

## MATERIAL SAFETY DATA SHEET CLEARPOR®

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### IMPORTANT

Read this MSDS before handling and disposing of this product and pass this information on to all users of this product.

### 1. Substance/preparation and company identification

#### 1.1 Company

##### Manufacturer

JSP Corporation  
Yokkaichi Daiichi Plant  
653-2, Rokuromi, Yokkaichi, Mie, Japan  
Tel : +81-593-45-1109  
Fax : +81-593-45-1119  
Emergency phone: +81-593-45-1109

##### Distributor

JSP International GmbH & Co.KG  
Wieslensdorfer Str. 48  
74182 Obersulm-Eschenau, Germany  
Tel : +49-71 30 40 080  
Fax : +49-71 30 40 08 70

#### 1.2 Product identification

Trade name: Clearpor®  
Chemical name: Copoly(methyl methacrylate / styrene /  $\alpha$ -methyl styrene)  
Chemical family: Poly(methyl methacrylate)

### 2 Composition/ information on ingredients

Compositions given are typical values, not specifications.

<u>Component</u> EINECS No	<u>% Weight</u>	<u>CAS No</u>	<u>Danger</u> <u>symbol</u>	<u>R phrases</u>
Copoly(methyl methacrylate / styrene / $\alpha$ -methyl styrene) --	89-92	30050-69-2		
Pentane 203-692-4	5.5-7.5	109-66-0	F+, Xn, N	R12, R51/53, R65, R66, R67
Xylene 215-535-7	1.2-1.6	1330-20-7	Xn	R10, R20/21, R38
Impurities methyl methacrylate 201-297	0.8-1.2	80-62-6	F, Xi	R11, R36/37/38, R43

Version: 4 Date 14/02/2006.

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The information contained herein is based upon the results of internal laboratory test samples of material moulded from expandable copoly (methyl methacrylate / styrene /  $\alpha$ -methyl styrene) beads (Trade name: Clearpor) manufactured by JSP. There can be no assurance that similar results will be achieved in simulated tests or actual use of commercial products moulded by customers of JSP. Product performance may vary substantially depending upon the particular application or processing involved. The listed properties are illustrative only and not product specifications. All suggestions and recommendations are made without warranty since the conditions of use are beyond JSP control. Processing and applications of JSP foam products can influence moulded part performance in many ways. Consequently, processors and/or users are advised that there may be a need to conduct independent tests and experiments in order for them to determine the extent to which they may choose to rely upon such information in their business operations. JSP disclaims any liability in connection with the use of the information and does not warrant against infringement by reasons of the use of its products in combination with other material or in any process

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### 3. Hazards Identification

PHYSICAL AND CHEMICAL HAZARDS:

Pentane evaporates from bead gradually.

Risk Phrases: R18 In use, these may form flammable/explosive vapor-air mixture

ADVERSE HUMAN HEALTH EFFECTS:

Hazard identification Xi irritant

Risk Phrases: R43 May cause sensitisation by skin contact

R67 Vapours may cause drowsiness and dizziness

R65 Harmful: may cause lung damage if swallowed

Styrene monomer remaining as an impurity at low level is listed in IARC classification as a possible carcinogen (Group II B).

ENVIRONMENTAL EFFECTS:

Risk Phrases: R52 /53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### 4. First aid measures

Inhalation: If vapors of blowing agent are excessively inhaled, remove person to fresh air. If breathing is difficult, get medical attention.

Skin contact: Avoid contact with skin. Wear suitable gloves.  
Any molten material on skin should be cooled as quickly as possible. Seek immediate medical attention.

Eye contact: Flush the eyes with plenty of water without rubbing the eyes with hands. Get medical attention if irritation persists

Ingestion: Single dose oral toxicity is believed to be low. Get medical attention if considerable amounts of this product are ingested.

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**5. Fire fighting measures**

Usual extinguishing methods: Water spray, CO<sub>2</sub>, foam or dry chemical.  
In case of close fire fighting, use breathing apparatus.

**6. Accidental release measures**

Spilled product may create slipping hazard on any hard smooth surface. Quickly sweep up product.  
Handle and store according to measures defined in section 7.

**7. Handling and storage**

Handling: Products should be handled carefully in well ventilated areas.  
Storage: Keep away from heat or ignition sources (flame or sparks) and avoid static discharge.

