Material Safety Data Sheet

Terpene Phenolic Resin

Section 1 - Chemical Product and Company Identification

Synonyms : Terpene Resin

Molecular Weight : N.A.

Chemical Formula : $(C_{16}H_{21}O)_n$

Company Identification : Tradeasia International Pte. Limited

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Section 2 - Composition and Information on Ingredients

Composition:

Chemical Name	CAS No	Purity, %
Terpene Phenolic Resin	68648-57-7	100

Section 3 – Hazards Identification

3.1 Classification of the substance according to HMIS

Health hazard (Category 1)

Fire hazard (Category 1)

Reactivity (Category 0)

(0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe; (*)=Chronic health hazard)

3.2. Emergency Overview

Product is a friable, amber, rosin based resin. This is a non-combustible, non-reactive solid material. Flaked material may cause a dust problem. Product may form explosive dust/air mixture if high concentration of product dust is suspended in air. Static electric charges created by emptying product from ungrounded containers in or near flammable vapors may cause flash fire. May cause eye irritation. Vapors may also produce eye irritation. Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing.

3.3. Potential Health Effects

Eye contact

Dust/powder may irritate eye tissue. Rubbing may cause abrasion of the cornea. Symptoms may include irritation, redness, scratching of the cornea, and tearing. Vapors may also cause eye irritation. If heated product contacts the eye, thermal burns may result.

Skin Contact

Prolonged or repeated skin contact may cause irritation. When it is heated, this product may cause thermal burns.

Inhalation

Inhalation of dusts may cause respiratory irritation. Inhalation of vapor/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing and difficulty breathing.

Ingestion

Ingestion of product may produce mild gastrointestinal disturbances.

Section 4 – First-Aid Measures

4.1. Description of first aid mesaures

In case of eye contact

Immediately flush eyes with flooding amounts of cool, low pressure water for at least 15 minutes. If irritation persists, get medical attention. If hot/molten product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.

In case of skin contact

In case of skin contact, wash immediately with soap and water. If irritation develops or persists, get medical attention. If hot or molten product contacts skin, cool under running water. Do not attempt to remove the hot, molten or cooled product from the skin. Seek medical attention.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

If swallowed

If swallowed, contact a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by medical personnel.

Notes to physician

Provide general supportive measures and treat symptomatically. In case of ingestion, the decision of whether or not to induce vomiting should be made by the attending physician. If burn is present, treat as any thermal burn. Removing adhered product from burned skin may compromise the skin integrity and result in infection and/or more severe scarring.

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media

Carbon dioxide, dry chemical or water.

5.2. Specific hazards arising from the chemical

High concentration of airborne dust may form explosive mixture with air. Static electric charges created by emptying product from ungrounded containers in or near flammable vapors may cause flash fire. Product is not considered combustible. If heated above its flash point in the presence of air, product can support combustion

5.3. Hazardous decomposition products

Smoke, carbon monoxide, carbon dioxide, and other products of combustion.

5.4 Fire-fighting/Further advice

Wear full protective clothing, including self-contained positive pressure/pressure demand breathing apparatus, helmet, and protective clothing. Use water to cool fire-exposed containers and to protect personnel.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment and clothing during clean-up. Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed. Avoid generation of dust during clean-up. Wear an approved respirator if dust is generated above exposure limits. Attempt to reclaim free product, if this is possible. Shovel material into appropriate container for disposal. Follow all Local, State, Federal and Provincial regulations for disposal.

6.2. Environmental precautions

Contain the discharged material. If airborne dust is generated, eliminate all sources of ignition that may come into contact with the dust.

6.3. Special Instructions

Avoid contact with skin and eyes. Avoid skin contact with molten resins. Avoid inhalation of dusts. Avoid inhalation of fumes from molten product.

6.4. Reference to other sections

For disposal see section 13.

Section 7 – Handling and Storage

7.1. Precautions for safe handling

Avoid eye and skin contact. Avoid breathing dusts from this material. Avoid breathing

fumes if product is used at high temperatures. Maintain good housekeeping to prevent dust accumulation. Flaked or crushed material may cause a dust problem. If product is in dust form, it is classified as a dust explosion hazard class II. Handling of product in dust form should be in accordance with NFPA. If handling with flammable or combustible materials, the explosion hazard may increase. Avoid ignition sources such as sparks and flame. In addition, when emptying bags where flammable vapors may be present, blanket vessel with inert gas; assure proper grounding (NFPA 69 - Explosion Prevention Systems; NFPA 70 - National Electric Code; NFPA 77 - Recommended Practices on Static Electricity; NFPA 654 -Standard for the Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industry), and pour material slowly into conductive grounded chutes.

Do not reheat product packaged in light metal containers. The light metal containers will not safely support the movement or transfer of the product in a hot, molten form. Do not chisel drums in areas where flammable liquids are stored or used. Wash thoroughly after handling. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

7.2. Conditions for safe storage, including any incompatibilities

Store at ambient temperature and atmospheric pressure. Guard against dust accumulation of this material. Flaked or crushed product may be prone to oxidation, therefore control inventory - use oldest material first. Suggest stainless steel construction for bulk storage.

