

Material safety Data Sheet

Effective Date: November 7, 2006

Document NO. : I-MF4-CO-S011

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name : BSTE BR01

Chemical Name : Polybutadiene

Molecular Formular : $(\text{CH}_2\text{-CH=CH-CH}_2\text{-})_n$

Synonyms : -

1.2 Use : Product

1.3 Max. Quantity Storage : -

1.4 Manufacturer/Import : BST Elastomers Company Limited

1.5 Address : 5/1, I-7 Rd. Maptaphut Industrial Estate, Muang District, Rayong 21150

Tel. : 0-3868-3314 Fax. : 0-3866-8-3315

2. HAZARD IDENTIFICATION

2.1 Route to body : Respiration, eye, and skin

2.2 Target

- Eye : Acute exposure : No data available.

: Chronic exposure : No data available.

- Skin : Acute exposure : No data available.

: Chronic exposure : No data available.

- Inhalation : Acute exposure : No data available.

- Ingestion : Acute exposure : No data available.

: Chronic exposure : No data available.

2.3 Effect of Short-term overexposure : See 2.2

2.4 Effect of Long-term overexposure : See 2.2

2.5 Processing Health Effects : Hot material can cause severe burns. Processing fumes may cause irritation to the eyes, skin, and respiratory tract, and in cases of severe over-exposure, nausea and headache.

2.6 Medical Restrictions : There are no known human health effects aggravated by exposure to this product. However, certain sensitive individuals and individual with respiratory impairments may be affected by exposure to components in the processing fumes.

2.7 TLV.TWA: No data available.

3.COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Percent	U.N. No.	CAS.No.	Safety Standard	
				TLV (PPM.)	LD50 (mg/kg)
Butadiene Copolymer	100	-	9003-17-2	-	-

Carcinogen : No data available.

4. First - aid measures

4.1 Skin : When hot material or fume condensation contacts skin remove contaminated clothing and shoes. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains at least 15-20 minutes (do not use solvent for removal). Get medical attention.

4.2 Eye : When hot material or fume condensation contacts eye. Wash eyes with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains at least 15-20 minutes. Get medical attention.

4.3 Inhalation : When fume inhalation irritation remove person from exposure area to fresh air immediately. Perform artificial respiration if necessary. Keep person warm and quiet. Treat symptomatically and supportively. Get medical attention.

4.4 Ingestion : If vomiting occurs, keep head lower than hips to help prevent aspiration. Treat symptomatically and supportively. Get medical attention if needed.

4.5 Additional data for first aid : No specific antidote. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

5.1 Flash Point : No data available.

5.2 Explosion Limits :

- LEL% (v/v) : No data available. - UEL% (v/v) : No data available.

5.3 Auto ignition : No data available.

5.4 Extinguishing Media : Dry chemical powder, CO₂, water spray or regular foam. For large fires, use water spray, fog or regular foam.

5.5 Special Fire-Fighting Procedures : Move container from fire area if you can do it without risk. Do not scatter spilled material with high-pressure water streams. Dike fire –control water for later disposal (1993 Emergency Response Guidebook, RSPA P5800.6, Guide Page 31).

Use agents suitable for type of surrounding fire. Avoid breathing hazardous vapors, keep upwind.

5.6 Hazardous decomposition Products : Thermal decomposition may release acrid smoke and irritation fumes.

5.7 Hazard class : No data available.

5.8 NFPA Hazard Classification : No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1 Sweep up and place in suitable containers. Do not flush spilled material into sewer. Keep unnecessary people away.

6.2 Disposal method : Burn in incinerator.

7. Handling and Storage

7.1 Observe all federal, state and local regulations when storing this substance.
Store away from incompatible substances.

7.2 Handling :

- Make efforts to keep workplace clean and tidy, and avoid using fire.
- Since there is possibility of volatile matter generating during work, it may cause irritation to the eyes.
- After work, before smoking or eating, wash the hands well, and gargle.

