

Section 1: Identification

1.1. Product identifier

Product form : Substance
Substance name : Norsolene® W-110
Chemical name : Ethenylbenzene, copolymer with (1-methylethenyl)benzene
CAS No : 9011-11-4
Generic name : Hydrocarbon Resin

1.2. Recommended use of the chemical and restrictions on use

No additional information available

1.3. Details of the supplier of the safety data sheet

Total Petrochemicals & Refining USA, Inc.
Cray Valley Division
P O Box 674411
Houston, TX 77267-4411

For non-emergency product information:
Phone: 713-483-5000 or 1-877-871-2709
Email: product.stewardship@total.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (Toll Free USA & Canada) / 703-527-3887 (Multiple languages)
Total Petrochemicals & Refining USA, Inc.: 1-800-322-3462 (Language: English only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Combustible Dust

2.2. Label elements

GHS-US labeling

Signal word (GHS-US) : **Warning**
Hazard statements (GHS-US) : **May form combustible dust concentrations in air**
Precautionary statements (GHS-US) : Precautionary statement not required.

2.3. Hazards not otherwise classified

Other hazards not contributing to the classification : Dust or particulates may cause mild respiratory tract and eye irritation
Repeated or prolonged contact may cause slight irritation to the skin
Vapors formed when material is processed at high temperatures may be irritating to the eyes and upper respiratory tract.
Contact with skin or eyes with hot material may cause serious thermal burns to skin or eyes.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

Section 3: Composition/information on ingredients

3.1. Substance

Chemical name : Ethenylbenzene, copolymer with (1-methylethenyl)benzene
CAS No : 9011-11-4

3.2. Mixture

Not applicable

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Section 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Wash with plenty of soap and water. If irritation persists, consult a doctor. Heated Material: For serious burns from heated material, get medical attention. In case of skin contact, immediately immerse in or flush with clean, cold water. Do not attempt to remove adhered material from skin.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking, tears or redness persist.
- First-aid measures after ingestion : Rinse mouth out with water. If necessary seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

Section 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Foam. Dry chemical.

5.2. Special hazards arising from the chemical

- Fire hazard : May form combustible dust concentrations in air. Vapors generated from overheating/melting/decomposition may be flammable and may cause fire/explosion if source of ignition is present.
- Explosion hazard : Potential dust explosion hazard. When dust becomes airborne and is exposed to an ignition source, sufficient combustible/flammable dust may exist to burn in the open or explode if confined.
- Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Toxic fumes. When heated above 150 °C, alpha-methyl styrene is generated by depolymerization.

5.3. Advice for firefighters

- Firefighting instructions : Fight fire from safe distance and protected location. Use water spray or fog for cooling exposed containers. Avoid raising powdered materials into airborne dust, creating an explosion hazard. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Complete protective clothing. Self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Emergency procedures for non-emergency personnel : Remove ignition sources. Ensure adequate ventilation. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures for emergency responders : No additional requirement.

6.2. Methods and material for containment and cleaning up

- For containment : Sweep up or vacuum up the product. Spilled material may present a slipping hazard.
- Methods for cleaning up : Dispose of solid materials or residues at a licensed site.

6.3. Reference to other sections

See section 8. Exposure controls and personal protection.

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Section 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with elevated temperature or molten product to prevent burns. Avoid raising powdered material due to explosion hazard. Prevent the build-up of electrostatic charge. Use only non-sparking tools. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. The plastic packaging film used to secure bags of material on pallets can also develop static electricity -- remove packaging film in an area free from ignitable vapors/dust. Refer to the latest edition of the National Fire Protection Association (NFPA) 654 publication, "Standard for the Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries", for complete discussion on dust explosion prevention and control measures. This material may be shipped as a viscous, molten product at elevated temperatures (approximately 177 °C), but below its flashpoint, to facilitate transfer to storage containers or processing vessels. Do not process at temperatures of 150 °C and higher.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Electrical equipment should conform to the National Electric Code. The plastic packaging film used to secure bags of material on pallets can also develop static electricity -- remove packaging film in an area free from ignitable vapors/dust. Protect from freezing. If frozen, thaw and mix thoroughly before use.
- Storage conditions : Keep container tightly closed. Store in a dry place. Flaked forms may degrade by gradual oxidation.
- Incompatible products : Oxidizing agents.
- Maximum storage period : 12 months
- Storage temperature : < 40 °C