Section 8 – Exposure Controls/Personal Protection

8.1. Control parameters

Components with workplace control parameters

We are not aware of any national exposure limit.

8.2. Appropriate engineering controls

Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, CGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Local exhaust ventilation is recommended when generating excessive levels of airborne dust or vapors from handling or thermal processing. Use electrically grounded, explosion-proof equipment for ventilation or any handling of this product.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. For heated/molten product, use any type of thermal insulating gloves and other clothing as necessary to protect from thermal burns. Ensure compliance with OSHA's personal protective equipment (PPE) standard, 29 CFR 1910.132 (general) and 138 (hand protection).

Respiratory protection

Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2 -1992). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage, must be implemented.

DUST/MIST: If concentrations are below the TLV and/or PEL, a NIOSH approved disposable dust/mist respirator may be used for personal comfort. For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-face piece respirator equipped with dust-mist cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in Publication No. 87-116 or ANSI Z88.2-1992. Note: ANSI Z88.2-1992 requires the use of a HEPA filter if the particle size distribution of the contaminant is unknown. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

For molten/heated product:

GAS/VAPOR: For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-face piece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in Publicaton No. 87-116 or ANSI Z88.2-1992. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

General:

Use good industrial hygiene practices in handling this material. Eye wash fountains and emergency showers are recommended. Launder contaminated clothing before reuse.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance : Form: Yellow Solid

Odour : Slight

Odour threshold : N.A.

pH @ 20°C : N.A.

Melting point : N.A.

Boiling point : N.A.

Flash point : N.A.

Evaporation rate : N.A.

Flammability : N.A.

Upper/lower flammability or explosive limits : N.A.

Vapour pressure : N.A.

Vapour density : N.A.

Relative density : Approximately 1.11 g/mL at 25°C

Solubility in water : Insoluble

Partition coefficient: n-octanol/water : N.A

Auto-ignition temperature : N.A.

Decomposition temperature : N.A.

Viscosity : N.A.

R/B Softening Point: 90-100°C

Acid No. (per ASTM D-465): 45 – 60.

9.2. Other information

N.A.

Section 10 – Stability and Reactivity

10.1. Reactivity

N.A.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

N.A.

10.4. Conditions to avoid:

Avoid strong oxidizing agents. Avoid dispersion of dust in air. Avoid ignition source where dust is produced.

10.5. Incompatible materials

May react with strong oxidizing agents.

10.6. Hazardous decomposition products

Smoke, carbon monoxide, carbon dioxide and other products of combustion.

Section 11 – Toxicological Information

11.1. Information on likely routes of exposure

Inhalation: No data available.

Eye contact: No data available.

Skin contact: No data available.

Ingestion: No data available.

11.2. Information on toxicological effects

Symptoms: No information available.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity: No information available.

11.4. Numerical measures of toxicity – Product Information

No data is available for the product. However, information on a similar product is as follows:

LD50 Oral – Rat – 5000 mg/kg when administered as a 75% w/w solution in corn oil

LD50 Dermal – Rat - 5000 mg/kg

11.5. Additional Information

Contact may cause skin or eye irritation. Ingestion may cause nausea, vomiting, and diarrhea. Inhalation of dust may cause respiratory irritation. Prolonged or repeated exposure to vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or breathing difficulty.

CARCINOGENIC EFFECTS: None of this product's components are listed as carcinogens by ACGIH, IARC, NIOSH, NTP or OSHA.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available. No information available on the toxicity of this product to the reproductive system.

Section 12 – Ecological Information

12.1. Toxicity

No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6. Other adverse effects

No information available.

Section 13 – Disposal Considerations

13.1. Waste treatment methods

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 – Transport Information

14.1. UN number : Not a DOT controlled material (United States).

14.2. UN proper shipping name : NA

14.3. Transport of hazard classes : NA

14.4. Packing group : NA

14.5. Environmental Hazards: NA

14.6. Incompatible materials: NA

14.7. Emergency Response Guide Number : NA

Section 15 – Regulatory Information

15.1. Federal Regulations

OSHA: Not hazardous by definition of Hazard Communication Standard
(29 CFR 1910.1200).
SARA TITLE III:
SARA Section 302 (40 CFR 355 Appendix A): **None of this product's components are listed**
SARA Section 311/312: **None**
SARA Section 313 (40 CFR 372.65): **None of this product's components are listed**
CERCLA (40 CFR 302.4): **None of this product's components are listed**
TSCA Inventory: All of this product's components are listed.
International Inventories: All of this product's components are on or exempt from these inventories: EINECS only.
WHIMIS (Canada): This product is classified under WHIMIS: Class D, Division 2, Subdivision B.
State lists: None of this product's components are listed in CA, FL, MA, MN, NJ, or PA. This product does not contain any chemicals currently on the California List of Known Carcinogens and Reproductive Toxins

Section 16 : Additional Information

References: Not available.

Other Special Considerations: Not available.

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