

Material Safety Data Sheet**ISOBAM - 04, 06, 10, 18****MSDS No.KEP-2011****1 PRODUCT AND COMPANY IDENTIFICATION**

Product Name : ISOBAM - 04, 06, 10, 18
 Supplier : Kuraray Co., Ltd., Elastomer Company
 Elastomer Dept., Polymer Sec.
 Kuraray Nihonbashi Building
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2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name : 2,5-Furandione, polymer with 2-methyl-1-propene

Chemical Family : Alternative copolymer of isobutylene and maleic anhydride

No.	Composition	CAS No.	Percent
P	ISOBAM - 04, 06, 10, 18	Mixture	100
1.	2,5-Furandione, polymer with 2-methyl-1-propene	26426-80-2	>96
2 .	Volatile components (Water and Others)		<4

3 HAZARDS IDENTIFICATION

This product is not hazardous as defined by the U.S. Occupational Safety and Health Administration. (OSHA) under its Hazard Communication Standard (HCS), 29 CFR 1910. 1200.

UN Class and UN Number : Non regulated commodity
 Adverse Human Health Effects : Not available
 Physical and Chemical Hazards : Not applicable
 Environmental Effects : Not toxic gas generation when its incineration

4 FIRST-AID MEASURES

Eye Contact : Flush eyes with water. If irritation occurs, get medical attention.
 Product is practically nonirritating to the eyes.
 Skin Contact : If contact with molten product occurs, treat as for ordinary burns.
 Product is nonirritating to the skin.

- Inhalation** : Not ordinarily required.
Product is not expected to cause irritation to the nose, throat or respiratory tract.
- Ingestion** : Not ordinarily required.
Product is generally considered to have a low order of acute oral toxicity.

5 FIRE FIGHTING MEASURES

Specific Hazards : Toxic gases (carbon monoxide) may form when burned without sufficient oxygen.

Extinguishing Media : Use water fog, foam, dry chemical or CO₂

Special Fire Fighting Procedures and Precautions :
Material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

Flash Points and Method : None

Flammable Limits/Percent Volume in Air

Lower : None

Higher : None

6 ACCIDENTAL RELEASE MEASURES

Method for Cleaning up : Normal procedures for clean-up. Use good housekeeping practices. Shovel and sweep up or use industrial vacuum cleaner. Avoid generating dust clouds. Put into containers for reclaiming or disposal.

Personal Precaution : Wear appropriate respiratory protection and protective clothing as described in section 8.

7 HANDLING AND STORAGE

Handling : When handling the product, ground all transfer, blending and dust collecting equipment to prevent static sparks. Remove all ignition sources from material handling, transfer and processing areas where dust may be present. Mechanical and local exhaust should be provided in work areas. Do not use near open flames or areas where smoking is permitted. Practice good house keeping. Do not allow

product to accumulate in processing area. The product spilled on walking surfaces constitute a slipping hazard. Equipment should provide a means for dissipating any charges that may develop. In processing, do not allow the temperature to exceed 288 degrees centigrade . Maintain a fire watch if 288 degrees centigrade is reached. Avoid vapors from heated products. Adequate ventilation and/or engineering controls must be employed in high temperature processing to prevent exposure to potentially toxic/irritating fumes.

Storage : Store in a cool, dry, well ventilated location.

8 **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control Parameters

Comp.	OSHA		ACGIH		
No.	PEL/TWA	PEL/CEILING	TVL/TWA	TLV/STEL	Other
P	None established				

Respiratory Protection : Use a NIOSH-approved respirator as required to prevent overexposure. In accord with 29 CFR 1910.134, use either an atmosphere-supplying respirator air-purifying respirator for particulates.

Protective Clothing : Safety glasses and protective clothing should be worn when product is heated in processing.

Additional Protective Measures : Adequate ventilation and/or engineering controls are required when product is heated in processing.

9 **PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point (deg. F)	:	None
Melting Point (deg. F)	:	None
Specific Gravity (H ₂ O=1)	:	1.3
Solubility in Water	:	None
Vapor Pressure (mm Hg)	:	None
Vapor Density (Air=1)	:	None
Evaporation Rate (Butyl Acetate = 1)	:	None
Appearance and Odor	:	White powder, essentially odorless.

10 STABILITY AND REACTIVITY

Stability : Stable. Hazardous polymerization will not occur.

Conditions and Materials to Avoid :

Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products :

At processing temperatures, some degree of thermal degradation will occur. Although highly dependent on temperature and environmental conditions, a variety of decomposition products may be present ranging from simple hydrocarbons (such as methane and propane) to toxic/irritating gases (carbon monoxide, dioxide and etc.).

11 TOXICOLOGICAL INFORMATION

No.	Acute Oral LD ₅₀	Acute Dermal LD ₅₀	Acute Inhalation LC ₅₀	Ames Test
P	Not Available	Not Available	Not Available	Not Available

12 ECOLOGICAL INFORMATION

All evidence indicates that large polymer molecules are not biologically active.

13 DISPOSAL CONSIDERATION

Waste Disposal : All recovered material should be disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices.

14 TRANSPORT INFORMATION

Department of Transportation Classification

: Not hazardous by D.O.T. regulations

DOT Proper Shipping Name : Not applicable

UN Classification Number : Non regulated commodity

15 REGULATORY INFORMATION

The components of this product are listed on the EPA/TSCA inventory of chemical substances.

All the monomers used to produce this product are listed in EINECS inventory list.

16 **OTHER INFORMATION**

All data presented here in is based on actual measurements performed by Kuraray Co., Ltd. All information contained herein is presented in good faith and without warranty.

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