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1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name : Styrene Butadiene Rubber (SBR-Non Oil Grade) or SBR 1502

Chemical Name : Styrene Butadiene copolymer

Molecular Formular : (CH₂-CH=CH-CH₂-CH₂-CH)_n

Synonyms : -

1.2 Use : Product : Raw material for the production of tires. Prohibited for use in the production of

food -grade products.

- 1.4 Manufacturer: BST Elastomers Company Limited
- 1.5 Address : 5/1, I-7 Rd. Map Ta Phut Industrial Estate, Muang District, Rayong 21150
 - Tel. : 0-3868-3314 Fax. : 0-3866-8-3315

2. HAZARD IDENTIFICATION

2.1 Classification of Substance or Mixture

Classification according to Directive 1999/45/EC : Not classified

Hazard classification : Not classifiable

2.2 Label Elements including precautionary statement :

Pictogram or Symbol : Not applicable

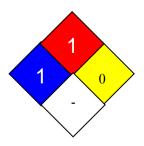
Signal word : Not applicable

Hazard statement : Not applicable

Precautionary statement Not applicable

2.3 Other Hazards which do not result in classification (e.g. dust explosion hazard)

NFPA : Health = 1, Flammability = 1, Reactivity = 0



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| 3.COMPOSITION/INFORMATION ON INGREDIENTS | | | |
|---|-----------|-----|--|
| Chemical Name : Styrene Butadiene Copolymer | | | |
| Synonyms : Styrene Butadiene Rubber (SBR) | | | |
| Name | CAS No. | % | |
| Styrene Butadiene Copolymer | 9003-55-8 | 100 | |

4. FIRST-AID MEASURE

4.1 Description of first aid measures

Skin : Wash skin with soap and water.

- **Eye :** Wash eyes with large amounts of water occasionally lifting upper and lower lids, until no evidence of chemical remains at least 15-20 minutes.
- **Inhalation :** Although this product is not known to cause respiratory problems, if breathing is difficult, remove to fresh air and provide oxygen.

Ingestion : Ingestion is not considered a potential route of exposure.

4.2 Potential acute health effects

Skin: May cause slight skin irritation .

Eye: No hazards expected in normal industrial use at room temperature.

Inhalation : Irritating vapors may be formed when product is processed at high temperature.

Ingestion : Ingestion is not considered a potential route of exposure.

4.3 Potential Chronic health effects.

Chronic effects : No known significant effects or critical hazards

Carcinogenicity : No carcinogenic substances as defined by IARC , NTP and/or OSHA.

4.4 Notes to physician : No specific treatment . Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media : Water, Foam, carbon dioxide, ABC fire extinguisher power

5.2 Special Hazards arising from the substance or mixture

Hazards from the substance or mixture : Toxic and irritating gases/fumes maybe given off

during burning or thermal decomposition

Hazardous decomposition products : Carbon monoxide (from combustion)

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5.3 Advice for Firefighters

Special precautions for fire fighter :

- Fire fighters should wear proper protective apparatus including clothes and stay upwind.
- Move containers out of fire area and put out a fire if it can be done without risk.
- Cool containers with water spray until the fire is put out.
- Use water spray; Foam, CO₂ or dry chemical power to extinguish flame.
- Keep personal removed and upwind of fire, isolate hazard area and deny the right to entry.
- Avoid inhale any materials or by-products during combustion.

Special protective equipment for fire-fighters : Should wear appropriate protective equipment and SCBA with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precaution : No special measure required.

Protective equipment and emergency procedure : Wear appropriate personal protective equipment

6.2 Environmental Precaution : Avoid to approach heater or ignition source. Sweep up and place in suitable containers. Do not flush spilled material into sewer. Keep unnecessary people away.

6.3 Method and materials for containment and cleaning up.

Small spill : Take up mechanically , Treat or dispose of waste material in accordance with all local and national requirements.

Large spill : Handle as solid waste. Vacuum or sweep up material and place in a disposal container.

7. HANDLING AND STORAGE

7.1 Precaution for safe 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.

7.2 Condition for safe storage , including any incompatibilities :

- Indoor to prevent deterioration, avoid the following.

Besides that It will be not controlled and the use is strictly prohibited.

| SDS of SBR 1502 | | | |
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- 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, indoor to prevent crumbling of the bulk cargo, keep the height as low as possible

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameter

Exposure limit value : No Data Available

8.2 Exposure Control

Occupational exposure controls :

ACGIH ; not data available

OSHA ; not data available

Thailand Regulation ; not data available

<u>Technical measure</u>: Use process enclosures , local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operation generate dust , fume or dust use ventilation to keep exposure to airborne contaminants below the exposure limit.

Environment exposure controls

<u>Technical measure</u>: Emission from ventilation or work process equipment should be check to ensure comply with the requirement of environmental protection legislation. In some case, fume scrubs, filters or engineering modifications to the process equipment will be necessary to reduce emission to acceptable levels.

8.3 personal protection measure

- **Respiratory protection :** Respirator with a dust and mist filter in case dust formation.
- **Protective Gloves :** Employee should wear appropriate protective gloves to prevent contact with this substance.
- **Eye Protection :** Employee must wear splash-proof or dust resistant safety goggles to prevent eye contact with this substance.

