

SAFETY DATA SHEET (SDS) / PS-1

Section 1 Product / Company Identification

Product Name	PS-1	
Product Description	Hydrocarbon mixture	
Manufacturer & Address	DYNA Metro Inc. 37 Creditstone Road Concord, Ontario L4K 1N3 Canada	
Manufacturer's Phone Number	+1 905.761.3309	
Manufacturer's Facsimile	+1 905.761.2114	
Date Of Issue	June 5, 2018Prepared By	
	Mark Gagro	
Emergency Phone Numbers	Canutech	1-613-996-6666 (Canada)
	Chemtrec	1-800-424-9300 (U.S.)

Section 2 Emergency And First Aid

Emergency Information

Eyes	Rinse the eyes with a gentle stream of water for at least 15 minutes. Consult a physician immediately.
Skin	Remove contaminated clothing. Wash the skin with soap and water. Decontaminate or discard clothing. If irritation occurs, seek medical attention.
Inhalation	Remove from exposure and provide fresh air. If breathing has stopped, administer artificial respiration or oxygen as necessary. Consult a physician immediately.
Ingestion	If swallowed, give several glasses of water and induce vomiting by placing a finger on the back of the victim's tongue. Give fluids until vomit is clear. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention and indicate the possible liberation of methanol.

Section 3 Composition Information

Physical State	Liquid
Colour	Translucent clear and mobile liquid
Odour and Appearance	Sweet \ acetic
Odour Threshold	> .2 - 2.0 ppm
Water Solubility	Negligible
Specific Gravity	.83642
Boiling Point	195° C
Freezing Point	Not applicable
Flash Point	> 40° C (T.C.C.)
Melting Point	Not applicable
Percent Volatile	60 - 90 %
Vapour Density (Air =1)	2.8 @ 20° C
Vapour Pressure (mm Hg)	> 3.0 @ 20° C
Partition Coefficient (K o/w)	No data available
Evaporation Rate	.12 n-butyl acetate=1
Viscosity	Unknown
V.O.C.	< 394 g/L

Section 4 Hazardous Ingredients

Ingredient	CAS #	OSHA PEL	ACGIHTLV-TWA	NOISH REL
Alkanes	64742-88-7	20 - 50 %	100 ppm	LD50 > 8.0 ml/kg oral rat LC50 > 1400 ppm\4hr LD50 > 4.0 ml\gk dermal rabbit
Methanol (hydrolysis by-product)	67-56-1	0 - 10 %		OSHA ACGIH
Ethanol (hydrolysis by-product)	67-17-5	0 - 10 %		ISHA ACGIH
Ethyl silicate monomer and polymer	mixture	0 - 5 %		Not established
Dibutyltin dilaurate	77-58-7	0 - 5 %		Not established
Isooctyltrimethoxysilane	34396-03-07	0 - 10 %		Not established
Silica	112945-52-5	0 - 2 %		10 mg/m ³ TWA (for total dust)
Soloxanes and silicones, di-Me, polymers with Me silsesquioxanes, ethoxy group terminated	68554-66-5	10 - 20 %		Not established
TBAc	540-88-5	20 - 30 %		Oral LD50 (Rat) = 4100 mg/kg Dermal LD50 (Rabbit) > 2 g/kg Inhalation LC50 (Rat) > 2230 mg/m ³ 4 h

Critical Hazards Single overexposure, above recommended guidelines, may cause : central nervous system depression with signs and symptoms such as headache, dizziness, drowsiness, in-coordination, slowed reaction time, slurred speech, giddiness and unconsciousness. Combustible liquid and vapour. Vapours may ignite explosively.

Section 5 Hazardous Identification

Potential Health Effects	Primary Entry Routes	Inhalation, ingestion skin contact.
	Acute Effects	May cause irritation to skin, eyes and respiratory tract. Excessive ingestion may cause GI tract disturbances.
	Chronic Effects	None known
	Medical Conditions Aggravated by Long-Term Exposure	None known.
	Carcinogenicity	NTP No
	OSHA Regulated	No
Eye Contact	Avoid eye contact. Wear vented goggles.	
Skin Contact	Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended : Polyvinyl alcohol and polyethylene / ethylene vinyl alcohol. Avoid butyl rubber, nitrile rubber and neoprene rubbers.	
Inhalation	Avoid breathing of vapours created during the cure cycle. Avoid breathing of vapours, mist or spray. Avoid breathing of airborne material. Select one of the NIOSH approved respirators based on airborne concentration of contaminants : half-mask organic vapour respirator with dust/mist and fume pre-filter ; full-face organic vapour respirator with dust/mist and fume pre-filter.	
Ingestion	Not applicable.	
Recommended Ventilation	Use with appropriate local exhaust ventilation. Use with functioning spray booth or local exhaust. Provide sufficient ventilation to maintain emissions below recommended exposure limits. If exhaust ventilation is not adequate, use appropriate respiratory protection.	
Other Protection	An eyebath and safety shower should be available. All food should be kept in a separate area away from the storage / use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Wash hands and face thoroughly before eating and drinking or smoking to remove any residual material.	

Section 6 Accidental Release Measures

Personal Precautions	Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.
Spill Response	Extinguish all ignition sources. Contain spill. Cover with absorbent material. Collect spilled material. Place in an approved metal container.
Methods of Disposal	Incinerate in a permitted hazardous waste incinerator in the presence of a combustible material.

