

# SAFETY DATA SHEET

## ABS SHEET

### **SECTION 1: IDENTIFICATION**

**Product Name:** King KPC ABS

**Product Number:** ABS-[NUMBERCODE] [e.g., NUMBERCODE = COLOR, SURFACE, GAGE, WIDTH-LENGTH]

**Physical State:** Solid

**Color:** Natural processed color is translucent to opaque white (Colorants can be added)

**Odor:** Faint to mild odor.

**Type of Use:** Fabricated ABS Products

**FDA Status:** No

**Company Business / Emergency Contact**

King Plastic Corporation

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### **SECTION 2: HAZARD(S) IDENTIFICATION**

#### ***Classification of Hazards***

While in normal usage form, this material does not meet or exceed requirements to be classified as a hazardous chemical in accordance with the GHS aligned OSHA Hazardous Communication Standard 29CFR1910.1200 Appendix A, and Appendix B. However, when subjected to processing methods that increase the material temperature, or result in production of material dusts, certain precautions become necessary.

#### ***Signal Word and Precautionary Statement (Non-mandatory)***

CAUTION!

Product is a clear to white, non-toxic solid sheet material having minimal odor. Dusts and heat-released air emissions may be irritating to the eyes, skin, and respiratory system. Under fire conditions, product will readily burn and emit a heavy, irritating smoke. Contact with molten material may cause serious thermal burns.

#### ***Identification Symbols or Labels***

*Not Applicable*

#### ***Potential Health Effects***

**Eyes:** If there is contact to the eyes with molten material, rinse with plenty of water and seek immediate medical attention. If fines enter the eye, rinse with water for 15 minutes and seek immediate medical attention if irritation develops.

**Skin:** If skin has contact with molten material, place affected area under cold running water. Seek medical attention for removal of material from the affected area.

**Ingestion:** Ingestion of this product is unlikely. However, ingestion of product may produce mild gastrointestinal irritation and disturbances.

**Inhalation:** Remove affected individual to fresh air, seek medical attention if difficulties in breathing occur

**Environmental Hazards:** ABS is an essentially biologically inert solid and considered non-toxic. It is stable (does not decompose) in landfills or in aquatic systems.

### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Name:** Acrylonitrile/Butadiene/Styrene

**Common Name:** ABS

Component	Percent by Wt.	CAS #
Acrylonitrile/Butadiene/Styrene	>=99%	9003-56-9
Additives*	0-1%	N/A

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS Cont.**

### **Additional Information**

\* Other chemical additives including antioxidants, UV stabilizers, processing aids and slip agents may be formulated into various polyethylene resin grades in a total concentration of less than 1% wt. /wt. Trade Secret(s) – Compositions given are typical values not specifications. Identity of Resin Manufacturers, Additive Component. Manufacturers and exact percentage of blends are proprietary information.

## **SECTION 4: FIRST AID MEASURES**

**Eyes:** Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

**Skin:** Remove dusty or contaminated clothing and shoes. For skin contact, wash affected area with soap and water. Seek medical attention if symptoms develop or persist. In case of contact with molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product, or molten product that has cooled, from skin without medical assistance.

**Inhalation:** Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist. Inhalation of smoke following a fire may result in delayed pulmonary edema; seek immediate medical attention.

**Ingestion:** Material is not expected to be absorbed from the gastrointestinal tract. DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

**Notes to Physician:** After adequate first aid, no further treatment is necessary, unless symptoms reappear. Burns should be treated as thermal burns. Molten resin will come off as healing occurs; therefore, immediate removal from the skin is not necessary. Treatment should be directed at the control of symptoms and the clinical condition of the patient. Ingested material should pass through the digestive system without injury.

## **SECTION 5: FIRE FIGHTING MEASURES**

5.1 Suitable extinguishing media: Water mist, dry chemical, carbon dioxide, or appropriate foam.

5.2 Extinguishing media which must not be used for safety reasons: -

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: During a fire, combustion products including but not limited to Carbon monoxide, Carbon dioxide, Hydrogen Cyanide, Styrene, Ethylbenzene and Acrylonitrile may be emitted.

