MATERIAL SAFETY DATA SHEET

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CHEMTREC 24-HOUR EMERGENCY RESPONSE
TOLL FREE NUMBER: (800) 424-9300
INTERNATIONAL CALLS: COLLECT (202) 483-7616
CHEMTREC should only be contacted in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.

1. PRODUCT IDENTIFICATION

(Produced in Brazil from Pinus Elliotti)

Product Name	Synonym	CAS Numbers	Use
Brazilian Gum Turpentine (Mainly a mixture of bicyclic monoterpenic hydrocarbons, mostly alpha & beta-Pinene)	Turpentine, Gum; Oil of Turpentine	9005-90-7 8006-64-2	Varied applications

2. HAZARDOUS INGREDIENTS

Hazardous Components	%	STEL	ACGIH TLV	OSHA PEL
A-Pinene (CAS# 80-56-8)	40 - 55%	150 ppm	100 ppm	100 ppm
B-Pinene (CAS# 127-91-3)	30 - 45%	150 ppm	100 ppm	100 ppm
Other Terpenes	3 - 10%	N/A	N/A	N/A

3. HAZARD IDENTIFICATION

Health Effects:

On Skin: Repeated or prolonged skin contact may produce primary skin irritation, contact dermatitis, or chemical burns.

On Eyes: Eye contact with liquid or vapor is irritating and damaging. It can cause conjunctivitis or corneal burns. Vapors can irritate the eyes at 175 ppm.

By Accidental Ingestion: Acute oral poisoning (mean; lethal dose: Adult – 4 to 6 ounces)

By Inhalation: Overexposure to vapor may cause headaches, dizziness, vertigo, chest pain, bronchitis, pulmonary edema, cyanosis, narcosis, accelerated pulse. Effects of repeated inhalation on vapors below TLV is presumed safe.

By Pressure Injection: Injection of all products will cause severe internal damage if not properly treated.

Other: Repeated dermal or chronic inhalation overexposure may produce kidney or bladder damage, also may cause a predisposition to pneumonia and chronic nephritis.

4. FIRST AID MEASURES

Skin Contact: Wash affected area with copious amounts of soap and water. Remove contaminated clothing and shoes, and launder before re-use. If irritation persists, seek medical assistance.

Eye Contact: Remove any contact lenses at once. IMMEDIATELY flush eyes well with large quantities of water for at least 15 minutes. See a physician immediately.

Ingestion: GET MEDICAL HELP IMMEDIATELY. Stomach pumping and lavage may be required. Give edible oil or white mineral oil to drink. DO NOT induce vomiting – aspiration a hazard if vomiting occurs.

Inhalation: If symptoms of overexposure are experienced, evacuate to fresh air. If respiration stops, give mouth to mouth resuscitation. If symptoms persist, seek medical attention.

5. FIRE & EXPLOSION HAZARD DATA

Flash Point (TCC): 95°F (35°C) **Identification Nº:** UN 1299 **EINECS Nº:** 232-350-7
Flash Point (Open Cup): 120°F (49°C) **Risk Number:** 30 **Risk Class:** 3
OSHA Class IC Flammable Liquid **Auto Ignition:** 476°F **Risk Group:** III
DOT EMERGENCY GUIDE NUMBER: 26
Extinguishing Media: Regular Foam, CO_2, Dry Chemical (Class B) or Halon®. Do not use water.
Flammable Limits: (% by volume) LEL – 0.8 UEL – 0.87%
Special Fire Fighting Procedures and Equipment: Do NOT use water. As with any fire situation, full face, self-contained breathing apparatus and appropriate protective clothing should be worn. Under fire conditions, this product may release CO, CO_2, and other decomposition products of undetermined hazard. Water is unsuitable for use on burning material, but may be used to cool containers exposed to heat.
NFPA Codes: Health: 2 Fire: 3 Reactivity: 0
(Degree of Hazard: 4=Extreme 3=High 2=Moderate 1=Slight 0=Insignificant)

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: Remove sources of ignition. Use protective gloves to avoid skin contact and avoid inhalation by using a NIOSH-approved respiratory protection device suitable for the level of exposure. Wear impervious boots. Small spills can be wiped up with vermiculite or other suitable absorbent material and removed to an approved disposal container. Large spills should be absorbed by dirt, sand, or other suitable absorbents for disposal. Do not hose spills down drains. Move leaking containers to well-ventilated area. No Smoking.
Waste Handling & Disposal Method: Dispose of in accordance with Federal, State and Local environmental regulations. Burning is recommended for waste disposal using an approved incinerator.
EPA HAZARDOUS WASTE NUMBER (40CFR261.21): D001
EPA REPORTABLE QUANTITY (49CFR172.101) APPENDIX): 100 LBS.

7. HANDLING & STORAGE

Handling and Storage Precautions: Store in glass, tin-lined, stainless steel or epoxy-lined containers to preserve quality. Do not store in plastic. Store in closed containers away from heat or sources of ignition and oxidizing materials. Protect against physical damage to containers. Avoid inhalation and contact with skin and eyes. Areas containing this material should have fire safe practices and electrical equipment in accordance with electrical and fire protection codes (NFPA-30) governing Class I Liquids. KEEP AWAY FROM OPEN FLAMES. NO SMOKING in areas of use or storage.
Due to the characteristics of the product, do not store turpentine in their original drums for long periods of time (over 6 months). Turpentine is a solvent which will eventually break away the epoxy coating in the drums used to prevent internal corrosion of the drums. PDM does not accept any product returns due to lining particulates beyond the stated 6-month period from the time the product was shipped. Turpentine should be repackaged as quickly as possible.
Other Precautions: Do not dispose of solvent or oil-soaked combustible materials (rags, paper, etc.) in an open container or trash can. Place rags in approved waste cans or soak with water.

