



# SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identifier

**Product Name** 30210-30

### Recommended Use of the Chemical and Restrictions on Use

**Recommended Use** Vinyl Ester Adhesive Bonding Putty

### Details of the Supplier of the Safety Data Sheet

#### **Supplier's details**

DBF, Inc.  
18576 Krause  
PO Box 2385  
Riverview, MI 48193  
Phone: 734-285-1480

**24 Hour Emergency Telephone Number** Chemtrec 800-424-9300 (North America) 1-703-527-3887 (International)

## 2. HAZARDS IDENTIFICATION

### Classification

Flammable Liquids	Category 3
Acute Toxicity: Inhalation	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure) [Respiratory tract irritation]	Category 3
Specific target organ toxicity (repeated exposure) Inhalation [ears]	Category 1
Specific target organ toxicity (repeated exposure) [liver and nervous system]	Category 2



### Signal Word

**Danger**

### Hazard Statements

Flammable liquid and vapor  
Harmful if inhaled  
Causes serious eye irritation  
Causes skin irritation  
Suspected of causing cancer  
May cause respiratory irritation.  
Causes damage to organs through prolonged or repeated exposure (ears)  
May cause damage to organs through prolonged or repeated exposure. (liver, nervous system)

**Precautionary Statements - Prevention**

Wear protective gloves/protective clothing/eye protection/face protection  
 Keep away from heat, sparks, open flames and hot surfaces – No smoking.  
 Use explosion proof electrical, ventilating, lighting, and all material handling equipment.  
 Use only non-sparking tools. Take precautionary measures against static discharge.  
 Use outdoors or in well-ventilated area. Keep container tightly closed.  
 Do not breathe dust/fume/gas/mist/vapors/spray.  
 Do not eat, drink or smoke when using this product  
 Use only outdoors or in a well-ventilated area  
 Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**

Get medical attention if you feel unwell.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for several minutes. If eye irritation persists: Get medical attention  
 IF ON SKIN (or hair): Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.  
 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Precautionary Statements - Storage**

Store containers in a safe place. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with all local, regional, national and international regulations.  
 Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Talc	14807-96-6	<30
Styrene	100-42-5	<23
Vinyl Ester Polymer	Mixture	<20
Unsaturated Polyester Polymer	Mixture	<20
Amorphous Silica	67762-90-7	<10
Milled Fibers	65997-17-3	<5
Alpha Methylstyrene	98-83-9	<3

### 4. FIRST AID MEASURES

**First Aid Measures**

<b>General Advice</b>	Provide this SDS to medical personnel for treatment.
<b>Eye Contact</b>	Immediately flush with plenty of water for at least 10 minutes occasionally lifting upper and lower eyelids. Check for and remove contacts lenses. Get medical attention.
<b>Skin Contact</b>	Flush contaminated skin with plenty of water for at least 10 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Clean shoes thoroughly before use.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

**Ingestion**

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure of if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain and open airway. Loosen tight clothing such as collar, tie, belt or waistband.

**Most Important Symptoms and Effects, both Acute and Delayed****Potential acute health effects**

<b>Eye contact</b>	Causes serious eye irritation.
<b>Inhalation</b>	Harmful if inhaled. May cause respiratory irritation.
<b>Skin contact</b>	Causes skin irritation.
<b>Ingestion</b>	Irritating to mouth, throat and stomach.

**Over-exposure signs/symptoms**

<b>Eye Contact</b>	Adverse symptoms may include the following: pain or irritation, watering, redness.
<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation, coughing.
<b>Skin contact</b>	Adverse symptoms may include the following: irritation, redness.
<b>Ingestion</b>	No specific data.

**Indication of any Immediate Medical Attention and Special Treatment Needed, if necessary**

<b>Note to Physicians</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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<b>5. FIRE-FIGHTING MEASURES</b>
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**Extinguishing media**

<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable Extinguishing Media</b>	Do not use water jet.
<b>Specific Hazards Arising from the chemical</b>	Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of subsequent explosion.
<b>Hazardous thermal decomposition products</b>	Decomposition products may include the following materials: carbon dioxide, carbon monoxide.
<b>Special protective actions for firefighters</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for firefighters</b>	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

- For non-emergency personal** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flames, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergence personnel".
- Environmental Precautions** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform relevant authorities if the product has environmental pollution (sewers, waterways, soil or air)

### Methods and Material for Containment and Cleaning Up

- Small spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Scoop into appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

- Protective measures** Put on appropriate protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Empty containers retain product residue and can be hazardous. Do not reuse containers.
- Advice on general Occupational hygiene** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for Safe Storage, Including any Incompatibilities** Do not store above 38°C (100.4°F). Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in original container protected from direct sunlight

