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1. Chemical Product & Company Identification


- | | |
|--------------------------|--|
| a. Chemical Product Name | Acrylonitrile, 1,3-Butadiene, Styrene Co-polymer |
| b. Usage | Electronic Goods, Automotive Parts, Package, etc |
| c. Chemical Type | Thermoplastics |
| d. Company's Address | LG Chem, Ltd.
70-1, Hwachi-Dong, Yeosu-City, Jeonranam-Do, 550-280, Korea |
| e. Phone Number | +82-61-680-1874 |
| f. Prepared By | ABS / EP Division |

2. Hazards Identification

- | | |
|---------------------------|--|
| a. Threshold Limit | |
| b. Effect of overexposure | |
| • Eye Contact | Solid or dust may cause irritation or corneal injury due to mechanical action |
| • Skin Contact | Essentially nonirritating to skin, Mechanical injury only |
| • Skin Absorption | Unlikely due to physical properties |
| • Ingestion | Unlikely due to physical state. |
| • Inhalation | Dust may cause irritation to respiratory
In case of breathing, fumes released from heated material may cause respiratory irritation |
| • Chronic Effects | Not Available |
| • Mutagenicity | Not Available |

3. Composition / Information On Ingredients

	CAS Number	Contents
a. ABS (Acrylonitrile-Butadiene-Styrene)	9003-56-9	70 ~ 90%
b. Flame Retardants	79-94-7	5 ~ 20%
c. Flame Synergists	1309-64-4	2 ~ 6 %
d. Impact Modifier		0 ~ 5 %
e. Typical Stabilizers		0 ~ 2 %
f. Typical Lubricants		0 ~ 2 %

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4. First Aid Measures


- | | |
|-----------------|--|
| a. Eye Contact | Immediately rinse eyes with copious amount of running water and seek medical advice |
| b. Skin Contact | Essentially nonirritating to skin but rinse with copious water |
| c. Ingestion | If vomiting occurs, lower the head to ease vomiting and seek for medical Advice |
| d. Inhalation | In case of breathing, fumes released from heated material may cause respiratory irritation
In case of inhaling dense smoke, immediately remove a person to fresh air. If necessary, apply artificial respiration and seek medical attention immediately |
| e. Mutagenicity | Not Available |

5. Fire Fighting Measures

- | | |
|-------------------------------------|--|
| a. Flammable Properties | <ul style="list-style-type: none"> • Flash Point None • Method Used Not applicable • Auto ignition Temperature Not applicable |
| b. Extinguishing Media | Usually use water and use extinguishing media appropriate to surrounding conditions |
| c. Special Fire Fighting Procedure | Cool Containers with water spray. In closed stores, provide fire fighter with self-contained breathing apparatus in positive pressure mode |
| d. Usual Fire and Explosion Hazards | Irritating gases and dense smoke |

6. Accidental Release Measures

- | | |
|------------------------------|--|
| a. Personal Precautions | Pellets or beads may present a slipping hazard |
| b. Environmental Precautions | Keep out of irrigation ditches, sewers, and water supplies
Spills should be collected to prevent contamination of waterways |
| c. Cleanup | Sweep up |

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7. Handling and Storage


- | | |
|-------------|--|
| a. Handling | <p>Avoid formation of dust</p> <p>Keep bags always closed / Keep container lightly closed</p> <p>Avoid pellets / bags from getting wet</p> |
| b. Storage | <p>Keep bags / containers in a well-ventilated place</p> <p>Avoid pellets / bags from getting wet</p> |

8. Exposure Controls / Personal Protection

- | | |
|----------------------------------|--|
| a. Engineering Controls | <p>Good general ventilation should be sufficient for most conditions.</p> <p>Local exhaust ventilation may be necessary for some operations</p> |
| b. Personal Protective Equipment | <ul style="list-style-type: none"> • Eye / Face Protection
Use safety glasses. If there is a potential for exposure to particles which could cause mechanical injury to the eye, wear chemical goggles • Skin Protection
No precautions other than clean body-covering clothing should be needed • Respiratory Protection
For most conditions, no respiratory protection should be needed ; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator |
| c. Exposure Guideline (s) | <p>Although some of the additives used in this product may have exposure guidelines, these additives are encapsulated in the product and no exposure would be expected under normal handling conditions</p> |

9. Physical And Chemical Properties

- | | |
|--------------------------------|--|
| a. Appearance | Pellet (Colored solid) |
| b. Odor | Almost Odorless |
| c. pH | Neutral |
| d. Boiling Point | Not applicable |
| e. Evaporation Rate | Not applicable at standard condition |
| f. Specific Gravity | 1.19 |
| g. Vapor Pressure | Not applicable at standard condition |
| h. Vapor Density | Not applicable at standard condition |
| i. Solubility in Water | insoluble |
| j. Solubility in other Solvent | Soluble in THF, Acetone and other Analogous Solvents |

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10. Stability and Reactivity

- | | |
|-------------------------------------|------------------------------------|
| a. Stability | Stable under normal condition |
| b. Storage conditions to avoid | Avoid fire and heating above 60 °C |
| c. Incompatibility | None known |
| d. Hazardous decomposition products | Not applicable |
| e. Hazardous polymerization | Not occur |

11. Toxicological Information

See Section 3 for Potential Health Effects. For detailed toxicological data, Write or call the address or phone number shown in Section 1.


12. Ecological Information

- | | |
|-----------------------------|--|
| a. Environmental Fate | |
| • Movement & Partitioning | No bioconcentration is expected because of the high molecular weight (MW>1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment. |
| • Degradation & Persistence | This water insoluble polymeric solid is expected to be inert in the environment. Surface degradation is expected with exposure to sunlight. No appreciable biodegradation is expected. |
| b. Ecotoxicity | Not Expected to be acutely toxic, but pellets, if ingested by waterfowl or aquatic life, may mechanically cause adverse effects. |

13. Disposal Considerations

Disposal : Do not Dump into any sewers, on the ground, or into any body of water.
 All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with appliance laws are the responsibility solely of the waste generator.

For unused & uncontaminated product, the preferred options include sending to a licensed, permitted : recycler, reclaim, incinerator or other thermal destruction device.

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14. Transport Information

Not classified as hazardous under transport regulations.

15. Regulatory Information

Listed below are chemical substances subject to supplier notification requirements.

U.S. REGULATIONS :

TSCA INVENTORY STATUS : This product complies with the Chemical Substance Inventory requirements of the US EPA TSCA.

CERCLA SECTION 103 (40CFR302.4) : Not Listed

SARA SECTION 313 (40CFR372.65) : Not Listed

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21)

ACUTE : Not Listed

CHRONIC : Not Listed

FIRE : Not Listed

REACTIVE : Not Listed

SUDDEN RELEASE : Not Listed

STATE REGULATIONS :

California Proposition 65 : Not Listed

EUROPEAN REGULATIONS :

EC NUMBER : Not assigned

This product complies with the requirements of resolution of European Parliament (WE) no. 1907/2006 Dated December 18 2006 concerning REACH (European Union Official Register L396 with its changes In EU Official Register no. L136)

16. Other Information

Product should be handled, stored, and used in accordance with the generally accepted industrial hygiene practices and in conformity with all the applicable legal regulations.

The information provided herein is based on the knowledge possessed at this present time from the view point of safety requirements.

It should, therefore, not be construed as guaranteeing specific properties.