7.3 Storage :

- In order to prevent deterioration, avoid the following.
 - Exposure to the direct sun rays.
 - High temperature, high humidity.
 - Outdoor storage. Even in the case of indoor storage, avoid storing in high temperature area or near UV-emitting lights such as the incandescent lamps and mercury lamps.
- In case of bulk shipments, in order to prevent crumbling of the bulk cargo, keep the height as low as possible.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Ventilation: Provide local exhaust ventilation. Ventilation equipment should be explosion-proof if explosive concentrations of dust, vapor or fume are present.

8.2 Respiratory protection: Powered air-purifying respirator with a dust and mist filter. And self-contained breathing apparatus for firefighting and other immediately dangerous to life or health conditions.

8.3 Protective Gloves: Employee should wear appropriate protective gloves to prevent contact with this substance.

8.4 Eye Protection : Employee must wear splash-proof or dust resistant safety goggles to prevent eye contact with this substance.

8.5 Other Protective Equipment: Employee should wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Boiling Point : Not applicable.

9.2 Melting Point : Not applicable.

9.3 Vapor Pressure : Not applicable.

9.4 Solubility in Water : Insoluble.

9.5 Specific Gravity : 0.90

9.6 Evaporating Rate : Not applicable.

9.7 Apparent Color and odor : White or yellowish white and slight odor solid.

9.8 pH : No data available.

9.9 Molecular Weight : No data available.

10. STABILITY AND REACTIVITY

10.1 Stability: May explode above 337°C at reduced pressure.

10.2 Condition to Avoid : May burn but does not ignite readily. Avoid contact with strong oxidizers, excessive heat, sparks, or open flame.

10.3 Incompatibilities : Oxidizers (strong) : Fire and explosion hazard.

10.4 Thermal Decomposition : More than 400°C (Heating rate :10°C/min 50-600°C,
Atmosphere : 100ml/min in Air)

10.5 Hazardous Decomposition : Thermal decomposition may release acrid smoke and irritating fumes

11. TOXICOLOGICAL INFORMATION

11.1 Carcinogen status : No data available.

11.2 Acute toxicity level : No data available.

11.3 Target effects : No data available.

11.4 Additional data available : Industrial products may contain trace impurities and additives which may cause toxic effects or allergic reactions.

11.5 Health effects :

- Inhalation : Acute exposure : No data available.

Chronic exposure : No data available.

- Skin contact : Acute exposure : No data available.

Chronic exposure : No data available.

- Eye contact : Acute exposure : No data available.

Chronic exposure : No data available.

- Ingestion : Acute exposure : No data available.

Chronic exposure : No data available.

12. ECOLOGICAL INFORMATION

12.1 Acute Aquatic Toxicity : No data available.

12.2 Degradability : No data available.

12.3 Others: The material does not contain substances listed in the harmful substances of U.S.EPA "33/50 Program" and substances listed in "Montreal Protocol on Substances that deplete the Ozone Layer".

13. DISPOSAL CONSIDERATIONS

13.1 Observe all federal, state and local regulations disposing of this substance.

13.2 Please refer to section 5, 6, and 15 for disposal and regulatory information

14. TRANSPORT INFORMATION

14.1 Cover the substance with sheets in order to prevent mingling of foreign matters, wetting, and exposure to the direct sun rays.

14.2 In case of bulk cargoes, in order to prevent crumbling, keep the height as low as possible, and fix it firmly in place.

15. REGULATORY INFORMATION

15.1 CERCLA SECTION 103 (40 CFR 302.4) : None

15.2 SARA SECTION 302 (40 CFR 355.30) : None

15.3 SARA SECTION 304 (40 CFR 355.40) : None

15.4 SARA SECTION 313 (40 CFR 372.65) : None

16. OTHER INFORMATION

Definition:

ACGIH : American Conference of Governmental Industrial Hygienists

IARC : International Agency for Research on Cancer

OSHA : Occupational Safety and Health Administration

TLV : Threshold Limit Value

TWA : Time-weighted average

SARA : Superfund Amendments and Reauthorization Act

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act.

References

1. MSDS of JSR Corporation

Remark

Additional Information Available from

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