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control measures

#### Occupational exposure limits

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
Styrene	TWA: 20 ppm 8 hours TWA: 85 mg/m <sup>3</sup> 8 hours STEL: 40 ppm 15 minutes STEL: 170 mg/m <sup>3</sup> 15 minutes	TWA: 100 ppm 8 hours CEIL: 200 ppm AMP: 600 ppm 5 minutes	TWA: 50 ppm 10 hours TWA: 215 mg/m <sup>3</sup> 10 hours STEL: 100 ppm 15 minutes STEL: 425 mg/m <sup>3</sup> 15 minutes
Amorphous Silica	-	TWA: 6 mg/m <sup>3</sup>	-
Alpha Methylstyrene	TLV 50 ppm A4	TWA 50 ppm	
Talc	TWA: 2 mg/m <sup>3</sup> particulate matter containing no asbestos and <1% crystalline silica, respirable fraction	(vacated) TWA: 2 mg/m <sup>3</sup> respirable dust <1% Crystalline silica, containing no Asbestos TWA: 20 mppcf if 1% Quartz or more use Quartz limit	IDLH: 1000 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> containing no Asbestos and <1% Quartz respirable dust

**Appropriate Engineering Controls** Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of the environmental protection legislation.

### Individual Protection Measures

#### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gasses or dusts.

#### **Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### **Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Respiratory Protection**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respiratory selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

<b>Property</b>	<b>The physical-chemical properties of this material have not been fully investigated.</b>	
<b>Physical State</b>	Liquid	
<b>Appearance</b>	Gray viscous liquid	
<b>Color</b>	Gray	
<b>Odor</b>	Styrene	
<b>Odor Threshold</b>	.01 to .1 ppm	
<b>pH</b>	Not determined	
<b>Melting Point</b>	Not determined	
<b>Boiling Point</b>	145.2°C (293.4°F)	(For unsaturated polyester resin)
<b>Flash Point</b>	31.1°C (88°F)	(Closed Cup)
<b>Evaporation Rate</b>	Less than 1	(for styrene) (Butyl Acetate=1)
<b>Upper Flammability Limits</b>	6.1%	
<b>Lower Flammability Limit</b>	1.1%	
<b>Vapor Pressure</b>	0.57 kPa (4.3 mmHg)	(room temperature) (for styrene)
<b>Vapor Density</b>	3.6	(for Styrene) (Air = 1)
<b>Specific Gravity</b>	1.3 – 1.4	
<b>Solubility in water</b>	Insoluble	
<b>Solubility in Other Solvents</b>	Not available	
<b>Partition Coefficient</b>	Not determined	
<b>Auto-ignition Temperature</b>	490°C (914°F)	(for styrene)
<b>Decomposition Temperature</b>	Not available	Low stability hazard expected at normal operating temperatures
<b>Viscosity</b>	Not determined	
<b>Styrene loss after catalyzing</b>	Less than .1%	When used as intended.

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	The Product is stable.
<b>Possibility of hazardous reactions</b>	Hazardous reactions or instability may occur under certain conditions or storage or use.
<b>Conditions to Avoid</b>	Avoid all possible sources of ignition (spark and flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat and flame. Hazardous polymerization may occur under certain conditions of storage our use. Keep away from heat and direct sunlight. Keep away from heat and flame. Keep away from oxidizing agents.
<b>Incompatible Materials</b>	Reactive or incompatible with the oxidizing materials, acids, and alkalis. Incompatible with alkali metals, some alkalis, and some strong acids.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Styrene	LC50 Inhalation Gas	Rat	2770 ppm	4 hours
	LC50 Inhalation Vapor	Rat	11800 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	2650 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Styrene	Eyes – Mild irritant	Human	-	50 ppm	-
	Eyes – Moderate Irritant	Rabbit	-	24 hours 100 mg	-
	Eyes – Severe Irritant	Rabbit	-	100 mg	-
	Skin – Mild irritant	Rabbit	-	500 mg	-
	Skin – Moderate irritant	Rabbit	-	100 Percent	-

**Sensitization** May cause skin sensitization by skin contact.

**Mutagenicity** Not Available.

**Carcinogenicity** Not Available.

**Conclusion/Summary** Styrene manufacturers have determined that the weight of evidence for the carcinogenicity of this substance does not meet the criteria for classification.

Styrene is listed by IARC as a possible carcinogen to humans (Group 2B) based on “limited evidence” in humans, “limited evidence in animals and “other relevant data”. The United States NTP listed styrene as reasonably anticipated to be a human carcinogen based on “limited evidence” from studies in humans, “sufficient evidence” from studies in experimental animals, and supporting data on mechanisms of carcinogenesis. The significance of these results for humans has not been established through risk assessment.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
Styrene		2B	Reasonably anticipated to be a human carcinogen.
Talc	-	3	-

**Reproductive toxicity** Not available

**Teratogenicity** Not available

#### **Specific target organ toxicity (single exposure)**

Name	Category	Routes of exposure	Target Organs
Styrene	Category 3	Not applicable	Respiratory tract irritation

#### **Specific target organ toxicity (repeated exposure)**

Name	Category	Routes of exposure	Target Organs
Styrene	Category 1	Inhalation	ears

**Aspiration hazard**

Name	Result
Styrene	Aspiration Hazard – Category 1

Information on the likely routes of exposure Not available

**Potential acute health effects**

Eye contact	Causes serious eye irritation.
Inhalation	Harmful if inhaled. May cause respiratory irritation.
Skin contact	Causes skin irritation.
Ingestion	Irritation to mouth, throat and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics**

Eye contact	Adverse symptoms may include the following: pain, or irritation, watering, redness.
Inhalation	Adverse symptoms may include the following: respiratory tract irritation, coughing.
Skin contact	Adverse symptoms may include the following: irritation, redness.
Ingestion	Adverse symptoms may include the following: irritating to mouth, throat and stomach.

