




<p><b>WHMIS (Canada)</b></p> 	<p><b>NFPA (USA)</b></p> <p>Fire: 3</p> <p>Health: 2</p> <p>Reactivity: 2</p>  <p>Specific Hazard</p>	<p><b>HMIS (USA)</b></p> <table border="1"> <tr><td>Health Hazard</td><td>2</td></tr> <tr><td>Fire Hazard</td><td>3</td></tr> <tr><td>Reactivity</td><td>2</td></tr> <tr><td>Personal Protection</td><td>X</td></tr> </table>	Health Hazard	2	Fire Hazard	3	Reactivity	2	Personal Protection	X	<p><b>Protective Clothing</b></p> 
Health Hazard	2										
Fire Hazard	3										
Reactivity	2										
Personal Protection	X										

<b>Section I. Chemical Product and Company Identification</b>			
<b>Product Type</b>	<b>Polyester Resin Solution in Styrene</b>	<b>CAS#</b>	Not applicable.
		<b>DSL</b>	All ingredients are on DSL list.
<b>Product Name/ Trade Name</b>	H834-RAA-30	<b>TSCA</b>	All ingredients are on TSCA list.
<b>Synonym</b>	None.	<b>In case of Emergency</b>	
<b>Chemical Name</b>	Not applicable.	CHEMTREC (US): 24 hours/7 days (800) 424-9300	
<b>Chemical Family</b>	Aromatic.	Manufacturer: 8am-5pm (CST) Mon-Fri (901) 854-2800	
<b>Chemical Formula</b>	Not applicable.	CANUTEC (Canada): 24 hours/7 days (613) 996-6666	
<b>Manufacturer</b>	AOC, LLC 950 Highway 57 East Collierville, Tennessee U.S.A. 38017 Phone Number: (901) 854-2800	<b>Material Uses</b>	Industrial Applications: Used in the manufacture of thermoset plastic parts.

<b>Section II. Information on Hazardous Ingredients</b>		
Name	CAS #	% by Weight
Styrene	100-42-5	33-35
Cobalt 2-Ethylhexanoate	136-52-7	0.1-1

<b>Section III. Hazards Identification.</b>	
<b>Potential Acute Health Effects</b>	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.
<b>Potential Chronic Health Effects</b>	<p><b>Carcinogenic Effects:</b> 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.</p> <p>Cobalt 2-Ethylhexanoate: Classified 2B (Possible for human.) by IARC.</p> <p><b>Mutagenic effects:</b> Not available. <b>Teratogenic effects:</b> Not available.</p> <p><b>Skin:</b> Prolonged exposure may cause dermatitis.</p>

**Section IV. First Aid Measures**

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

**Section V. Fire and Explosion Data**

<b>The Product is:</b>	Flammable liquid.
<b>Auto-Ignition Temperature</b>	914 °F (490 °C) Styrene
<b>Flash Points</b>	87.6°F (31°C) Styrene
<b>Flammable Limits</b>	LOWER: 1.1% UPPER: 6.1% Styrene
<b>Products of Combustion</b>	May produce carbon monoxide, carbon dioxide, and irritating or toxic vapors, gases or particulate.
<b>Fire Hazards</b>	Flammable in the presence of open flames, sparks, or heat.
<b>Explosion Hazards</b>	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.
<b>Fire Fighting Media and Instructions</b>	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**

<b>Small Spill</b>	Absorb with an inert material and place in an appropriate waste disposal container.
<b>Large Spill</b>	Stop leak if without risk. Eliminate all sources of ignition. 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**

<b>Precautions</b>	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.
<b>Storage</b>	Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material.