5.4 Special protective equipment for fire-fighters: Use self-contained breathing apparatus. Use water spray to keep fire-exposed containers cool. Dust is not expected to be generated in the event of a fire.

## **SECTION 6: ACCIDENTAL RELEASE**

### **Personal Precautions / Protective Measures:**

Slipping Hazard, avoid standing or walking on product, or product debris. For product debris: Do not use compressed air to sweep debris. Eliminate sources of ignition. (No smoking, flares, sparks or flames in immediate area). Dissipate static electricity during transfer or processing by use of proper electrical grounding and bonding methods.

**Equipment and Emergency Procedures: (Use ERG Guide #133 in event of fire)** For debris spill, isolate area for at least 25 meters (75 feet) in all directions, if no fire exists.

**In case of Fire:** Keep unnecessary personnel away and notify emergency and firefighting personnel. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. Stay upwind from fire.

**Environmental Precautions:** Prevent entry of small debris into ditches, sewers, and waterways. Plastic pellets, and debris are defined by the UA EPA under the Clean Water Act (40CFR 122.26) as a "Significant Material", which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Pellets or debris found in storm water runoff are subject to EPA regulations with the potential for substantial fines and penalties. Use appropriate tools to put the spilled solid in an appropriate disposal or recovery container. Reuse or recycle where possible.

### **Methods and Materials for Containment and Cleaning Up Spills:**

Wear appropriate protective equipment and clothing during cleanup. Vacuum or sweep material into container, do not use compressed air to sweep debris material.

**Other Information:** Risk of dust-air explosion is increased if flammable vapors are also present.

## **SECTION 7: HANDLING AND STORAGE**

### **Handling Procedures:**

**Sheet Material:** Secure product to prevent shifting during handling, or transport.

**Debris:** Handle in contained and properly designed equipment systems. Avoid ingestion and inhalation. Keep away from uncontrolled heat incompatible materials. Earth (ground) all material handling and transfer equipment to dissipate build-up of static electricity. Keep handling areas and processing equipment free of debris. Do not use compressed air to sweep debris. For additional information on control of static and minimizing potential dust and fire hazards, refer to NFPA-654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2006 Edition."

### **Storage Procedures:**

Store sheet material flat. Secure to pallet, rack, or stack. Storage area accessible only to trained and authorized personnel. Store accumulated debris in closed, earthed (grounded) and properly designed vessels, away from uncontrolled heat and incompatible materials. Avoid accumulation of dust by frequent cleaning and suitable construction of storage and handling areas. Keep shovels and vacuum systems readily available for cleanup of debris. DO NOT enter filled bulk containers and attempt to walk over product, due to risk of slipping. Use a fall arrest system when working near open bulk containers.

## **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **OSHA Permissible Exposure Limits (OSHA PEL)**

Debris and dust produce from processing sheet material can be considered nuisance particulates. Particulates Not Otherwise Classified (PNOC) OSHA PEL (Total Dust) 15 mg/m<sup>3</sup> TWA OSHA PEL (Respirable Fraction) 5 mg/m<sup>3</sup> TWA (Respirable Fraction) ACGIH (Inhalable Particulate) 10 mg/m<sup>3</sup> TWA ACGIH (Respirable Particulate) 3 mg/m<sup>3</sup> TWA.

### **Engineering Controls**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

### **Personal Protection Equipment (PPE)**

**Inhalation:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Use appropriate respiratory protection where atmosphere exceeds recommended limits. A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. "Nuisance dust" such as polymer dust typically exhibits no significant health effect when they are reasonably controlled. Exposure to high concentrations of dust may cause slight irritation by mechanical action.

**Skin:** Use chemical resistant gloves appropriate to conditions of use. Wear heat protective gloves and clothing if there is a potential for contact with heated material. Protective clothing such as long sleeves or a lab coat should be worn.

## **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION cont.**

**Eye:** Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles, which may result from processing of this product. Safety glasses are required as minimum requirement.