**Delayed and immediate effects and also chronic effects from short and long-term exposure****Short term exposure**

<b>Potential immediate effects</b>	Not available
<b>Potential delayed effects</b>	Not available

**Long term exposure**

<b>Potential immediate effects</b>	Not available
<b>Potential delayed effects</b>	Not available

**Potential chronic health effects**

<b>General</b>	Causes damage to organs through prolonged or repeated exposure if inhaled.
<b>Carcinogenicity</b>	Suspected of causing cancer. Risk depends on duration and level of exposure.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

**Numerical measures of toxicity****Acute toxicity estimates**

Route	ATE value
Oral	2575.6 mg/kg
Inhalation (gases)	3838.7 ppm
Inhalation (vapors)	16.35 mg/l



## 12. ECOLOGICAL INFORMATION

### Toxicity

Product /ingredient name	Result	Species	Exposure
Styrene	Acute EC50 1400 ug/l Fresh water	Algae – Pseudokirchneriella subcapitata	72 hours
	Acute EC50 720 ug/l Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4700 ug/l Fresh water	Daphnia – Daphnia magna	48 hours
	Acute LC50 52000 ug/l Marine water	Crustaceans – Artemia salina – Nauplii	48 hours
	Acute LC50 4020 ug/l Fresh water	Fish – Pimephales promelas	96 hours
	Chronic NOEC 63 ug/l Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
Talc	LC50 100 g/l semi – static	Brachydanio rerio	96 hour

**Persistence and Degradability** Not determined

### Bioaccumulative potential

Product/ingredient	logP <sub>ow</sub>	BCF	Potential
Styrene	0.35	13.49	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) Not available

**Other adverse effects** No known significant effects of critical hazards.

## 13. DISPOSAL CONSIDERATIONS

### **Disposal Methods**

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid disposal. Attempt to use product completely in accordance with intended. Waste packaging should be recycled. Incineration or landfill should be considered when recycling is not feasible.

### **Special precautions**

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. TRANSPORT INFORMATION

**DOT**

UN/ID No	UN1866
Proper Shipping Name	Resin Solution
Hazard Class	3
Packing Group	III
Reportable Quantity (RQ)	1000 lbs (Styrene)

**IATA**

UN/ID No	UN1866
Proper Shipping Name	Resin Solution
Hazard Class	3
Packing Group	III

**IMDG**

UN/ID No	UN1866
Proper Shipping Name	Resin Solution
Hazard Class	3
Packing Group	III

## 15. REGULATORY INFORMATION

**U.S. Feral regulations**

TSCA 8(a) PAIR:	4-tert-butylpyrocatechol; N,N-dimethylaniline
TSCA 8(a) CDR Exempt/Partial exempt:	Not determined.
United States inventory (TSCA 8b):	Not determined.
Clean Water Act (CWA) 307:	Naphthenic acids, copper salts
Clean Water Act (CWA) 311	Styrene
Clean Air Act Section 112 (b) Hazard Air Pollutants (HAPs)	Styrene
Clean Air Act Section 602 Class I Substances	Not listed
Clean Air Act Section 602 Class II Substances	Not listed

**SARA 302/304**

No Products found

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

**SARA 313**

Chemical Name	CAS No	Weight-%
Styrene	100-42-5	<23

**State Regulations****U.S. State Right-to-Know Regulations**

<b>Massachusetts</b>	Styrene monomer; Alpha Methylstyrene; Talc
<b>New York</b>	Styrene
<b>New Jersey</b>	Styrene monomer; Isopropenyl Benzene; Alpha Methylstyrene; Benzene, Ethenyl-; Talc
<b>Pennsylvania</b>	Benzene, Ethenyl-; Talc

**California Proposition 65**

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: Styrene; Methanol, Alpha Methylstyrene

**International lists**

<b>Australia inventory (AICS)</b>	Not determined.
<b>Canadian inventory</b>	Not determined.
<b>China inventory (IECSC)</b>	Not determined.
<b>Japan inventory</b>	Not determined.
<b>Korea Inventory</b>	Not determined.
<b>Malaysia Inventory (EHS Register)</b>	Not determined.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>	Not determined.
<b>Philippines inventory (PICCS)</b>	Not determined.
<b>Taiwan inventory (CSNN)</b>	Not determined.

## 16. OTHER INFORMATION

<b>NFPA</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	2	3	1	Not determined
<b>HMIS</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	2	3	1	Not determined

Revision Date 26-Jan-2017

Revision Notes

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**