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MEMBER: SOCIETY OF THE PLASTICS INDUSTRY AND PLASTICS PIONEERS  
ESTABLISHED 1932**MATERIAL SAFETY DATA SHEET****ABS**

**EMERGENCY TELEPHONE:** (856) 227-0500  
**Issue Date:** February 27, 1987  
**Revised Date:** May 26, 2000  
**TRADE NAME:** Cycolac Acrylonitrile-butadiene-styrene terpolymer  
**CHEMICAL NAME:** ABS Polymer  
**PART NAME:** ABSNR, ABSBR

**1. Hazardous Ingredients**

This material is not considered as hazardous material under the provisions of 29CFR 1910.1200. These pellets are high-molecular-weight polymers not expected to be chemically active under recommended conditions of use. Trace amounts of residual monomers, including acrylonitrile, a suspected carcinogen, may be released under suggested processing temperature ranges. Under the AN Permanent Standard (Federal Register, Vol. 43, NO. 192 of October 3, 1978), OSHA has exempted converters and processors of finished polymers of ABS from the regulation since such activity does not appear to constitute a significant source of AN exposure.

**2. Physical and Chemical Properties**

**State:** Solid pellets  
**Melting Point:** 218-262F  
**Specific Gravity:** 1.02-1.17  
**% Volatile :** < 1%  
**Water Solubility :** No  
**Odor:** Faint

These materials do not exhibit a sharp melting point but soften gradually over a wide temperature range.

**3. Physical Hazard Information**

**Flash Point:** 660F (349C)

**Lower Flammable Limit:** Not Applicable

**Upper Flammable Limit:** Not Applicable

**Auto Ignition Temp:** 946F (505C)

**Extinguishing Media:** Use dry chemical, carbon dioxide, foam or water spray. Do not use high pressure water stream or other method that creates dust.

**Reactivity:** Stable

**Incompatibilities:** Strong oxidizing agents

**Conditions to Avoid:** Do not exceed 550F (288 C). Purgings should be collected only as small, flat thin shapes or in thin strands to allow for rapid cooling. Precautions should be taken against auto-ignition of hot, thick masses of the plastic. Quench in water. Grinder dust is an explosion hazard.

**Fire Hazard Information:** Hazards from burning are intense heat and very high levels of dense black smoke containing carbon monoxide, carbon dioxide, and hydrogen cyanide. Fire-fighters should be provided the necessary protective clothing and use a self-contained breathing apparatus approved by NIOSH or MSHA for all fires.

**Hazardous Decomposition Products:** Styrene monomer, ammonia, hydrogen cyanide, acrylamide, aromatic and aliphatic hydrocarbon fractions, and carbon monoxide may be present. Primary toxic product on combustion is carbon monoxide. Carbon dioxide, an asphyxiant, is also produced. The gaseous emissions from the vents of vented-barrel presses and extruders should not be discharged into the work areas. These materials should be exhausted, under controlled ventilation, to the outside of the building, or may be discharged into a closed process-waste water system (no open trenches or manholes), or can be trapped by a suitable catalytic conversion device (consult the manufacturer of any such device to determine its suitability with these plastics.)

#### 4. Health Hazard Information

*Precautionary Information:* Vapors and fumes produced during the melt-processing of these plastics may produce acute health effects in some individuals, especially irritation of the eyes, nose and throat, and, in cases of severe over-exposure, nausea and headache. In cases of persistent discomfort, the affected person should be removed from the area and provided medical attention. The gaseous emissions from the vents of vented-barrel presses and extruders should not be discharged into the work areas. Fumes and vapors emitted from the hot melted plastic during converting operations may condense on cool overhead metal surfaces or structures. That condensate, usually in the form of a soft grease-like, semi-solid, may contain substances which can be irritating or toxic. Avoid contact of that material with the skin. Wear rubber or other impermeable protective gloves when cleaning contaminated surfaces.

Typical volatile emissions from the polymers under recommended process conditions, in addition to the monomers previously discussed, may be water vapor and trace amounts of such materials as ethyl benzene, phenol, acrolein, acetophenone, alpha methyl styrene, 4-vinyl cyclohexene and cumene. Wash hands with soap and water before eating or smoking and at the end of each work day.

#### 5. Symptoms of Overexposure

*Ingestion:* Not acutely toxic. Not a probable route of exposure.

*Inhalation:* See precautionary information.

*Skin Contact:* Not acutely toxic

*Eye Contact:* Not acutely toxic

*Chronic:* No known chronic problems

*Restrictive Medical Conditions:* Unknown

#### 6. First Aid Procedures

*Ingestion:* Not a probable route of exposure.

*Inhalation:* Remove to fresh air. Refer to a physician for treatment.

*Skin Contact:* Molten plastic causes severe burns. Cool rapidly with water and immediately obtain medical attention to remove the cooled plastic.

*Eye Contact:* Flush immediately with large amounts of water for at least 15 minutes. If irritation persists, contact physician.

#### 7. Precautions for Safe Handling and Storage

*Storage, Handling and Shipping:* (1) Instruct all pertinent personnel to read and become familiar with all labels and instructions on the packages. (2) Avoid storing containers near foodstuffs due to the possibility of odor and taste contamination of the food. (3) Do not store containers near heating devices, hot pipes, etc., due to the possibility of ignition and flame hazards. (4) These materials should have a shelf-life of at least two years when stored in a cool dry environment away from the weather and from sources of heat in the original unopened containers. (5) The head-space of boxes, bulk-trucks or hopper cars may accumulate low concentration of residual monomers which can be toxic or explosive. Open all containers under conditions of good ventilation, away from flames or ignition sources; and avoid breathing the trapped vapors. With proper ventilation these products can be stored or processed without exposing employees to unacceptable monomer levels. (6) These pellet materials are not considered as hazardous under any definition of the Federal Hazardous Substances Act, Title 16 CFR, Section 1500.3; and are not regulated for shipping purposes by the U.S. Department of Transportation. The common descriptive shipping term is that of the NMFC (National Motor Freight Carriers): "Plastic O(ther) T(han) Foam, viz pellets, Fibers, Granules, Lumps, Powder." (7) Any pneumatic conveyance system for this product must be properly designed and installed to prevent ignition of pellet fines.

#### 8. Spills, Leaks, and Waste Disposal

For spills, leaks or releases of the pellets, remove from all floor areas to allow for stable footing and prevent slips by personnel

*Waste Disposal:* Landfill waste plastic if codes permit, or incinerate if codes and equipment permit. Incineration equipment should be capable of handling large volumes of dense, black smoke and withstand the corrosive effects of acid gases

*This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe this information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.*