**Footwear:** Use appropriate footwear. Spilled debris can be a serious slipping/falling hazard. Exercise caution when walking on spilled material.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b> Solid Sheet Material - Translucent to white.	<b>Lower Flammable Limit:</b> No Data Available.
<b>Odor:</b> Faint, mild hydrocarbon odor.	<b>Explosive Properties:</b> No Data Available.
<b>Odor Threshold:</b> No value available.	<b>Oxidizing Properties:</b> No Data Available.
<b>pH:</b> Not applicable.	<b>Vapor Pressure:</b> Not applicable.
<b>Freezing Point:</b> Not applicable.	<b>Vapor Density:</b> Not applicable
<b>Melting Point:</b> >105°C	<b>Relative Density:</b> 1.05 (g/cm <sup>3</sup> ) (water=1)
<b>Boiling Point/Boiling Range:</b> Not applicable.	<b>Solubility (Water):</b> Insoluble.
<b>Flash Point:</b> >207° C	<b>Partition Coefficient (Kow):</b> Specific data not available.
<b>Evaporation Rate:</b> Not applicable.	<b>Auto-ignition:</b> n/a
<b>Flammability:</b> Not Classified. Burns but does not easily ignite.	<b>Decomposition Temperature:</b> Varies; >250°C
<b>Upper Flammable Limit:</b> No Data Available.	<b>Viscosity:</b> Not applicable.

## **SECTION 10: STABILITY AND REACTIVITY**

### **Reactivity:**

Non-Reactive with Air, or Water

### **Chemical Stability:**

This product is stable under normal use conditions for shock, vibration, pressure, or temperature.

### **Possibility of Hazardous Reactions:**

Certain Halogens, Organic Chlorides and Hydrocarbons may react with and degrade polyethylene. Powders or dusts may form an explosive mixture with air. Dusts may create static discharge; Risk of dust-air explosion is increased if flammable vapors are also present.

### **Conditions to Avoid:**

Avoid processing material over 300°C. Avoid accumulations of debris and dust in air and surfaces.

### **Incompatibility:**

Fluorine gas, (violent reaction), Diethyl ether, Methylene chloride, Ethylene chloride. Polyethylene degrades after lengthy contact with most Aromatic hydrocarbons; benzene, toluene, acetone, xylenes, ammonia gas, turpentine, naphtha, etc., and most Halogenated Hydrocarbons; Perchloroethylene, chloroform, trichloroethylene, carbon tetrachloride, etc.

### **Hazardous Decomposition products:**

At temperatures >300deg C (572deg F), polyethylene may emit various oligomers, waxes and oxygenated hydrocarbons as well as carbon dioxide, carbon monoxide and small amounts of other organic vapors (e.g. aldehydes, acrolein). Inhalation of the decomposition gases may be hazardous.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

Toxicokinetics, metabolism and distribution: NA

Acute effects (toxicity tests) Acute toxicity: NA

Oral LD50: NA

Irritant and corrosive effects: NA

Irritation to respiratory tract: NA

Sensitization: NA

Experiences made in practice N/A

General remarks: Carcinogenicity; None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP

## **SECTION 12: ECOLOGICAL INFORMATION (non-mandatory)**

The content of this section is considered non-mandatory by OSHA because it concerns matters handled by other agencies.

## **SECTION 13: DISPOSAL CONSIDERATIONS (non-mandatory)**

The content of this section is considered non-mandatory by OSHA because it concerns matters handled by other agencies.

## **SECTION 14: TRANSPORT INFORMATION (non-mandatory)**

The content of this section is considered non-mandatory by OSHA because it concerns matters handled by other agencies.

## **SECTION 15: REGULATORY INFORMATION / SAFETY, HEALTH AND ENVIRONMENTAL (non-mandatory)**

The content of this section is considered non-mandatory by OSHA because it concerns matters handled by other agencies.

## **SECTION 16: OTHER INFORMATION**

**Special Considerations:**

Exposure to the Hazardous Combustion and Decomposition Products as described in SDS Sections 5 and 10 may be linked with various acute and chronic health effects. These effects include irritation of eyes and upper respiratory tract primarily from the aldehydes, breathing difficulties, systemic toxicity such as liver, kidney, and central nervous system effects. Polyethylene fines and dust particles are listed as a Class I combustible dust by the National Fire Protection Association (see NFPA-68, Table F.1). For additional information on control of static and minimizing potential dust and fire hazards, refer to NFPA-654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids, 2006 Edition".

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