

# ABS Material Safety Data Sheet

Product Name: **ABS ENGRAVING SHEET**

Effective Date: 8/18/13

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## 1. INGREDIENTS: (% w/w, unless otherwise noted)

Acrylonitrile/butadiene/styrene resin	CAS# 009003-56-9	90-99%
May contain the following:		
Mineral Oil	CAS# 008042-47-5	0- 2%
Tallow	CAS# 067701-27-3	0- 2%
Wax	CAS# 000110-30-5	0- 2%
Styrene Monomer	CAS# 000100-42-5	Trace
Acrylonitrile Monomer	CAS# 000107-13-1	Trace
Various Pigments (See Sec. 7.)		0- 4%

Where proprietary ingredient shows, the identity may be made available as provided in this standard.

## 2. PHYSICAL DATA:

BOILING POINT:	Not applicable
VAP. PRESS:	Not applicable
VAP. DENSITY:	Not applicable
SOL. IN WATER:	Nil
SP. GRAVITY:	1.05-1.10
APPEARANCE:	Colored solid sheet
ODOR:	No odor.

## 3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT:	None
METHOD USED:	Not applicable
FLAMMABLE LIMITS	
LFL:	Not applicable
UFL:	Not applicable

EXTINGUISHING MEDIA: Water fog, foam, alcohol resistant foam, CO<sub>2</sub>, dry chemical.

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## FIRE AND EXPLOSION HAZARD DATA: (continued)

FIRE AND EXPLOSION HAZARD: Hazards from burning are intense heat and very high levels of dense, black smoke containing carbon monoxide, carbon dioxide, and hydrogen cyanide.

FIRE FIGHTING EQUIPMENT: Wear positive-pressure, self-contained breathing apparatus approved by NIOSH or MSHA.

## 4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Temperatures over 300°C, 572°F, release combustible gases.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing materials.

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.

HAZARDOUS POLYMERIZATION: Will not occur.

## 5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

WASTE DISPOSAL: Recycle if possible. 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. These sheet materials are not considered hazardous waste under Title 40, CFR Part 261 (Hazardous Wastes under the Resources Conservation Recovery Act), reference Sections 261.31, .32, .33(e) and .33(f). They do not have the characteristics of a hazardous material as defined under Sections 261.21, .22, .23 and .24.

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## 6. HEALTH HAZARD INFORMATION:

**PRECAUTIONARY INFORMATION:** Fumes and vapors emitted from the hot plastic during forming 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 and toxic. Avoid contact of that material with the skin. Wear rubber or other impermeable protective gloves when cleaning contaminated surfaces. Typical volatile emissions from polymers under recommended process conditions, in addition to the materials 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.

### **SYMPTOMS OF OVER-EXPOSURE:**

#### Acute:

**INHALATION:** Vapors and fumes produced during the forming 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.

**SKIN CONTACT:** Fumes and vapors emitted from hot plastic during converting operations may condense on cooling overhead metal surfaces or structures. This condensate, usually in the form of a soft, grease-like, semi-solid may contain substances which can be irritating and toxic.

**EYE CONTACT:** Vapors and fumes from hot melt-processing may cause irritation.

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

#### Chronic:

No known chronic problems.

**RESTRICTIVE MEDICAL CONDITIONS:** Unknown



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SYMPTOMS OF OVER-EXPOSURE: (continued)

PRIMARY ROUTES OF EXPOSURE:

INHALATION	Yes	INGESTION	Unlikely
SKIN ABSORPTION	No	SKIN AND EYE CONTACT	Yes

## 7. FIRST AID PROCEDURES:

**INHALATION:** If affected by mists or vapors, 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.

**INGESTION:** Not probable. Keep person warm and at rest. Obtain medical attention.

Certain heavy-metal salts, present as color pigments and based upon cadmium, chromium, copper, lead, or mercury metals, may be present in some colored sheet. Those ingredients are essentially mixed into the plastic and are unlikely to contribute either to pollution of soils and waters or to personnel handling hazards.

## 8. PRECAUTIONS FOR SAFE HANDLING AND STORAGE:

**STORAGE AND HANDLING:** Avoid storing near foodstuffs due to the possibility of odor and taste contamination of the food. Do not store near heating devices, hot pipes, etc. With proper ventilation these products can be stored or processed without exposing employees to unacceptable monomer levels. The gaseous emissions from forming and fabrication should not be discharged into the work areas. These materials should be exhausted, under controlled ventilation, to the outside of the building.

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## PRECAUTIONS FOR SAFE HANDLING AND STORAGE: (Continued)

VENTILATION: Recommended; sufficient to control vapors and odors.

### PERSONAL PROTECTIVE EQUIPMENT:

<u>DEGREE OF EXPOSURE</u>	<u>EYE</u>	<u>SKIN</u>	<u>RESPIRATORY</u>	<u>OTHERS</u>
CLOSED SYSTEM (REMOTE)	A	B	NONE	NONE
OCCASIONAL (INFREQUENT)	A	B	NONE	NONE
REPEATED & PROLONGED	A	B	C	NONE

### KEY FOR PERSONAL PROTECTIVE EQUIPMENT

- A SAFETY GLASSES
- B ORDINARY WORK CLOTHES
- C HALF MASK W/CARTRIDGE

RESPIRATORY PROTECTION: Under conditions of excessive fume concentration, a NIOSH or MSHA approved device with an OVAG (organic vapor acid gas) rating or fresh air supply should be used.

GLOVES: Use for hot material.