

PRODUCT NAME: **OPSTER PJ5007 (R & D use only)**

## **MATERIAL SAFETY DATA SHEET**

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **OPSTER PJ5007 (R & D use only)**  
General Use: Photosensitive resin  
Product Description: Polymethylsiloxane resin solution

MANUFACTURER:  
JSR Corporation  
2-11-24, Tsukiji,  
Chuo-ku, Tokyo  
Japan 104-8410 〒

EMERGENCY TELEPHONE NUMBERS:  
CHEMTREC: 800-424-9300  
(in USA) 24Hrs Every day  
Telephone: +81-3-5565-6600  
9:15-17:45 Jpn M-F  
Facsimile: +81-3-5565-6641  
24Hrs Every day

DISTRIBUTOR  
JSR Micro, Inc.  
1280 North Mathilda Ave.,  
Sunnyvale, CA94089  
Telephone: 408-543-8800

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

	%	CAS #
Polysiloxane	50-60	Proprietary
Photo initiator	0.1-5	Proprietary
Propyleneglycol monomethylether (PGME)	40-50	107-98-2

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Transparent liquid with a mild odor.

#### POTENTIAL HEALTH EFFECTS

##### INHALATION:

Vapors may cause irritating to nose and respiratory tract.

##### EYE CONTACT:

Eye contact may cause irritation.

##### SKIN CONTACT:

Prolonged and repeated contact with skin may cause irritation and dermatitis.

##### INGESTION:

Swallowing may nauseate and cause pain in esophagus and stomach.

##### CARCINOGENICITY:

Not known to be carcinogenic.

NTP? No IARC MONOGRAPHS? No OSHA Regulated? No  
NFPA RATINGS (SCALE 0 – 4): HEALTH=2 FIRE=3 REACTIVITY=0

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#### 4.FIRST AID MEASURES

##### INHALATION:

Remove exposed person to fresh air, perform artificial respiration if necessary. Call physician.

##### EYE CONTACT:

Immediately flush eyes with plenty of water at least 15 min. Call physician.

##### SKIN CONTACT:

Immediately wash skin with soap and plenty of water.

##### INGESTION:

Give large quantities of water; contact a poison center and have MSDS information available.

#### 5.FIRE-FIGHTING MEASURES

##### GENERAL HAZARD:

Flammable liquid. May release vapors that form flammable mixtures when temperatures are at or above the flash point. Toxic gases will form upon combustion.

##### EXTINGUISHING MEDIA:

Carbon dioxide, alcohol foam, dry chemical.

##### SPECIAL FIRE FIGHTING PROCEDURES:

Firefighters should wear self-contained breathing apparatus and protective clothing.

##### UNUSUAL FIRE AND EXPLOSION HAZARDS:

None.

##### HAZARDOUS COMBUSTION PRODUCTS:

Smoke, fumes, toxic gas and/or carbon monoxide.

#### 6. ACCIDENTAL RELEASE MEASURES

##### GENERAL:

Provide maximum ventilation. Wear suitable protective equipment. Small spill should be flushed with large quantities of water. Large spill should be collected for disposal.

##### LAND SPILL:

Dike or absorb with inert absorbent material such as sand or saw-dust and transfer to container for disposal.

##### WATER SPILL:

Remove from surface by skimming or with suitable absorbents.

#### 7.HANDLING AND STORAGE

##### WARNING:

Flammable solvent mixture. Avoid heat, sunlight, ignition sources.

##### PRECAUTIONS:

Handle with care. Open only under well ventilated conditions. Loosen closure cautiously before opening. When using this substance: (a) avoid breathing the

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substance; (b) avoid ingestion;(c) use respiratory protection when in dust or mist form. Wear chemical goggles, resistant gloves and protective clothing to prevent contact. Wash thoroughly after handling.

STORAGE TEMPERATURE: Below 41° F (Below 5° C)  
STORAGE PRESSURE: Atmospheric

## 8.EXPOSURE CONTROLS/PERSONAL PROTECTION

### ENGINEERING CONTROLS:

The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

### PERSONAL PROTECTION

#### RESPIRATORY PROTECTION:

Under conditions of frequent use or heavy exposure, Respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridge(s).

