources of ignition - No smoking. Do not breathe vapour/ spray. Avoid contact with skin. Use only in well ventilated areas.

Aerosol containers can be regarded as exempt from classification as an aspiration hazard under BAMA guidelines.

Regulatory References

- ⇨ Health & Safety at Work Act 1974
- ⇨ Control of Substances Hazardous to Health Regulations 1988
- ⇨ Occupational Exposure Limits EH 40
- ⇨ Chemical (Hazard Information & Packaging for Supply) Regulations 2002. (CHIP 3)
- ⇨ EC Directive 91/155/EEC
- ⇨ Dangerous Preparations Directive 1999/45/EC
- ⇨ REACH Directive (EC) 1907/2006

16. OTHER INFORMATION

R Phrases in full

R12	Extremely flammable
R65	Harmful : may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking..

Revision Date : 15/11/2010 Rev : 06

Replaces Rev 05 (04/04/08)

Revision Summary : SDS general update including revised transport and WEL information in compliance with the Chemical (Hazard Information & Packaging for Supply) Regulations 2002. (CHIP 3) and amendments. REACH sec 2 & 3 layout changes.