8. OCCUPATIONAL PROTECTIVE MEASURES

Respiratory Protection:	MSHA/NIOSH-approved organic vapor respiratory protection should be worn when TLV is exceeded in accordance with OSHA 29CFR1910.134 or other applicable standards or guidelines.
Ventilation:	General mechanical ventilation (to reduce fumes) plus local exhaust at points of emission to maintain exposures below TLV(s) listed.
Protective Gloves:	Neoprene or Rubber – impervious gloves.
Eye Protection:	ALWAYS wear OSHA-approved chemical splash goggles with side shields OR full facepiece respirator as approved by NIOSH; full face shield to be worn with goggles and respirator if NOT a full facepiece respirator.
Other Protective Equipment:	Wear appropriate aprons, boots and other suitable body protection.
Safety Stations:	Eye bath and safety shower; clothing to protect from skin contact.
Work/Hygienic Practices:	Good personal hygiene practices should be used. Wash after any contact, before eating, and at the end of the work period.

9. PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: (**760 mm Hg)**	311 - 374°F (155°C - 190°C)	**Odor:**	Sweet Turpentine Odor
Vapor Pressure (mmHg @ 20°C)	<3 mm Hg	**Vapor Density: (Air = 1)**	4.84
Specific Gravity: (H_2O =1)	0.860 – 0.875	**Refractive Index: (@ 20°C)**	1.465 – 1.478
Solubility in Water:	Negligible g/100cc	**Evaporation Rate: (Ether = 1)**	<1.0
Percent Volatile by Volume:	99%	**Optical Rotation: (@ 25°C)**	-25° to -31°

10. STABILITY & REACTIVITY DATA

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Burning produces Carbon Monoxide and/or Carbon Dioxide.

Hazardous Polymerization: May occur from contamination with strong acids.

Conditions to Avoid: Reasonably stable when stored in well-ventilated, cool place in suitable containers sealed to exclude air. It can undergo auto oxidation in air and generate heat which can build up in a confined space.

Incompatibilities: Avoid strong oxidizing agents and acids or acidic materials. Do not store in plastic containers. Avoid exposure to sparks, heat and flames.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: None **NTP:** N/A **OSHA:** Flammable Liquid **IARC:** N/A

TOXICOLOGY:

A & B-Pinene: Acute Oral (rat) LD50 = 3700 mg/kg to > 5000 mg/kg

Alpha Pinene: Acute Dermal (rabbit) LD50 = > 5000 mg/kg

Turpentine: Oral (human) LDLo = 500 mg/kg. Inhalational (human) LCLo = 175 ppm (irritant effects). Possibility of Teratogenic Effects exists for pregnant women (AIHA Journal, 1976, 423-26)

12. ECOLOGICAL INFORMATION

Gum Turpentine is a natural product and its individual components are entirely biodegradable within a few days depending on the dilution degree, temperature, air supply and bacteria present.

13. DISPOSAL CONSIDERATIONS

In case of leaks, avoid runoff into storm sewers and ditches which lead to waterways. The EPA and U.S. Department of Transportation has classified Turpentine as a **Marine Pollutant**. See **Section 6** of this MSDS.

14. TRANSPORT INFORMATION

DOT Description:	Flammable Liquid, Turpentine Oil, Class 3, UN1299, PGIII, Marine Pollutant NMFC 91600, CLASS 70
Container Mode:	55-Gal drums or Bulk
Hazardous Substance/RQ:	Ignitable waste/100 lb. (45.4 Kg).
Int'l./Air Freight:	UN 1299 – Terpene Hydrocarbons, Class 3, PG III

15. REGULATORY INFORMATION

Permissible Concentrations References: ACGIH Threshold Limit Values (1988 – 1989). OSHA Standard 29CFR1910.1000 (1989).

This product is listed on the EPA/TSCA Inventory of Chemical Substances.

This product satisfies all the requirements of the European Inventory of Existing Chemical Substances (EINECS).

California Prop 65: To the best of our knowledge, belief and current analytical methods, this product generally does not contain detectable amounts of any chemical known to the State of California to cause cancer or reproductive toxicity which has appeared on the list of such chemicals published by the Governor. However, contaminants in raw materials, incomplete chemical reactions, or other factors, may, from time to time, result in the inclusion in a product detectable amounts of material not generally present in this product.

SARA Hazard Category: According to our interpretation of Section 311 and 312 of the SARA Title III regulations, this product is considered, under applicable definitions, to meet the following categories:

AN IMMEDIATE HEALTH HAZARD

SARA 313: This product contains no substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR Part 372.

16. OTHER INFORMATION

The information contained herein is based on data considered to be accurate and reliable. No warranty is expressed or implied regarding the accuracy or correctness of this data. It is the user's obligation to determine the safe use of the product since conditions of use, handling, storage and disposal are beyond our control.