



## Product Stewardship Summary for High Impact Polystyrene (HIPS)

Americas Styrenics LLC has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employees, public health and our environment. The success of our Product Stewardship program rests with every individual involved with Americas Styrenics LLC products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

### **Product Overview**

Americas Styrenics manufactures High Impact Polystyrene (HIPS) resins. These resins are available with various physical and mechanical properties and are formulated with additives to affect processability, color, or other characteristics. The resins are available as pellets or granules.

### **Chemical Identity**

**Common Name:** High Impact Polystyrene (HIPS)

Also known as Styrene, 1,3-butadiene copolymer

**CAS No:** 9003-55-8

### **Exposure Potential**

#### **Industrial Worker Exposure**

Exposure can occur either in a resin manufacturing facility or in the various industrial or manufacturing facilities that use these resins. Each manufacturing facility should have a thorough training program for employees and appropriate work processes and safety equipment in place to limit unnecessary exposure. If there is a potential for exposure to dust particles that could cause eye discomfort, wear chemical goggles. Provide general and/or local exhaust ventilation to control airborne dust levels. No other precautions other than clean, body-covering clothing should be needed.

Long sleeves and thermal gloves are necessary in areas where molten polymer is present. If molten material comes in contact with the skin, apply cool water. Do not attempt to remove the material from the skin, but rather seek medical attention immediately.

#### **Consumer Exposure**

Americas Styrenics does not sell resin for direct consumer use, but it is used as a raw material to make many products used by consumers. All our prime grades are approved for food-contact applications.

#### **Environmental Exposure**

Due to the relatively high molecular weight, bioconcentration (accumulation in the food chain) is not expected. In terrestrial environments, the material is expected to remain in the soil. In aquatic environments, the material is expected to sink and remain in the sediment or bind to dissolved organic materials.

HIPS resins are expected to be inert in the environment. Surface photodegradation will occur with exposure to sunlight. No appreciable biodegradation is anticipated. These resins are not likely to be acutely toxic, but material in pellet form may cause adverse mechanical effects if ingested by waterfowl or aquatic life.

### **Health Information**

There are few health concerns resulting from handling HIPS. Dust or small pellets may cause eye irritation or corneal injury due to mechanical action. Handling these resins is unlikely to cause skin reaction or irritation. If molten resin comes in contact with the skin, thermal burns can occur.

There is a very low risk of toxicity if the product is swallowed; harmful effects are not anticipated from swallowing small amounts. However, choking or blockage of the digestive tract is possible if the product is swallowed. Based on available data, repeated exposures are not anticipated to cause significant adverse effects. Additives are encapsulated in the polymer and are not expected to be released under normal processing conditions.

### **Stability Information**

HIPS resins are thermally stable at typical use temperatures. However, exposure to elevated temperatures can cause the product to decompose. Under high-heat processing conditions, small amounts of irritating fumes can be released.

To reduce the potential for dust explosion, do not permit dust to accumulate. During a fire, smoke may contain the original material in addition to toxic and/or irritating combustion products of varying composition. In smoldering or flaming conditions, carbon monoxide and carbon dioxide are generated. Dense smoke is produced when the product burns.

The NFPA classification for our polystyrene resins is: 1,1,0 (health, flammability, reactivity).

### **Shelf Life**

The shelf life of Americas Styrenics' polystyrene products is 2 years from the date of manufacture.

The shelf life of 2 years for Americas Styrenics polystyrene products is that for which Americas Styrenics LLC guarantees retention of properties as stated in the sales specification, provided the material is properly stored following good manufacturing practices. In general, polystyrene resins when stored properly, will retain a high level of mechanical properties after storage times of many years.

Shelf life or storage time is the time between manufacture at Americas Styrenics and actual processing at the customer location. Guidelines for good storage practice must be followed e.g. storage in a sheltered location, with good ventilation, no direct sunlight and undamaged, original packaging.

**NOTICE: The information presented above is not intended to be a substitute for Safety Data Sheets (SDS). Americas Styrenics LLC strongly encourages and expects its customers to read and understand the product SDSs prior to use of Americas Styrenics LLC products. We expect you to follow the precautions identified in the SDS unless your use conditions necessitate other appropriate methods or actions. Americas Styrenics LLC personnel are available to answer your questions and to provide reasonable support if needed. Click [here](#) for a list of available SDSs.**