Section 7 Fire And Explosion

Means of Extinction	Carbon dioxide, dry chemical, foam.	
Exposure Hazards During Fire	Vapours may travel long distances along the ground or floor to an ignition source and flash back.	
Fire Fighting	<p>Firefighters should wear positive pressure, self-contained breathing apparatus. Equipment should be decontaminated after use. Vapours could form an explosive mixture in air.</p> <p>Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.</p>	
Flash Point	> 40° C (T.C.C.)	
Upper Flammable Limit (% by volume)	13.0	
Lower Flammable Limit (% by volume)	1.1	
Explosion Data	Explosive Power	Not available
	Rate of Burning	Not available
Sensitivity To Static	Yes	
Sensitivity to Impact	No	
Auto Ignition Temperature	507° C	
Unusual Fire And Explosion Hazards	This product is considered a combustible liquid under WHMIS criteria and is a fire hazard. It supports combustion and decomposes under fire conditions. Do not pour, spill, use or store near heat, spark sources or open flames. Consider the possible formation of explosive methyl alcohol / air mixture for example in uncleaned containers by moisture.	
Hazardous Combustion Products	Carbon monoxide, carbon dioxide, and toxic gases	

Section 8 Stability And Reactivity Data

Stability And Reactivity	Gradual hydrolysis in water
Hazardous Polymerization	Will not occur
Conditions To Avoid	Heat and any ignition source, open flames.
Incompatibility	Water (moisture)
Hazardous Decomposition	SiO ₂ , CO, CO ₂ , and traces of incompletely burned hydrocarbons upon combustion on hydrolysis, methyl alcohol
Reactivity	Reacts slowly in water.

Section 9 Precautions For Handling And Storage

Storage Requirements	Keep container dry.
Incompatible Materials	Store away from acids or oxidizing agents . Store away from heat. Store out of direct sunlight.
Ventilation	Keep container in well ventilated area.
Fire Prevention	Ground containers securely when transferring contents. Wear low static or properly grounded shoes. No smoking while handling this material. Avoid shock or friction.
Explosion Prevention	Keep away from heat, sparks, open flame, and other sources of ignition. Prevent all sources of ignition. Vapours may ignite explosively.
Static Prevention	Avoid static discharge.
Use Instructions	Keep container tightly closed.

Section 10 Toxicological Information

A material similar to PS-1 was evaluated in October, 1990 and January, 1984 and the findings were as follows :

LD50 - Acute Oral (rats)	5000 mg\kg
LD50 - Acute Dermal (rabbits)	2000 mg\kg
LC50	Not Available
Major Exposure Hazards	Skin contact, inhalation, eye contact, ingestion
Skin Contact	Moderate skin irritation (after prolonged or repeated contact). Signs and symptoms can include redness, swelling, itching and dryness.
Inhalation	Single overexposure, above recommended guidelines, may cause, central nervous depression. Signs and symptoms can include headache, dizziness, drowsiness, in-coordination, slowed reaction time, slurred speech, giddiness and unconsciousness. Irritation of the upper respiratory system could show signs and symptoms of the following : soreness of the nose and throat, coughing and sneezing. Inhalation of vapours may lead to the same symptoms as with ingestion. On prolonged exposure, this product may cause liver and kidney damage.
Eye Contact	Mild eye irritation with signs and symptoms that include redness, swelling, pain and tearing.
Ingestion	Ingestion is not a likely route of exposure to this product. Ingestion may cause aspiration pneumonitis. Signs and symptoms can include coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. Ingestion of methyl alcohol may lead to blindness or death. Symptoms may include, nausea, vomiting, dizziness and giddiness.
Carcinogenicity	This product (or components, if a mixture) is not listed in IARC Monographs, the NTP Annual Report or regulated by OSHA as a carcinogen or potential carcinogen Information.
Mutagenicity	No data available
Reproductive Effects	No data available
Sensitization Information	No data available
Other	This material releases methyl alcohol (methanol) upon hydrolysis. Methyl alcohol causes optic neuropathy and metabolic acidosis. There is little information available on the chronic effects of exposure to methyl alcohol or on the reproductive, teratogenic or mutagenic potential of methyl alcohol. Methyl alcohol is not a carcinogen under WHMIS criteria.

Section 11 Personal Protection / Exposure Control

Respiratory Protection

Wear NIOSH approved respiratory protective equipment when dusts or spray mists from product may be encountered.

Eye Protection

Wear safety glasses with side shields or goggles to avoid contact with the eyes.

Protective Clothing/Equipment

When application is made in a confined area, local exhaust with mist collection. Wear impervious abrasion- and alkali-resistant gloves, boots, long-sleeved shirt, long pants or other protective clothing to prevent skin contact.

Section 12 Disposal Considerations

Product As Sold

No data available

Product Packaging

No data available

Special Instructions

Dispose at a government approved landfill, incineration, or recovery facility. Observe all local, state, and federal regulations.

Section 13 Transportation Data

Transportation of Dangerous Goods TDG classification

Not regulated material

Proper Shipping Name

Resin Solution

Class / Division

3.3

UN Number

UN 1268

Packaging Group

3

International Dangerous Goods Classification:

IMO CLASS

3

Packaging Group

3.3

Class

3

UN Number

1268