

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacture's Name : Mitsubishi Rayon Co., Ltd.
Manufacture's Address : 6-41, Konan 1-chome, Minato-ku, Tokyo, 108-8506 JAPAN
Manufacture's Telephone : 03-5495-3067
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Emergency Phone : 03-5495-3067
(Monday through Friday 9:15a.m. to 5:45p.m.)
Product Name : SHINKOLITE-A MR-200
Product Family Name : Acrylic sheet
Product Chemical Name : polymethyl methacrylate
Reference No. ALE-008
Date of MSDS: July 1,2002
Technical Review Date: Dec 28,2004

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	GAS No.	Conc. Wt%	OSHA PEL TWA	ACGIH TWA	Unit
Polymethyl methacrylate	9011-14-7	>98	*5	-	mg/m ³
Methyl methacrylate	80-62-6	<2.0 <3.0	410 100	410 100	mg/m ³ ppm

* : as respirable particulars

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Transparent or colored planar sheet. Odorless.
Can burn in a fire, generating dense toxic smoke.
Dry chemicals or water can be used on fires.
Prolonged exposure to dusts or gases formed during processing may cause eye, skin and respiratory tract irritation.

POTENTIAL HEALTH EFFECTS

This material in its marketed form not expected to present a serious health hazard, however, operations such as sawing, sanding, grinding or thermoforming may generate dusts, vapors or gases containing methyl methacrylate monomer, which may cause eye, skin or respiratory tract irritation.

EYE

Dusts may cause irritation or itching to skin. Vapors or gases during the processing is unlikely to be absorbed.

INGESTION

Oral toxicity (single dose LD50) has been determined. Material is considered to be physiologically inert, so oral toxicity is believed to be negligibly small.

INHALATION

Single exposure to dusts or vapors or gases may not be hazardous. Chronic inhalation of vapors or gases formed during processing may cause respiratory tract irritation.

CHRONIC EFFECTS/CARCINOGENICITY

Nonspecific data are available.

NTP Studies : None

IARC Monographs : No

OSHA Regulations : No

4. FIRST AID MEASURES

EYE

Irrigate immediately with large amounts of water for at least 15 minutes. Consult a doctor if irritation persists.

SKIN

Wash affected areas gently with soap and water. Consult a doctor if irritation persists.

INGESTION

No adverse effects are anticipated, however, drink water to induce vomiting.

INHALATION

Remove the victim to fresh air. If breathing is difficult or has stopped, consult a doctor for medical aid.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point : Not applicable

Autoignition : Over 400 degrees Celsius

FLAMMABLE LIMITS

Lower Flammable Limit : Not established

Upper Flammable Limit : Not established

EXTINGUISHING MEDIA

Dry chemical, carbon dioxide and water fog.

FIRE & EXPLOSION HAZARDS

Dense smoke given when burned without sufficient oxygen.

FIRE-FIGHTING EQUIPMENT

Wear full bunker gear including a positive pressure self-contained breathing apparatus in any closed space.

6. ACCIDENTAL RELEASE MEASURES

Sweep up dusts generated in sawing of the material and dispose of.

7. HANDLING AND STORAGE

Avoid eye or skin contact or breathing of dusts when the dusts are generated.

When handling, provide adequate ventilation and dust collector. To prevent dust explosion, employ bonding and grounding for operations capable of generating static electricity. Good house keeping is recommended to prevent accumulation of the dusts.

Store the material in a cool dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION

Under normal handling or processing conditions, no respiratory protection is needed.

However, under dusty atmospheres, use U.S.NIOSH / OSHA approved respiratory equipment or the environment.

Respirators should be selected based on the form and airborne concentration of the dusts in accordance with OSHA(29 CFR 1910.134).

SKINPROTECTION

Wear gloves to protect fingers and hands from being cut at sharp edges of the sheets.

EYE PROTECTION

Use safety glasses when dusts or vapors are generated in the processing.

EXPOSURE GUIDE LINES

	OSHA PEL TWA	ACGIH TWA	Units
Material (as respirable particulates)	5	-	mg/ m ³
Methyl methacrylate	100	100	ppm

9. **PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE

Transparent or colored planar sheet

ODOR

None

PHISICAL STATE

Rigid planar sheet

p H

Not relevant

VAP.PRESS.

Not applicable

VAP.DENSITY

Not applicable

BOILING POINT

Not applicable

FREEZING POINT

Not applicable

METALING POINT

Over 100 c(softens gradually over a wide temperature range.)

SOL. IN WATER

Insoluble

SP. GRAVITY

1.19

BULK DENSITY

Not relevant

%VOLATILE

Negligible

10. **STABILITY AND REACTIVITY**

STABILITY

Stable under normal and recommended storage and handling conditions.

INCOMPATIBILITY

Not applicable.

HAZARDOUS DECOMPOSITION PRODUCTS

Vapors or gases given off under recommended processing conditions may contain trace levels of MMA monomer (methyl methacrylate) and other substances which are not clearly identified. At elevated temperatures (above 300 degree Celsius), decomposition may occur resulting in the release of irritating gasses.

Carbon dioxide, carbon monoxide, methyl methacrylate monomer will be generated in combustion.

HAZARDOUS POLYMERRIZATION

Will not occur.

11. **TOXICOLOGYCAL INFORMATION**

ACUTE ORAL EFFECTS

Not established.

12. **ECOLOGICAL INFORMATION**

GENERAL

Not expended to present any significant ecological problems.

13. **DISPOSAL CONSIDERATION WASTE MANAGEMENT INFORMATION (DISPOSAL)**

Burn in an adequate incinerator or bury in land fill in accordance with all applicable regulations. Any disposal practice must be in compliance with local, state, and federal laws and regulations.

14. **TRANSPORT INFORMATION**

D.O.T.CLASSIFICATION

None

IDENTIFICATION

None

D.U.S.CLASSIFICATION

None

15. **REGULATORY INFORMATION**

TOXIC SUBSTANCES CONTROL ACT (TSCA)

Components of the material are listed on the TSCA inventory.

CERCLA

The material contains a substance, methyl methacrylate, in quantities subject to reporting.

SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES

Neither the material nor methyl methacrylate, component of the material, meet the category of extremely hazardous substance.

SARA SECTION 311 / 312 HAZARD CATEGORY

The material is categorized as a delayed health hazard.

SASA SECTION 313 TOXIC CHEMICALS

The material contains a toxic chemical substance, methyl methacrylate, subject to the reporting requirement of this Section 313.

◆ **NOTICE**

The above information is believed to be correct and reliable as of the date thereof. However, neither MRC nor its subsidiaries makes representation or warranties, express or implied, as to the completeness or accuracy of the information contained herein.

Final determination as to the suitability of any material shall be made on user's own responsibility. All materials may present unknown hazards and are described herein, we cannot guarantee that these are only hazards which exist.

The user is required to utilize the information to meet his safety programs in accordance with applicable hazard communication standards and regulators.