(Material) Safety Data Sheet

20180830 revised

According to 1907/2006/EC (Article 31) and its amendment (EC) No. 453/2010

The manufacturer of this product urges anyone using this product to read the following (M)SDS information and become aware of the properties associated with this material. Users should consider consulting reference sources or individuals that are trained in ventilation, material handling/storage and fire prevention prior to its intended use.

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 - Description

Chemical name: Styrene-Butadiene-Styrene Block Copolymer
Designation or trade name: **GLOBALPRENE**

Grades: 3411, 3411P, 3501, 3501W, 3540, 3545, 3546, 3566, 3542
Manufacturer: **LCY GRIT CORP.**

1.2 - Company Identification

Taiwan

Corporate Office :	**LCY Chemical CORP.**
Address :	3F, No.85, Sec. 4, Bade Road, Taipei, (Taiwan) 105
Telephone No :	(886) 2-27631611
Emergency Telephone No :	LCY GRIT CORP., HSE Manager (886) 7-8712268

1.3 - Application

Plastics modification
Asphalt modification
Compounding
Adhesive
Shoe making

2. HAZARDS IDENTIFICATION

Classification system

These products are not classified as hazardous in accordance with 4th Rev. UN GHS, 29 CFR 1910.1200 (OSHA/HazCom), 1272/2008/EC (CLP), 1907/2006/EC (REACH) , 67/548/EEC and following amendments.

HMIS Hazard Class

Health: 0 Flammability: 1 Physical Hazards: 0

Potential Health Hazards:

-**Eye Contact:** Particulates may cause irritation, which is typically characterized by redness and excessive tear production.
-**Skin Contact:** No hazard in normal industrial use. Exposure to hot or molten material while processing may cause burns.
- **Inhalation:** Dust may be irritating to respiratory tract. Wear appropriate respiratory protection.
- **Ingestion:** No hazard in normal industrial use.

Potential Safety Hazards:

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- **Electrostatic Charge:** Under certain in-process product handling conditions, electrostatic charges may be generated.
- **Dust Explosion:** For powdered grades or for materials that may become powdered during processing, normal engineering practices and controls should be put in place to avoid dust explosion.

Potential Environmental Hazards:
There are no specific hazards to the environment related to these products.

Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Not applicable.
Labelling according to Directive 1999/45/EC[DPD]
Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

These products are Styrene-1,3-Butadiene-Styrene copolymer (CAS NO. 9003-55-8) and not classified as hazardous substance.

4. FIRST-AID MEASURES

Under normal conditions this product is not expected to be an acute hazard. Following are the recommended actions for exposure to product:

Symptoms and Effects:

- **Eye Contact:** Flush eye with clear water for several minutes. Remove contact lens if worn. If irritation persists seek medical attention.
- **Skin Contact (thermal burn):** Seek medical attention immediately
- **Inhalation:** Remove affected person to fresh air. If irritation persists then seek medical attention.
- **Ingestion** First aid is not normally required.

5. FIRE-FIGHTING MEASURES

Extinguishing Media:
Water spray, foam, dry chemicals, and carbon dioxide.

Special Exposure Hazards:
This product is not flammable but can burn under the right conditions. Burning can produce the following combustion products: Carbon monoxide (CO), carbon dioxide (CO_2) and carbon particulates. Carbon monoxide is a highly toxic colorless gas. Carbon dioxide can displace oxygen and act as an asphyxiant in poorly ventilated spaces.

Protective Equipment:
Use suitable personal protective equipment (full protective clothing, self contained breathing apparatus, helmet, goggles, fire resistant gloves, boots etc.).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Spilled material can cause a slipping hazard. Clean up immediately and dispose of properly. Wear appropriate respiratory protective equipment when responding to large clean-ups.

Environmental Precautions: No specific measures. Material should be recovered and placed in suitable container for recycle or disposal under local regulatory requirements. Avoid generating dust

Methods for Cleaning: Material can be swept, shoveled or vacuumed using suitable equipment.

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7. HANDLING AND STORAGE

Handling
Avoid contact with any potential sources of ignition. During processing material should be handled in well-ventilated areas and care should be taken to avoid formation and accumulation of dust. Elevated processing temperatures may result in some degree of thermal degradation. Avoid processing temperatures above 220°C (428°F) where product degradation could potentially occur.

The product is a poor conductor and can accumulate electrostatic charges. Precautions normally used for preventing the accumulation of electrostatic charges, such as proper grounding of processing equipment, should be used during processing. Static charge build up during the handling or within process equipment could lead to the ignition flammable vapors (if present) or increase the potential for dust explosions.

Storage
Store the product in a well-ventilated covered place in sealed packaging, away from direct sunlight and heat sources to avoid product degradation. Store at ambient temperatures.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values
There are no occupational exposure standards for this product. The following particulate limits are stated as a guideline as fine particles can be an inherent part of the physical form of certain products.

