

MATERIAL SAFETY DATA SHEET

1. PRODUCT INFORMATION

Manufacturer's Name and Address:	Empack Spraytech Inc. 98 Walker drive, Brampton, Ontario, Canada, L6T 4H6 (905) 670 – 8697
Emergency telephone numbers:	EMPACK (8 AM TO 4 PM EST) (905) 792 – 6571 CANUTEC (24 HR) (613) 996 – 6666
Supplier's Name and Address:	Refer to Manufacturer.
Product Name:	SAFE 'N DRY FIRE RETARDANT AND WATER REPELLENT
Synonyms:	Not Applicable
Chemical Family:	Silicones, Hydrocarbons
Molecular Formula:	Proprietary Formulation
Product Use:	Aerosol coating
WHMIS Classification:	B5, D2B
TDG Classification:	AEROSOLS, Class 2.1(6.1), UN1950 <i>Under the Clear Language Regulations: refer to Section 1.17 for Limited Quantity Shipping Information, if shipping under this exemption.</i>

2. HAZARDOUS INGREDIENTS

Hazardous Ingredients	CAS Number	Wt. %	ACGIH TLV (ppm)	OSHA TWA (ppm)	LD/50 (mg/kg)		LC/50 Inhal – Rat, 4 hr
					Oral (Rat, 4hr)	Dermal (Rabbit)	
Heptane	142-82-5	30 - 60	400	500	>15,000	Not Available	103,000 mg/m ³
Perchloro-ethylene	127-18-4	10 - 30	25	100	2600	>3245	3786 ppm
Tris (mono-chloropropyl) phosphate	13674-84-5	7 – 13	Not Available	Not Available	1250	>2000	5000 mg/m ³
Stoddard Solvent	8052-41-3	0.5 -1.5	100	500	>5000	>3000	>5500 mg/m ³
Xylene	1330-20-7	0.1—1	100	100	5400	>1700	6350 ppm
Propane	74-98-6	10 – 30	2500	1000	Not Available	Not Available	Not Available
Isobutane	75-28-5	3 - 7	800 (<i>as Butane</i>)	Not Available	Not Available	Not Available	520,000 ppm (mouse / 2 Hrs)

3. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Volatile liquid, aerosol
Appearance	Mist
Odour	Hydrocarbon odour
Odour Threshold	Not Available
Boiling Point (Liquid)	93 deg. C
Freezing Point (Liquid)	Not Available
Aerosol wt. % Volatile	97 –98
Vapour Density (Air = 1)	> 1
Specific Gravity (Liquid)	0.7
Specific Gravity (Aerosol)	0.65
Vapour Pressure (PSIG)	50 – 60 @ 20 deg. C
Evaporation Rate, n-Butyl Acetate = 1	> 1
pH	Not Applicable
Melting Point	Not Available
Coefficient of Water/Oil Distribution	Not available.
Solubility in Water	Negligible

4. FIRE AND EXPLOSION HAZARD

Flammability:	Extremely Flammable. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time. Vapours are heavier than air and collect in low-lying areas. Vapours can travel to a source of ignition and flash back causing an explosion and fire.
Conditions of Flammability:	Ignition sources, excessive heat, open flame, sparks and electrostatic charge.
Flash Point (TCC deg. C) (CONCENTRATE):	> - 4
Aerosol Flame Projection Classified as:	> 45 cm
Flashback:	Yes
Extinguishing Media:	Carbon Dioxide, dry chemicals, foam, water fog.
Fire Fighting Procedures:	Wear NIOSH approved self-contained breathing

Autoignition Temperature (deg. C):	apparatus or equivalent and full protective gear. Move containers from fire area if it can be done without risk. In case of large fire cool containers with water jet in order to prevent pressure build up, autoignition or explosion. Shield personnel to protect from venting, rupturing or bursting cans.
Flammability Limit in Air (% by volume):	Not Available
	LEL: 1.4
	UEL: 9.5
Hazardous Combustion Products:	Oxides of carbon, phosphorous oxides, hydrogen chloride, chlorine gas and phosgene gas. Emits fumes and smoke.
Rate of Burning:	Not available.
Explosive Power:	Not available.
Sensitivity to Mechanical Impact:	Not available. Not expected to be sensitive to mechanical impact.
Sensitivity to Static Discharge:	Not available. Expected to be sensitive to static discharge when vapours in air are between the lower and upper explosive limits (i.e. 1.4 – 9.5 %).