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Skin : 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 General information Appearance

Physical State : Solid (Rubber bales)

Colour : Pale yellow

SDS of SBD 1502

Odour : Odorless to weak aromatic

- 9.2 Odour threshold limit : No data available.
- 9.3 pH : No data available.
- 9.4 Melting Point / Freezing point : No data available.
- 9.5 Initial boiling point and boiling range : No data available.
- 9.6 Flash point : Closed cup : >300 °C
- 9.7 Evaporation Rate : No data available
- 9.8 Flammability (Solid/Gas): No, but the product will burn if ignited
- 9.9 Upper Flammability/Explosive limits : No data available.

Lower Flammability/Explosive limits : No data available.

- 9.10 Vapor Pressure : No data available.
- 9.11 Vapor density : No data available.
- 9.12 Relative density : No data available.
- 9.13 Solubility : Insoluble in water.
- 9.14 partition Coefficient : n-octanol / water : No data available
- 9.15 Specific Gravity (Water=1): 0.94
- 9.16 Auto ignition temperature : No data available.
- 9.17 Decomposition temperature : No data available.
- 9.18 Viscosity: No data available.
- 9.19 Molecular Weight: No data available.

10. STABILITY AND REACTIVITY

- **10.1 Reactivity :** No specific test data related to reactivity available for this product or its ingredients.
- **10.2 Stability:** Stable at ambient temperature and pressure.

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- **10.3 Possibility of hazardous reaction :** If ignited by excessive heat or open flame the product will burn.
- **10.4 Conditions to Avoid :** Extreme temperature, 300-350°C (572-662°F) will cause thermal decomposition.
- 10.5 Incompatible material: Strong Oxidizers.
- **10.6 Hazardous Decomposition Products :** Carbon monoxide (from combustion), Carbon Dioxide, partially oxidized hydrocarbon.

11. TOXICOLOGICAL INFORMATION

11.1 Potential acute health effects

Skin : May cause mechanical irritation (abrasion). Contact with hot material will cause thermal burns.

Eye: May cause mechanical irritation (abrasion).

Inhalation : May cause mechanical irritation (abrasion).

Ingestion : No known significant effects or critical hazards.

11.2 Potential Chronic health effects.

Chronic effects : No known significant effects or critical hazards

Carcinogenicity : No carcinogenic substances as defined by IARC , NTP and/or OSHA.

11.3 Acute Toxicity Level :

Acute oral toxicity : Not available

Acute dermal toxicity : Not available

Acute inhalation toxicity : Not available

12. ECOLOGICAL INFORMATION

- 12.1 Eco-Toxicity: No data available.
- 12.2 persistence and Degradability : No data available.
- 12.3 Bio accumulative Potential : No data available.
- 12.4 Mobility in soil : No data available.
- 12.5 Other Adverse effect : No data available.

The product is practically insoluble in water. No ecological problems are to be expected if the product is properly handling.

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13. DISPOSAL CONSIDERATIONS

13.1 Product disposal information : Incinerate or landfill in accordance with applicable environment control regulation. Recycle if possible.

13.2 Container Disposal : Remove all packing for recover or waste disposal.

14. TRANSPORT INFORMATION

14.1 UN No. : Not available

- 14.2 UN Proper shipping name : Not available
- 14.3 Transport Hazard class : Not available
- 14.4 Packing group : Not available
- 14.5 Marine pollutants : Not available

14.6 Transport in bulk according to annex II of MARPOL73/78 and the ICB code : Not available

14.7 Special precautions for user/Additional information :

15. REGULATORY INFORMATION

15.1 Thailand Regulation

- Labour Protection Act B.E.2541 : Material is not listed

- Hazardous Substance Act B.E. 2535 : Material is not listed

15.2 CLP Regulation : Material is not listed

15.3 European Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of

Substances and Mixtures, ; Material is listed in Annex VI

- 15.4 OSHA : No data available.
- 15.5 TSCA : No data available.
- 15.6 SARA : No data available
- 15.7 REACH Regulation : Material is not listed

15.8 EU Phrases :

Symbol : Xn Harmful

Risk Phrases : R43, May cause sensitization by skin contact

Safety Phrase : S2-24-37

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16. OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

- ACGIH : American Conference of Government Industrial Hygienists
- NFPA : National Fire Protection Agency
- NIOSH : National Institute for Occupational Safety & Health
- OSHA : Occupational Safety & Health Administration
- IARC : International Agency for Research on Cancer
- SARA : Superfund Amendments and Reauthorization Act.
- GHS : Globally Harmonized System
- TSCA : Toxic Substance Control Act
- WHMIS : Workplace Hazardous Materials Information System
- LD50 : Lethal Dose 50%
- CNS : Central Nervous System NTP National Toxicology Program
- EC50 : Effective Concentration NOAEL No Observable Adverse Effect Level
- EC50 : Effective Concentration 50% NOEC No Observed Effect Concentration
- PEL : Permissible Exposure Limit
- STEL : Short-term Exposure Limit
- TLV : Threshold Limit Value
- TWA : Time Weighted Average

<u>Remark</u>

Additional Information Available from

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