Particulate	**OSHA PEL**
Total Dust (8 hr)	15mg/m^3
Respirable Fraction (8 hr)	5mg/m^3

Exposure Control
Product should be handled only in areas with suitable exhaust ventilation. When concentrations in air exceed OSHA particulate limits, an approved dust mask or respirator should be used. In processes where heated vapors may be produced a NIOSH approved respirator or engineering controls may be needed to avoid vapor exposure by inhalation.

Personal Protection:

- **Eye protection**: Safety glasses with side shields. In processes where the product is in contact with hot materials a face shield should be worn.
- **Skin protection**: Cloth or leather work gloves. In processes where the product is in contact with hot materials thermal protection gloves, apron and arm protection should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White solid with form of pellets or crumb powder
Odor:	odorless
Odor threshold:	-
PH:	-
Melting point/freezing point:	-
Initial boiling point and boiling range:	-
Flash point:	>288°C
Evaporation rate:	-
Flammability:	-
Upper/Lower flammability or explosive limits:	-
Vapor pressure:	-

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Vapor density :	-
Relative density(specific gravity):	<1
Solubility:	Insoluble (in water)
Partition coefficient; n-octanol/water	-
Auto-ignition temperature:	>320°C
Decomposition temperature:	-
Viscosity:	-
Bulk density:	0.20 - 0.45 (g/cm3)

10. STABILITY AND REACTIVITY

The product is stable and inert in the recommended storage and handling conditions (see heading 7).

Conditions to Avoid Instability:
Exposure to direct sunlight, ultraviolet light or elevated temperatures over prolonged periods of time may cause degradation and discoloring. Accumulation of product in equipment, processes or areas exposed to elevated temperatures over extended periods of time and in the presence of air may lead to combustion of the product.

Incompatibilities:
Strong oxidizing substances, open flames or heat sources. Avoid accumulation of electrostatic charges.

Hazardous Decomposition Products:
Under normal conditions processing of product will not be expected to produce hazardous decomposition products. Although dependent on temperature and environmental conditions, if the product is exposed to an unusual heat or ignition source then thermal decomposition can occur leading to potential formation of toxic and irritating vapors (Refer to Special Exposure Hazards in Section 5.).

11. TOXICOLOGICAL INFORMATION

Refer to Section 3. for potential hazards to health. Toxicological information for this product has not been determined.

12. ECOLOGICAL INFORMATION

The product being a high molecular weight polymer is non-toxic and biologically inactive.

Ecotoxicity
The product is not regarded as ecotoxic.

Mobility
The product will float on water and will remain on the surface of soil.

Persistence and Degradability
The product is not a biodegradable polymer.

13. DISPOSAL CONSIDERATIONS

The product is not considered a hazardous waste as defined by the US Environmental Protection Agency (40 CFR 261). Refer to local, state, federal or country specific regulations concerning the appropriate methods and means of disposal.

Product Disposal
Either in delivered form or as a waste the product should be recovered or recycled if possible. If disposal is required consult local environmental regulations.

14. TRANSPORT INFORMATION

These products are not classified as dangerous material for transport according to the following regulations;
ADR/RID, IMO, IATA, U.S. Department of Transportation.
Label not required.

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15. REGULATORY INFORMATION

15.1 These products are not subject to below requirements.
Montreal Protocol: on Ozone Depleting Substances (ODS)
Stockholm Convention: on Persistent Organic Pollutants (POPs)
Rotterdam Convention: on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
Basel Convention: on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal

15.2 EU-Regulations
This safety data sheet is in compliance with the following EU legislation and its adaptations – as far as applicable - : 67/548/EEC, 1999/45/EC, Regulation (EC) No. 1272/2008, Regulation (EC) No. 453/2010, 98/24/EC, 92/85/EEC, 94/33/EC, 91/689/EEC and 1999/13/EC.

15.3 Environmental, Health and Safety (EHS) regulatory compliance relevant to these products are specified in the Regulatory Affairs Product Stewardship Information Data Sheet (RAPIDS) which can be reached through sales channel or reference to LCY official website.

16. OTHER INFORMATION

Data and information contained in this (Material) Safety Data Sheet are based on our available knowledge at the last revision date. No guarantee can be given as to the sufficiency of any safety measures contained in this Information Data Sheet, nor can it be assumed that other or additional measures may not be required under particular or exceptional circumstances. Since use of these products is not under the control of the manufacturer, the user is solely responsible for determining whether the product is suitable for the intended process.

The information and opinions contained within this (M)SDS sheet are intended to provide Safety, Health and Environmental guidance only and is not a guarantee of product performance within any application.

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