5. REACTIVITY DATA

Chemical Stability:	Stable under the recommended storage and handling conditions prescribed.
Incompatible Materials:	Strong oxidizing agents, acids, bases.
Conditions of Reactivity:	Avoid sources of heat and flame, and electrostatic charge. High temperatures may cause thermal decomposition
Hazardous Products of Decomposition:	Hydrogen chloride gas, hydrochloric acid, phosgene. Refer to Hazardous Combustion Products, Section 4.
Hazardous Polymerization:	Will not occur.

6. TOXICOLOGICAL PROPERTIES

Route of Entry:	
Skin Contact:	Yes
Skin Absorption:	May be absorbed
Eye Contact:	Yes
Inhalation:	Yes
Ingestion:	Unlikely
Effects of Acute Exposure:	This product is harmful if inhaled or swallowed. Contact with eyes may cause irritation, redness, watering, itching and freezing of the eye. Contact with skin may cause moderate to severe irritation and frostbite. Symptoms may include a burning sensation, redness, blistering, numbness, prickling and itching.

	<p>Ingestion is not a likely route of exposure. If ingested, however, this product may be absorbed and result in CNS depression. Inhalation of vapours causes irritation to the nose, throat and respiratory tract, with coughing, wheezing, dizziness, headache, drowsiness, nausea and vomiting. Inhalation of higher concentrations may result in central nervous system depression and unconsciousness. High vapour concentrations reduce oxygen available for breathing, resulting in asphyxiation.</p>
Effects of chronic exposure:	<p>May cause skin defatting and dermatitis. May cause sweating, muscle twitching, tremor and chest discomfort. Prolonged overexposure may cause liver damage. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.</p>
Carcinogenicity of material:	<p>Contains Perchloroethylene. Perchloroethylene is classified as probably carcinogenic to humans by IARC (Group 2A), and as a confirmed animal carcinogen with unknown human relevance by ACGIH (Group A3).</p>
Reproductive effects:	<p>No information is available and no adverse reproductive effects are anticipated.</p>
Teratogenicity:	<p>Contains Xylene. Xylene may cause fetotoxic effects, based on animal evidence.</p>
Mutagenicity:	<p>No information is available and no adverse Mutagenic effects are anticipated.</p>
Sensitization:	<p>May cause skin sensitization.</p>
Synergistic products:	<p>May increase the effects of exposure to other organic solvents.</p>

7. PREVENTIVE MEASURES

Eye Protection:	<p>Not required on a short-term basis. Use chemical safety goggles or full face shield when there is potential for eye contact.</p>
Skin Protection:	<p>Not normally required. Gloves impervious to the material are recommended. Advice should be sought from glove suppliers.</p>
Respiratory Protection:	<p>Not required on a short term basis or if exhaust ventilation is provided. However, if exposure exceeds occupational limits, wear a NIOSH/MSHA-approved air-purifying respirator equipped with organic vapour cartridges for mists and vapours.</p>
Engineering Controls:	<p>Exhaust ventilation is recommended if used indoors on continuous basis. Required locally, to maintain the point of use below the Threshold Limit Value if unprotected personnel are involved.</p>
Leak/Spill Clean-Up Procedures:	<p>All persons dealing with clean-up should wear the</p>

	appropriate protective equipment. Eliminate all sources of ignition. Provide adequate ventilation. Ventilate enclosed spaces. Do not use combustible materials such as sawdust as an absorbent. Use spark-resistant tools (e.g. aluminum, brass shovel). Collect product for disposal. Notify applicable government authority if release is reportable or could adversely affect the environment.
Containers Disposal:	Don't puncture or incinerate containers, even when empty. Dispose in accordance with local, provincial and federal regulations.
Handling Procedures and Equipment:	Avoid breathing vapours. Avoid contact with eyes, skin and clothing. Wear appropriate protective equipment. Use with adequate ventilation. Use non-sparking tools. Ground all equipment during handling. Avoid all sources of ignition, heat, flames and direct sunlight. Do not smoke while handling this product. Keep containers closed when not in use. Do not cut, puncture or incinerate containers. Keep work area clean.
Storage Instructions:	Store in a cool, dry, well ventilated place away from incompatibles and flammable materials.
Special Shipping Information:	Refer to Section 1, TDG Classification.

8. FIRST AID MEASURES

In case of eye contact, immediately flush eyes with lukewarm running water for a minimum of 15 minutes. Obtain medical attention. For skin, wash thoroughly with soap and lukewarm water. Obtain medical attention. If affected by inhalation of vapour or spray mist, move to fresh air. Obtain medical attention. If swallowed, do not induce vomiting. Obtain medical attention IMMEDIATELY.

9. PREPARATION INFORMATION

Prepared by:	EMPACK
Telephone:	(905) 670 – 8697
Preparation Date:	June 2, 2005
Last Revision:	January 15, 2014

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. **This MSDS is valid for three years.**

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