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

<b>Exposure Limits</b>	<p>Styrene</p> <p>PEL TWA: 100 (ppm) from OSHA          PEL TWA: 426 (mg/m<sup>3</sup>) from OSHA          TLV TWA: 20 (ppm) from ACGIH          TLV TWA: 85 (mg/m<sup>3</sup>) from ACGIH</p> <p>Cobalt 2-Ethylhexanoate</p> <p>PEL TWA: 500 (ppm) from OSHA          PEL TWA: 0.05 (mg/m<sup>3</sup>) from OSHA          TLV TWA: 0.05 (mg/m<sup>3</sup>) from ACGIH</p>
<b>Engineering Controls</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Provide adequate safety showers and eyewashes in the area of use.
<b>Personal Protection</b>	<u>Personal Protective Equipment:</u> PPE may vary depending on the job being performed. <b>Eye/Face:</b> Wear eye protection such as safety glasses with side shields, splash goggles or face shield with safety glasses. <b>Skin:</b> Avoid skin contact. Impervious gloves should be worn. Other items may include long sleeves, lab coats, or impervious jackets. <b>Respiratory:</b> 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
<b>Personal Protection in Case of a Large Spill</b>	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**

<b>Physical State and Appearance</b>	Liquid.	<b>Odor</b>	Aromatic.
<b>Molecular Weight (g/mol)</b>	1000 to 15000	<b>Color</b>	Clear to Amber.
<b>pH (1% soln/water)</b>	Not applicable.		
<b>Boiling Point</b>	293°F (145°C) Styrene		
<b>Melting Point</b>	Not applicable.		
<b>Specific Gravity</b>	1.1 (Water = 1)		
<b>Vapor Pressure</b>	4.5 mm of Hg @ 68°F (20°C) Styrene		
<b>Vapor Density</b>	3.59 Styrene (Air = 1)		
<b>Odor Threshold</b>	0.14 ppm Styrene		
<b>Evaporation rate</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Dispersion Properties</b>	Not dispersed in water.		
<b>Solubility</b>	Soluble in acetone, styrene, toluene, methanol, carbon tetrachloride, and methylene chloride.		

**Section X. Stability and Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	>170°F (77°C)
<b>Conditions of Instability</b>	Heat.
<b>Incompatibility with various substances</b>	Polymerizes in the presence of organic peroxides, oxidizing materials, or heat.

**Corrosivity** No specific information is available in our database.

### Section XI. Toxicological Information

**Routes of Entry** Inhalation. Ingestion. Skin contact. Eye contact.

**Toxicity to Animals**

Styrene	ORAL (LD50): Acute: 2650 mg/kg [Rat]. VAPOR (LC50): Acute: 5634.2 ppm 4 hour(s) [Rat].
Cobalt 2-Ethylhexanoate	Not available.

**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, if possible. Consult your local or regional authorities. Ignitable characteristic.

### Section XIV. Transport Information

**Proper Shipping Name (DOT)** Resin Solution, Class 3, UN1866, PGIII.

**DOT (Labels)**



**Proper Shipping Name (TDG)** Resin Solution, Class 3, UN1866, PGIII.

**TDG (Labels)**



**Other Regulations** IMDG Classification: Resin solution (styrene), 3.3, UN1866, PG III, Marine Pollutant, Flash point 31 °C, EmS No. 3-05, MFAG Table 310  
IATA Classification: Resin solution, 3, UN1866, PG III, Pkg Inst passenger 309; cargo 310

**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).

For the following states; Hazardous and Extraordinarily Hazardous Substances on the Material Substance List (MSL), which exceed the state's criterion level, must be identified when present in products.

Florida: Styrene.

Massachusetts: Styrene.

Minnesota: Styrene.

New Jersey: Styrene.

Pennsylvania: Styrene.

SARA 302 component(s): None.

SARA 313 component(s): Styrene, Cobalt 2-Ethylhexanoate.

CERCLA RQ(s): Styrene:1000 lbs. (453.6 kg)

Proposition 65 Warning: This product contains a chemical(s) known to the State of California to cause cancer.

**Other Classifications**

**WHMIS (Canada)** WHMIS CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).  
WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).

**HCS (U.S.A.)** HCS CLASS: Flammable liquid having a flash point lower than 37.8°C (100°F).  
HCS CLASS: Toxic.

**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:** Corporate Regulatory Affairs.

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