Section 8: Exposure controls/personal protection

8.1. Occupational Exposure Limits

Norsolene® W-110 (9011-11-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (inhalable dust) 3 mg/m ³ (respirable dust)
USA ACGIH	Remark (ACGIH)	Particulates, not otherwise classified
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
USA OSHA	Remark (US OSHA)	Particulates, not otherwise classified

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Protective gloves.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of inadequate ventilation wear respiratory protection.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Pastilles. Flakes. Powder.
- Color : Colorless. Clear to light yellow. Translucent.
- Odor : No data available
- Odor threshold : No data available
- pH : Not applicable
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : > 251 °C Closed cup
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available

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Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.06
Solubility	: Water: Insoluble
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available

9.2. Other information

Softening point	: ~ 105 - 115 °C
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Section 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

Dust may form explosive mixture in air.

10.4. Conditions to avoid

Avoid the build-up of electrostatic charge. High temperature. Avoid dust formation. Direct sunlight. No flames, no sparks. Eliminate all sources of ignition. To avoid thermal decomposition, do not overheat (> 150°C).

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

When heated above 150 °C, alpha-methyl styrene is generated by depolymerization.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
	Based on available data, the classification criteria are not met

Norsolene® W-110 (9011-11-4)	
LD50 oral rat	> 2000 mg/kg
Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met Not irritating to skin (rabbit)
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met Does not cause cutaneous sensitization for guinea-pigs
Germ cell mutagenicity	: Not classified Lack of data
Carcinogenicity	: Not classified Lack of data
Reproductive toxicity	: Not classified Lack of data
Specific target organ toxicity (single exposure)	: Not classified Lack of data
Specific target organ toxicity (repeated exposure)	: Not classified Lack of data

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Aspiration hazard	: Not classified Not applicable
Potential Adverse human health effects and symptoms	: Dust or particulates may cause mild respiratory tract and eye irritation. Product may cause mild skin irritation.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

Section 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

Section 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

Section 14: Transport information

Not a DOT controlled material

Additional information

Transport by sea (IMDG)

Not an IMDG controlled material

Air transport (IATA)

Not an IATA controlled material

Section 15: Regulatory information

15.1. US Federal regulations

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TSCA

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

SARA 313

This product contains no chemicals in excess of the applicable de minimis concentration that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Table 372.65).

SARA Section 311/312 Hazard Classes : Fire hazard

Export Control Classification Number (ECCN): : EAR99 (No License Required)

15.2. International regulations

CANADA

No additional information available

National inventories

Ethylbenzene, copolymer with (1-methylethenyl)benzene (9011-11-4)

Listed on the AICS (the Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the China Inventory of Existing Chemical Substances (IECSC)

Listed on the Korean ECL (Existing Chemical List) inventory.

Listed on New Zealand - Inventory of Chemicals (NZIoC)

Listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)

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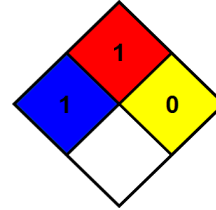
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15.3. US State regulations

California Proposition 65 - To the best of our knowledge, there are no Proposition 65 chemicals present in this product at levels that would require warning under the California Safe Drinking Water and Toxic Enforcement Act.

Section 16: Other information

NFPA health hazard : 1
NFPA fire hazard : 1
NFPA reactivity : 0



HMIS III Rating

Health : 1
Flammability : 1
Physical Hazard : 0
Personal Protection : See section 8 of SDS

Version : 1.1

Date of issue : January 17, 2014

MSDS ID: NORSOLENE_W-110

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