Safety Data Sheet

Product Name: smartABS Resin Natural

Revision Date: 2006/10/24
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Styron LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Identification of the substance/preparation and of the company/undertaking

Product Name
smartABS Resin Natural

Use of the substance/preparation
A thermoplastic resin. Raw material for industrial conversion to articles or goods.

COMPANY IDENTIFICATION
Styron LLC
1604 Building
48674 Midland, MI
USA

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 00 44 155 37 61 251

2. Composition/information on ingredients

Component	Amount	Classification:	CAS #	EC #
Acrylonitrile/butadiene/ styrene resin	>= 99.5 %	Not classified.	9003-56-9	Polymer

3. Hazards Identification

This product is not classified as dangerous according to EC criteria.

4. First-aid measures

Eye Contact: Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.
Skin Contact: If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Ingestion: If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.
Notes to Physician: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
Unusual Fire and Explosion Hazards: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate. Dense smoke is produced when product burns.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Styrene. Hydrogen cyanide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.
Personal Precautions: Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

Storage

Store in accordance with good manufacturing practices.

8. Exposure Controls / Personal Protection

Exposure Limits

None established

Personal Protection

Eye/Face Protection: Use safety glasses. Safety glasses should be consistent with Directive 89/686/EEC Category 2. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator.
Skin Protection: No precautions other than clean body-covering clothing should be needed.

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection (EN 407), when needed.

Respiratory Protection: In dusty or misty atmospheres, use an approved particulate respirator. Use the following CE approved air-purifying respirator: When dust/mist are present use a/an Particulate filter, type P2. When combinations of vapors, acids, or dusts/mists are present use a/an Organic vapor cartridge with a particulate pre-filter, type AP2.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Physical State	Granules
Color	Off-white
Odor	Odorless
Flash Point - Closed Cup	Not available
Flammable Limits In Air	**Lower**: Not available **Upper**: Not available
Autoignition Temperature	No test data available
Vapor Pressure	Not available
Boiling Point (760 mmHg)	Not available.
Vapor Density (air = 1)	Not available
Specific Gravity (H2O = 1)	1.05 - 1.07 *Literature*
Freezing Point	Not available
Melting Point	Not available
Solubility in Water (by weight)	Negligible
pH	Not available
Kinematic Viscosity	Not applicable

10. Stability and Reactivity

Stability/Instability

Stable.
Conditions to Avoid: Avoid temperatures above 300°C (572°F) Exposure to elevated temperatures can cause product to decompose.

Incompatible Materials: None known.

Hazardous Polymerization
Will not occur.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating.

11. Toxicological Information

Acute Toxicity
Ingestion
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.
Estimated LD50, Rat > 5,000 mg/kg
Eye Contact
Solid or dust may cause irritation or corneal injury due to mechanical action. Vapor may cause eye irritation experienced as mild discomfort and redness.
Skin Contact
Essentially nonirritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.
Skin Absorption
No adverse effects anticipated by skin absorption.
Estimated LD50, Rabbit > 2,000 mg/kg
Inhalation
No adverse effects are anticipated from single exposure to dust. Vapors/fumes released during thermal processing may cause respiratory irritation.
Repeated Dose Toxicity
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

12. Ecological Information

CHEMICAL FATE

Movement & Partitioning
No bioconcentration of the polymeric component is expected because of its high molecular weight. In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.

Persistence and Degradability
This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

ECOTOXICITY
Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

13. Disposal Considerations

For uncontaminated material the disposal options include mechanical and chemical recycling or energy recovery. In some countries landfill is also allowed. For contaminated material the options remain the same, although additional evaluation is required. For all countries the disposal methods must be in compliance with national and provincial laws and any municipal or local by-laws. All disposal methods must be in compliance with the EU framework Directives 91/156/EEC, 91/689/EEC and their subsequent adaptations, as implemented in National Laws and Regulations, as well as EU Directives dealing with priority waste streams. Transboundary shipment of wastes must be in compliance with EU Regulation 259/93 and subsequent modifications.

14. Transport Information

ROAD & RAIL
NOT REGULATED

OCEAN
NOT REGULATED

AIR
NOT REGULATED

INLAND WATERWAYS
NOT REGULATED

15. Regulatory Information

US. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.
European Inventory of Existing Commercial Chemical Substances (EINECS)
This product is a polymer according to the definition in Directive 92/32/EEC (7th Amendment to Directive 67/548/EEC) and all of its starting materials and intentional additives are listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) or in compliance with European (EU) chemical inventory requirements.

EC Classification and User Label Information
This product is not classified as dangerous according to EC criteria.

16. Other Information

Revision
Identification Number: 79353 / 1810 / Issue Date 2006/10/24 / Version: 2.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Styron LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.