




<p>WHMIS (Canada)</p>  <p>B-2 D-2A D-2B</p>	<p>NFPA (USA)</p> <p>Fire</p>  <p>Health Reactivity</p> <p>Specific hazard</p>	<p>HMIS (USA)</p> <table border="1"> <tr><td>Health hazards</td><td>2</td></tr> <tr><td>Fire hazard</td><td>3</td></tr> <tr><td>Reactivity</td><td>1</td></tr> <tr><td>Personal protection</td><td>X</td></tr> </table>	Health hazards	2	Fire hazard	3	Reactivity	1	Personal protection	X	<p>Protective Clothing</p> 
Health hazards	2										
Fire hazard	3										
Reactivity	1										
Personal protection	X										

Section I. Chemical Product and Company Identification

Trade name	A140-APH-15	Product type	Polyester Resin Solution
CAS #	Mixture.	Synonym	None.
Chemical name	Not applicable.	Chemical formula	Not applicable.
Chemical family	Aromatic.		
Material uses	Used in the manufacture of thermoset plastic parts.		
TSCA	All ingredients are listed or compliant with TSCA.		
DSL	All ingredients are listed or compliant with the NSNR.		
Manufacturer	In case of emergency		
AOC, LLC 950 Highway 57 East Collierville, TN U.S.A. 38017 Phone Number: (901) 854-2800 8am-5pm (CST) Mon-Fri	CHEMTREC (US): 24 hours/7 days (800) 424-9300 CANUTEC (Canada): 24 hours/7 days (613) 996-6666		

Section II. Information on Hazardous Ingredients

Name	CAS #	% by weight
1) Styrene	100-42-5	30.0
2) Alpha Methyl Styrene	98-83-9	1 - 5

Section III. Hazards Identification.

Potential acute health effects	Inhalation of spray mist or liquid vapors may cause upper respiratory irritation and possible central nervous system effects including headaches, nausea, vomiting, dizziness, drowsiness, loss of coordination, impaired judgement and general weakness. Severe eye irritant which may result in redness, burning, tearing and blurred vision. Skin irritant which may result in burning sensation. Ingestion may result in mouth, throat and gastrointestinal irritation, nausea, vomiting and diarrhea.
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Potential chronic health effects**CARCINOGENIC EFFECTS:**

Styrene: Classified A4 (not classifiable for human or animal) by ACGIH. Classified 2B (possible for human) by IARC. An increased incidence of lung tumors was observed in mice from a recent inhalation study. The relevance of this finding is uncertain since data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic. Lung effects have been observed in mouse studies following repeated exposure.

MUTAGENIC EFFECTS

Not available.

TERATOGENIC EFFECTS

Not available.

Skin effects:

Prolonged exposure may cause dermatitis.

Section IV. First Aid Measures

Eye Contact	Flush with a continuous flow of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Use of buffered baby shampoo will aid in removal. Seek medical attention.
Skin Contact	Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. If irritation persists, seek medical attention.
Hazardous Skin Contact	No additional information.
Inhalation	Evacuate the victim to a safe area as soon as possible. Allow the victim to rest in a well ventilated area.
Hazardous Inhalation	Evacuate the victim to a safe area as soon as possible. If breathing is difficult, give oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Ingestion	Do not induce vomiting. Seek immediate medical attention.
Hazardous Ingestion	No additional information.

Section V. Fire and Explosion Data

The Product is:	Flammable liquid, Class IC.
Auto-ignition Temperature	914°F (490°C) Styrene
Flash Point	87.6°F (31°C) Styrene
Flammable limits	Lower: 0.9% Upper: 6.8% (Styrene)
Products of combustion	May produce carbon monoxide, carbon dioxide, and irritating or toxic vapors, gases or particulate.
Fire hazard	Flammable in the presence of open flames, sparks, or heat.
Explosion hazard	Can react with oxidizing materials. Explosive in the form of vapor when exposed to heat or flame. Material may polymerize when container is exposed to heat (fire) and polymerization will increase pressure in a closed container which may cause the container to rupture violently.

Fire fighting media and instructions

SMALL FIRE: Use carbon dioxide, foam, dry chemical or water fog to extinguish.
 LARGE FIRE: Evacuate surrounding areas. Use carbon dioxide, foam, dry chemical or water fog to extinguish. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Cool containing vessels with water spray in order to prevent pressure build-up, autoignition or explosion. Prevent run off to sewers or other water ways.

Section VI. Accidental Release Measures**Small Spill**

Absorb with an inert material and place in an appropriate waste disposal container.

Large Spill

Stop leak if without risk. Eliminate all ignition sources. Contain with an inert material, recover as much as possible and place the remainder in an appropriate waste disposal container. Warn unauthorized personnel to move away. Prevent entry into sewers or confined areas.

Section VII. Handling and Storage**Precautions**

WARNING! Use only in well-ventilated areas. Avoid inhalation and contact with eyes, skin, and clothing. Wear appropriate personal protective equipment for your task. Ground and bond all containers when transferring the material. Empty containers may retain product and product vapor. Do not expose to heat, flame, sparks or other ignition sources such as cutting, welding, drilling, grinding or static electricity. Do not pressurize. Provide adequate safety showers and eyewashes in the area of use.

Storage

Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Containers should be grounded.

