MATERIAL SAFETY DATA SHEET JESMONITE: FLEX METAL LIQUIDS

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name

JESMONITE FLEX METAL LIQUIDS

Application of Product:

Fibre reinforced decorative moulded elements.

Company Address:

Jesmonite Limited. Challenge Court, Bishop's Castle, Shropshire, SY9 5DW

Information in case of emergency:

Tel:+44 (0) 1588 630302 Fax:+44 (0) 1588 630304 Web: www.jesmonite.co.uk Email: sales@jesmonite.co.uk

2. COMPOSITION / INFORMATION ON INGREDIENTS

No.	CAS Reg No.	Weight (%)
1 Acrylic Polymer	Not hazardous	40 - 45 %
2 Individual residual monomers	Not required	<0.1
3 Water	7732 – 18 – 5	55 - 60 %

NB: Water contains small quantities of sulfactant dispersion agent, plasticising agent and polyurethane thickener.
See section 15, Regulatory Information. This product is a preparation.

3. HAZARDS IDENTIFICATION

Primary Routes of Exposure: Inhalation, skin contact and eye contact.
Inhalation: Inhalation of vapour or mist can cause the following headache, nausea, irritation of the nose, throat and lungs.
Skin Contact: Prolonged or repeated skin contact can cause slight skin irritation.
Eye Contact: Direct contact with material can cause slight eye irritation.

4. FIRST AID MEASURES

Inhalation: Move subject to fresh air.
Eye Contact: Flush eyes with a large amount of water for at least 15 minutes. Consult a physician if irritation persists.
Skin Contact: Was affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.
Ingestion: If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point	Non-combustible
Auto-ignition Temperature	**N/A**
Lower Explosive Limit	N/A
Upper Explosive Limit	N/A
Extinguishing Agents	Use extinguishing media appropriate for surrounding fire.
Unusual Hazards	Material can splatter above 100℃/212℉. Dry product can burn.
Personal Protective Equipment	Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH apparatus or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal protection

Appropriate protective equipment must be worn when handling a spill of this material. See Section 8, Exposure Controls/Personal Protection for recommendations. If exposed to material during clean up operations, see Section 4, First Aid Measures, for actions to follow.

Procedures

Keep spectators away. Floor may be slippery, use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid dyking material to separate suitable containers for recovery or disposal.

Caution

Keep spills and cleaning run-off out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

Storage conditions

Keep from freezing; material may coagulate. The minimum recommended storage temperature for this material is 1℃/34℉. The maximum recommended storage temperature for this material is 49℃/120℉.

Handling Procedures

Monomer vapours can be evolved when material is heated during processing operations. See section 8, Exposure Controls/Personal protection, for types of ventilation required.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

No.	CAS Reg No.	Weight (%)
1 Acrylic Polymer	Not hazardous	40 - 45 %

2 Individual residual monomers	Not required	<0.1
3 Water	7732 – 18 – 5	55 - 60 %

NB: Water contains small quantities of sulfactant, dispersion agent, plasticising agent and polyurethane thickener.

	ACGIH		MAAK (Germany)	
No. Units	**TWA**	**STEL**	**WERT**	**KAT**
1	None	None		
2	a	a		
3	None	None	None	None

a Not required

NB: Water contains small quantities of sulfactant dispersion agent, plasticising agent and polyurethane thickener.

Personal protection

Respiratory protection: A respiratory protection programme meeting OSHA 1910.134 and ANSI Z88.1 requirements must be followed whenever workplace conditions warrant a respirator's use. None require if airborne concentrations are maintained below the exposure limit listed in 'Exposure Limit Information'. For airborne concentrations up to 10 times the TWA/TVL's listed in 'Exposure Limited Information', wear a MSHA/NIOSH approved (or equivalent) half mask, air purifying respirator. Air purifying respirators should be equipped with an ammonia/methylamine cartridge.

Hand protection: The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection: Neoprene.

Eye protection: Use chemical splash goggles (ANSI Z87.1 or approved equivalent).

Ventilation: Use local exhaust with a minimum capture velocity of 100 ft/min. (£0 m/min) at the point of vapour evolution. Refer to the current edition of Industrial Ventilation: A manual of recommended practice published by the American Conference of Governmental Industrial Hygienists for information on design, installation, use and maintenance of exhaust systems.

Other protective equipment: Facilities storing or utilising this material should be equipped with an eye wash facility.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Milky
Physical form	Liquid
Colour	White
Odour	Acrylic odour
pH	4.5 – 5.5
Viscosity	< 500 mPa/s
Specific gravity (water=1)	1.0 – 1.2
Vapour density (air = 1)	< 1 water
Vapour pressure	2266.5 Pa @ 20℃/ 68℉ water
Boiling point/boiling range	100℃/212℉
Melting point/melting range	0℃/32℉
Solubility in water	dilutable
Percent volatility	52 – 54% water
Evaporation rate (BAc = 1)	< 1 water

10. STABILITY AND REACTIVITY

Instability This material is considered stable. However, avoid temperatures above 177℃/350℉, the onset of polymer decomposition. Thermal decomposition is dependent on time and temperature.

Hazardous decomposition products Thermal decomposition may yield acrylic monomers.

Hazardous polymerisation Product will not undergo polymerisation.

Incompatibility There are no known materials which are incompatible with this product.

11. TOXICOLOGICAL INFORMATION

No toxicity data is available for this material. The information shown in section 3, Hazards Identification, is based on the toxicity profiles for a number of acrylic emulsions that are compositionally similar to this product. Typical data values are:

Oral LD50 – rat:	> 5000 mg/kg
Dermal LD50 – rabbit:	> 5000 mg/kg
Skin irritation – rabbit:	Practically non-irritating
Eye irritation – rabbit:	Inconsequential irritation

12. ECOLOGICAL INFORMATION

No applicable data.

13. DISPOSAL CONSIDERATIONS

Procedure
Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush into chemical sewer. Incinerate liquid and contaminated solids in accordance with local, state and federal regulations.

Waste key for the product as delivered (Germany)
573 03 Dispersions or Emulsions of Plastic Material.

14. TRANSPORT INFORMATION

ADR Class	Not regulated for transport
IMO Class	NR
IATA Class	NR

15. REGULATORY INFORMATION

United States
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Act (MSC) Chemical Substance Inventory.

EEC
This product satisfies all the requirements of the European Inventory of Existing Chemical Substances (EINECS).

EINECS Information

No.	CAS Reg No.	EINECS
1 Acrylic Polymer	Not hazardous	
2 Individual residual monomers		Not required
3 Water	7732 – 18 – 5	2317912

Indication of Danger
This product is not hazardous according to EEC Directives 67/548/EEC and 88/379/EEC

16. OTHER INFORMATION

Abbreviations

ACGIH	=	American Conference of Governmental Industrial Hygienists
MAK	=	Maximum Workplace Concentrations
TLV	=	Threshold Limit Value
PEL	=	Permissible Exposure Limit
TWA	=	Time Weighted Average
STEL	=	Short-Term Exposure Limit
BAc	=	Butyl acetate

Disclaimer of Liability

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This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS may not be acceptable.