Any chemical cartridge respirator with a full facepiece and organic Vapor cartridge(s).

Any air-purifying respirator with a full facepiece and an organic Vapor canister.

For Unknown Concentrations or Immediately Dangerous to Life or Health.

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

#### SKIN PROTECTION:

Wear impermeable gloves and clothing during activities where there is potential for direct skin contact with chemical.

#### EYE PROTECTION:

Wear primary eye protection such as splash resistant safety goggles with a secondary protection faceshield. Provide an emergency eye wash station and quick drench shower in the immediate work area.

OSHA HAZARDS (29 CFR 1910.1200)	Exposure Limits 8 hrs. TWA(ppm)	
	OSHA PEL	ACGIH TLV
Polysiloxane Resin	Not-established	None Listed
Photo initiator	Not-established	None Listed
PGME	100ppm	100 ppm

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure : 11 mmHg(25° C)  
Specific Gravity : Not available  
Solubility in water : Moderate  
Boiling Point : 118° C

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Flashpoint and Method : 33° C  
Flammable Limits LFL: 1.7%, UFL: 11.5%  
Autoignition Temperature : 286° C

#### 10. STABILITY AND REACTIVITY

##### INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents, strong acids, strong bases and strong reducing agents.

##### HAZARDOUS DECOMPOSITION:

This material is stable under recommended storage and handling conditions.

##### HAZARDOUS POLYMERIZATION:

May not occur.

#### 11. TOXICOLOGICAL INFORMATION

##### SOLVENT (PGME)

##### ACUTE TOXICITY

Oral	LD50	rat	5,660mg/kg
Oral	LD50	mouse	11,700mg/kg

#### 12. ECOLOGICAL INFORMATION

SOLVENT (PGME) FISH TOXICITY: 5000 ug/L 24 year(s) (Stress) Sea lamprey  
(Petromyzon marinus)

#### 13. DISPOSAL CONSIDERATION

The user of this product must properly characterize the waste generated from the use of this product in accordance with all applicable federal, state and/or local laws and regulations in order to determine the proper disposal of the waste in accordance with all applicable federal, state and/or local laws and regulations.

#### 14. TRANSPORT INFORMATION

U.S.DOT PROPER SHIPPING NAME: Resin solution  
IATA PROPER SHIPPING NAME: Resin solution, Flammable,3, UN1866,  
IDENTIFICATION NUMBER: UN1866

#### 15. REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200: Ensure that the hazards associated with this product are transmitted to employees by means of a hazard communications program, in accordance with federal and state Occupational Safety and Health Administration (OSHA) regulations.

CERCLA/SUPERFUND HAZARD CATEGORY: At the time of this document's preparation, none of the ingredients of this product were listed in 40 CFR 302.4. The list should be periodically checked for applicable updates.

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SARA 313 INFORMATION: At the time of this document's preparation, none of the ingredients of this product were listed in 40 CFR 372. The list should be periodically checked for applicable updates.

TOXIC SUBSTANCES CONTROL ACT (TSCA): Most of the compounds in this product are on the TSCA Inventory. Some of the components in the solution are not on TSCA lists (**R & D use only**). In accordance with federal regulations, this material shall be used only to manufacture optical device. In particular, this material shall not be distributed to any person, other than for disposal, until after it has been completely reacted on optical device or similar media. All users must utilize the worker protection measures and environmental release controls specified in this Material Safety Data Sheet and in EPA and OSHA regulations. Acknowledgement of receipt of this Material Safety Data Sheet shall be considered acknowledgement that the user will comply with these requirements.

CALIFORNIA PROPOSITION 65: At the time of this document's preparation, none of the ingredients of this product were included on the California Proposition 65 list of chemicals known to cause cancer or reproductive toxicity. The list should periodically be checked for applicable updates.

#### 16. OTHER INFORMATION

##### REVISION SUMMARY

January 6, 2003

Original MSDS established.

To the best of our knowledge, the information contained herein is accurate. However, neither JSR Corporation nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.