

MATERIAL SAFETY DATA SHEET

SHIPLEY FAR EAST LTD.
SANBANCHO UF BLDG. 6-3 SANBANCHO
CHIYODA-KU, TOKYO, 102-0075, JAPAN

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS #	PC-J0365
Trade Name	InterVia™ PHOTODIELECTRIC 8021-10
Manufacturer/Supplier	Shibley Far East Ltd.
Address	Sanbancho UF Bldg. 6-3 Sanbancho Chiyoda-Ku, Tokyo, 102-0075, Japan
Phone Number	81-3-5213-2900
Fax Phone Number	81-3-5213-2901
Emergency Phone Number	81-3-5213-2900
MSDS first issued	March 5, 2003
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Prepared By:	Environmental, Health & Safety Department

2. COMPOSITION/INFORMATION ON THE INGREDIENTS

Components without CAS numbers are Trade Secret

Component Name	CAS# / Codes	Concentration
1-Methoxy-2-propyl acetate	108-65-6	38
Epoxy resin intermediate (Reaction products of 25068-38-6 methylene bisphenol diglycidyl ether and chloromethyl oxirane)		28
Cresol novolak resin and Photoactive compounds		34

3. HAZARD IDENTIFICATION

Main Hazards	- Irritant - Combustible - Nervous System - Respiratory System - Skin - Eye - Kidney - Liver
Routes of Entry	Inhalation, ingestion, eye and skin contact, absorption.
Carcinogenic Status	Not considered carcinogenic by NTP, IARC and OSHA
Target Organs	- Nervous System - Respiratory System - Skin - Eye - Liver - Kidney
Health Effects - Eyes	Liquid or vapor may cause pain, transient irritation and superficial corneal effects.

3. HAZARD IDENTIFICATION

Health Effects - Skin	Material may cause slight irritation on prolonged or repeated contact. Repeated and/or prolonged contact may lead to: - drowsiness - liver damage - kidney damage - allergic sensitization
Health Effects - Ingestion	A large dose may have the following effects: - drowsiness - liver damage - kidney damage
Health Effects - Inhalation	Exposure to vapor at high concentrations may have the following effects: - irritation of nose, throat and respiratory tract - liver damage - kidney damage

4. FIRST AID MEASURES

First Aid - Eyes	Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.
First Aid - Skin	Wash skin with water. Continue washing for at least 15 minutes. Obtain medical attention if blistering occurs or redness persists.
First Aid - Ingestion	Wash out mouth with water. Have victim drink 1-3 glasses of water to dilute stomach contents. Obtain medical attention. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing.
First Aid - Inhalation	Remove from exposure. If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.
Advice to Physicians	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Use water spray, foam, dry chemical or carbon dioxide. Keep containers and surroundings cool with water spray.
Special Fire-Fighting Procedures	This product may give rise to hazardous vapors in a fire. Vapors can travel a considerable distance to a source of ignition and result in flashback.
Unusual Fire & Explosion Hazards	Pressure may build up in closed containers with possible liberation of combustible vapors.
Protective Equipment for Fire-Fighting	Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures	Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Finally flush area with plenty of water.
Personal Precautions	Wear appropriate protective clothing. Wear respiratory protection. Eliminate all sources of ignition.
Environmental Precautions	Prevent the material from entering drains or water courses.

7. HANDLING AND STORAGE

Handling	Use local exhaust ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.
Storage	Store in original containers. Store away from sources of heat or ignition. Storage area should be: - cool - dry - well ventilated - out of direct sunlight
Other	None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards

1-Methoxy-2-propyl acetate Manufacturer recommends 30ppm 8h TWA and 90ppm 15 min STEL.

Epoxy resin intermediate None assigned.

(Reaction products of methylene bisphenol diglycidyl ether and chloromethyl oxirane)

Cresol novolak resin and None assigned.

Photoactive compounds

Engineering Control Measures Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.

Respiratory Protection Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Hand Protection Butyl rubber gloves. Other chemical resistant gloves may be recommended by your safety professional.

Eye Protection Chemical goggles.

Body Protection Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Pale Orange
Odor	Slightly Sweet
VOC (%)	38
Specific Gravity	1.10
pH	Not applicable.
Boiling Range/Point (°C)	150
Flash Point (PMCC) (°C)	49
Explosion Limits (%)	1-Methoxy-2-propyl acetate: Lower limit 1.5% at 20 °C. Upper limit 7.0% at 20 °C.
Solubility in Water	Insoluble.
Vapor Density (Air = 1)	Heavier than air.
Evaporation Rate	Slower than ether
Vapor Pressure	1-Methoxy-2-propyl acetate: 320 Pa at 20 °C.

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to Avoid	- High temperatures - Static discharge
Incompatibilities	- Oxidizing agents - Acids
Hazardous Polymerization	Will not occur.
Hazardous Decomposition Products	- methanol - oxides of carbon - formaldehyde - ammonia - oxides of nitrogen - aldehydes - phenols

11. TOXICOLOGICAL INFORMATION

Acute Data	1-Methoxy-2-propyl acetate: Oral LD50 (rat) 8532mg/kg.
Chronic/Subchronic Data	No data.
Genotoxicity	1-Methoxy-2-propyl acetate: The product did not exhibit mutagenic activity in the following systems (with and without metabolic activation): - Chinese hamster ovary cells No significant mutagenic response was observed and the carcinogenic potential of the material is therefore considered to be low.
Reproductive/Developmental Toxicity	1-Methoxy-2-propyl acetate: Inhalation teratology testing of this solvent (with less than 3% beta isomer) revealed no maternally toxic, teratogenic or fetotoxic responses in rats or rabbits exposed to concentrations as high as

11. TOXICOLOGICAL INFORMATION

1,500 ppm. Concentrations reaching nearly 3,000 ppm produced maternal toxicity in rats.

1-Methoxy-2-propyl acetate:
Dermal teratology testing of this solvent (with less than 3% beta isomer) revealed no maternally toxic, teratogenic or fetotoxic responses in rats or rabbits exposed to concentrations of 1,000 and 2,000 mg/kg per day.

Additional Data None known.

12. ECOLOGICAL INFORMATION

Mobility 1-Methoxy-2-propyl acetate: Koc is 0 - 50.

Persistence/Degradability 1-Methoxy-2-propyl acetate: BOD20 greater than 0%

Bio-accumulation No data.

Ecotoxicity The product is rated as practically non-toxic to aquatic species.
1-Methoxy-2-propyl acetate: Tests on the following species gave a LC50 of 161mg/litre: - fathead minnows
Tests on the following species gave a LC50 of 408mg/litre: - daphnia

13. DISPOSAL CONSIDERATIONS

Product Disposal Incineration is the recommended method of disposal. Dispose of in accordance with all applicable local and national regulations.

Container Disposal Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care.

14. TRANSPORT INFORMATION

UN Proper Shipping Name	RESIN SOLUTION flammable
UN Class	(3) Flammable liquids
UN Number	UN 1866
UN Packaging Group	III
Marine Pollutant	No.

15. REGULATORY INFORMATION

Follow all regulations in your country.

16. OTHER INFORMATION

Abbreviations

CAS#: Chemical Abstract Services Number
ACGIH: American Conference of Governmental Industrial Hygienists
OSHA: Occupational Safety and Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
NTP: National Toxicology Program
IARC: International Agency for Research on Cancer
R: Risk
S: Safety
LD50: Lethal Dose 50%
LC50: Lethal Concentration 50%
BOD: Biological Oxygen Demand
Koc: Soil Organic Carbon Partition Coefficient.
TLm: Median Tolerance Limit

Disclaimer

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