**8. Exposure controls / Personal protection**

Occupational Exposure:	France VME	France VLE	Germany MAK	EU TWA (8hr)	EU STEL (15 min)
methyl methacrylate	100 ppm 410 mg/m <sup>3</sup>	200 ppm 820 mg/m <sup>3</sup>	50 ppm 210 mg/m <sup>3</sup>		
pentane	600 ppm 1 800 mg/m <sup>3</sup>		1000 ppm 3 000 mg/m <sup>3</sup>		
xylene	100 ppm 435 mg/m <sup>3</sup>	150 ppm 650 mg/m <sup>3</sup>	100 ppm 440 mg/m <sup>3</sup>	50 ppm 221 mg/m <sup>3</sup>	100 ppm 442 mg/m <sup>3</sup>

- Collective protection: Good general ventilation should be provided.
- Personal protection: Goggles should be worn for all industrial operations.
- Skin protection: Avoid contact with skin. Wear suitable gloves. Use suitable protection gloves and clothes against contact with molten product.
- Industrial hygiene: Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities.

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### 9. Physical and chemical properties

Appearance:	Plastic beads
Physical state at 25°C:	Solid
Colors:	Opaque white
Odor:	Acrylic odor
Density at 25°C (kg/m <sup>3</sup> ):	ca. 1150
Bulk Density (kg/m <sup>3</sup> ):	ca. 600
Solubility in water (in weight %):	Insoluble
Other solvents:	Soluble in organic solvents
Softening, Expansion temperature (°C):	>70
Flash point(°C):	43-75 (Seta flash closed cup)
Flammable limits (in volume %)	LEL: 1.5, UEL: 7.8 (for pentane)
Decomposition temperature (°C):	>280
Auto-ignition temperature (°C):	285 (for pentane)

### 10. Stability and reactivity

The product is stable in normal use conditions.

Decomposition products: Incomplete combustion will generate carbon monoxide and perhaps other toxic vapors.

### 11. Toxicological Information

Refer to section 3.

Acute Toxicity:	LD50 not available
Inhalation:	Dust can irritate the upper respiratory tract. Vapours may cause drowsiness and dizziness Harmful: may cause lung damage if swallowed
Skin contact:	May cause sensitisation by skin contact
Eye contact:	Can induce irritation or injury of the cornea due to a mechanical action.
Ingestion:	Product ingestion can create a wrong satiety feeling.
Chronic Toxicity:	No chronic health effects for this material have been reported.

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### 12. Ecological information

Product may cause long-term adverse effects in the aquatic environment. Do not allow to enter drains and waterways.

Finished parts produced with the product are biologically inert and not readily degradable. They sink in fresh water and may float or sink in sea water.

### 13. Disposal considerations

Dispose of product in accordance with local and national regulations on waste disposal. User should try to recycle or reuse material.

### 14. Transportation information

#### Land transport

ADR/RID	Shipping name :	POLYMERIC BEADS, EXPANDABLE
	Class :	9
	Substance No :	2211
	Hazard No :	90
	Packaging group :	III
	UN No	2211

#### Inland waterway transport

ADN/ADNR	Shipping name :	POLYMERIC BEADS, EXPANDABLE
	Class :	9
	Packaging group:	III

#### Sea transport

IMO/IMDG	Shipping name :	POLYMERIC BEADS, EXPANDABLE
	Class :	9
	UN No :	2211
	Packging group :	III
	EmS No :	4.1-06
	Marine Pollutant	No

#### Air transport

ICAO/IATA	Shipping name :	POLYMERIC BEADS, EXPANDABLE
	Class :	9
	UN No :	2211
	Packaging group :	III

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**15. Regulatory information**

EC Labeling

Symbol(s):



Xi - Irritant

R Phrase(s): R43: May cause sensitisation by skin contact

S Phrase(s): S24 Avoid contact with skin

S37 Wear suitable gloves

R Phrase(s): R18: In use, may form flammable/explosive vapor-air mixture

S Phrase(s): S3/S7/S9: Keep container tightly closed in a cool, well-ventilated place

S16: Keep away from sources of ignition – No smoking

S33: Take precautionary measures against static discharges

The contents and format of this MSDS are in accordance with EEC Commission directives 67/548/EEC, 91/155/EEC (and its modification 2001/58/EC), 1999/45/EC, and their adaptations to technical progress.

**16. Other information**

R10	Flammable
R11	Highly flammable
R12	Extremely flammable
R20/21	Harmful by inhalation and in contact with skin
R36/37/38	Irritating to eyes, respiratory system and skin
R38	Irritating to skin
R43	May cause sensitisation by skin contact
R51/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapours may cause drowsiness and dizziness

All information contained herein is based on the present state of our knowledge at the date of issue. It is believed to be accurate. It is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing specific properties.

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Under no circumstances is the user exempt from respecting legislative or administrative texts related to the product in term of safety, hygiene, and health and environment protection.

This product should be stored, handled and used in accordance with good industrial hygiene practices and according to local regulations.

For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use of disposal of the product.

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 information may not be applicable.