Section VIII. Exposure Controls/Personal Protection**Exposure limits**

1) Styrene	<p>OSHA PEL (United States). TWA: 100 ppm TWA: 426 mg/m³</p> <p>ACGIH TLV (United States). TWA: 20 ppm TWA: 85 mg/m³</p>
2) Alpha Methyl Styrene	<p>OSHA PEL (United States). TWA: 50 ppm TWA: 240 mg/m³</p> <p>ACGIH TLV (United States). STEL: 100 ppm STEL: 485 mg/m³ TWA: 50 ppm TWA: 242 mg/m³</p>

Engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Provide adequate safety showers and eyewashes in the area of use.

Personal protection

Personal protective equipment may vary depending on the job being performed. **Eye/Face:** Wear eye protection such as safety glasses with side shields, splash goggles or face shield with safety glasses. **Skin:** Avoid skin contact. Impervious gloves should be worn. Other items may include long sleeves, lab coats, or impervious jackets. **Respiratory:** Determine if airborne concentrations are below the recommended exposure limits in accordance your company's PPE program and regulatory requirements. If they are not, select a NIOSH-approved respirator that provides adequate protection from the concentration levels encountered. Air-purifying respirators are generally adequate for organic vapors. Use positive pressure, supplied-air respirators if there is potential for an uncontrolled release, if exposure levels are unknown, or under circumstances where air-purifying respirators may not provide adequate protection. Reference OSHA 29 CFR 1910.134

Personal protection in case of a large spill Chemical resistant gloves, full protective suit, and boots. Respiratory protection in accordance with OSHA regulation 29 CFR 1910.134. A self-contained breathing apparatus should be used to avoid inhalation of the product vapors.

Section IX. Physical and Chemical Properties

Physical state	Liquid.	Odor	Aromatic.
Color	Blue-Clear.	pH (1% soln/water)	Not applicable.
Molecular Weight (g/mol)	1000 to 15000	Boiling point	293°F (145°C) Styrene
Melting point	Not available.	Specific gravity	1.1 (Water = 1)
Vapor pressure	4.5 mm Hg @ 68°F (20°C) Styrene	Vapor density	3.59 Styrene (Air = 1)
Odor threshold	0.14 ppm Styrene	Water/oil dist. coeff.	Not available.
Evaporation rate	Not available.	Dispersion properties	Not dispersed in water.
Solubility in water	Slight.		

Section X. Stability and Reactivity Data

Stability	This product is normally stable, but can become unstable at elevated temperatures.
Instability Temperature	>170°F (77°C)
Conditions of instability	Heat.
Incompatibility with various substances	Polymerizes in the presence of organic peroxides, oxidizing materials, or heat.
Corrosivity	No specific information is available in our database regarding the corrosivity of this product in presence of various materials.

Section XI. Toxicological Information

Routes of entry	Inhalation. Ingestion. Skin contact. Eye contact.	
Toxicity to animals	1) Styrene	ORAL (LD50): Acute: 2650 mg/kg [Rat]. VAPOR (LC50): Acute: 5634.2 ppm 4 hour(s) [Rat].
	2) Alpha Methyl Styrene	ORAL (LD50): Acute: 4900 mg/kg [Rat].
Special remarks on toxicity to animals	Lung effects have been observed in mouse studies following repeated exposure.	
Special remarks on chronic effects on humans	No additional remark.	
Special remarks on other toxic effects on humans	No additional remark.	

Section XII. Ecological Information

Ecotoxicity Toxic to aquatic organisms. Should not be released to sewage system or other bodies of water at concentrations above limits established in regulations or permits.

Section XIII. Disposal Considerations

Waste disposal Recycle to process, if possible. Consult your local or regional authorities. Ignitable characteristic.

Section XIV. Transport Information

DOT - Shipping description UN1866; Resin Solution; 3; III.

Labels

TDG - Shipping description Resin Solution; 3; UN1866; III.

Labels

IATA/IMDG - Shipping description IATA:
UN1866; Resin Solution; 3; III; Pkg. Inst.: Passenger - 309; Cargo - 310
IMDG:
UN1866; Resin Solution; 3; III; FP=31°C; EmS No.: F-E, S-E

Additional information US regulations require the reporting of spills when the amount exceeds the Reportable Quantity (RQ) for specific components of this material. See CERCLA in Section 15, Regulatory Information, for the Reportable Quantities.

Section XV. Other Regulatory Information**Other regulations**

This section does not reference all applicable regulatory compliance lists.

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Proposition 65 Warning: This product contains a chemical(s) known to the State of California to cause cancer, birth defects and/or reproductive harm.

SARA 302 component(s): None.

SARA 313 component(s): Styrene.

CERCLA RQ(s):

Styrene-1000 lbs. (453.6 kg)

Section XVI. Other Information

References

- Transportation of Dangerous Goods Act - "Regulations respecting the handling, offering for transport and transporting of dangerous goods." Extract from the Canada Gazette Part II
- Canada Gazette Part II, Hazardous Products Act "Ingredient Disclosure List".
- Manufacturer's Material Safety Data Sheet.
- 29 CFR 1910.1000, Z - Tables
- ACGIH 2000 TLVs for Chemical Substances and Physical Agents
- Registry of Toxic Effects of Chemical Substances (RTECS)

-California Code of Regulation Proposition 65

Prepared by

AOC, LLC - Corporate Regulatory Affairs.

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