



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HP7116 Silicone Polyester
SYNONYMS: Silicone Polyester
PRODUCT CODES: HP7116

MANUFACTURER: HP Polymers Ltd.
ADDRESS: 32 Kerr Cres.
Puslinch, ON N0B 2J0

EMERGENCY PHONE: 519-826-0374 CANUTEC, Canada, (613) 996-6666
FAX PHONE: 519-826-0376 CHEMTREC, USA, (800) 424-9300
CHEMTREC, International (703) 527-3887

PRODUCT USE: Manufacture of coatings, inks and resins

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS Registry No.	Concentration
Resin	Proprietary	40 – 70%
Propylene glycol monomethyl ether acetate	108-65-6	15 – 40%
Butanol	71-36-3	0.5 – 1.5%

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid,

WARNING! COMBUSTIBLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF INHALED OR SWALLOWED.

Potential Health Effects

Exposure routes: Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact: May cause mild eye irritation. Symptoms include stinging, tearing, and redness. Additional symptoms of eye exposure may include: blurred vision.

Skin contact: Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Ingestion: Swallowing this material may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation: Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.. Symptoms are not expected at air concentrations below the recommended exposure limits.

Aggravated Medical Condition: Preexisting disorders of the following organs (or organ systems) may be



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aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions), kidney, auditory system.

Symptoms: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset, (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, effects on memory, respiratory depression (slowing of the breathing rate), shortness of breath, lack of coordination, confusion, irregular heartbeat, coma.

Target Organs: Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, cardiac sensitization, kidney damage, effects on hearing

Carcinogenicity: There is no information available. The chance of this material causing cancer is unknown

Reproductive hazard: This material (or a component) has been shown to cause harm to the fetus in lab animal studies. The relevance of these findings to humans is uncertain.

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

No information available

Treatment

No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Foam, Carbon dioxide (CO₂)

Hazardous combustion products

Carbon dioxide and carbon monoxide, Hydrocarbons

Precautions for fire-fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).



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Flammability Class for Flammable Liquids

Flammable Liquid Class IC

6. ACCIDENTAL RELEASE MEASURES

Personal precautions; For personal protection see section 8. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

Environmental precautions: Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Methods for cleaning up: Absorb liquid on vermiculite, floor absorbent or other absorbent material.

7. HANDLING AND STORAGE

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering or pumping at high flow rates. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. *Warning:* Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Storage: Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines for solvents in this material

<u>Glycol ether PM acetate</u>		108-65-6	
CAD BC OEL	time weighted average	50 ppm	
CAD BC OEL	Short term exposure limit	75 ppm	
CAD ON OEL	time weighted average	20 ppm	
CAD ON OEL	time weighted average	270 mg/m ³	

<u>Butanol</u>		71-36-3	
CAD AB OEL	ceiling limit value	50 ppm	
CAD AB OEL	ceiling limit value	152 mg/m ³	
CAD BC OEL	time weighted average	15 ppm	
CAD BC OEL	ceiling limit value	30 ppm	



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CAD ON OEL	time weighted average	20 ppm	
OEL (QUE)	ceiling limit value	50 ppm	
OEL (QUE)	ceiling limit value	152 mg/m ³	

General advice: These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection: Wear resistant gloves (consult your safety equipment supplier).

Discard gloves that show tears, pinholes, or signs of wear. Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional of your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory protection: A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstance where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Form	Viscous
Colour	Clear
Odour	mild, aromatic
Boiling point/boiling range	117 °C / 244°F
Melting point/range	n. av.
pH	n. ap.
Flash point	> 38°C (100°F)
Evaporation rate	n. av.
Explosion limits (based on solvent)	1.5%(V) – 11.25%(V)
Vapour pressure	n. av.
Vapour density	n. av.
Density	1.06.
Solubility	Slightly soluble in water

10. STABILITY AND REACTIVITY

Stability:

Stable at normal conditions

Conditions to avoid:

Exposure to excessive heat, open flames and sparks.

Avoid conditions that favor the formation of excessive mists and/or fumes.

Incompatibility (MATERIAL TO AVOID): Strong oxidizing agents, reducing agents, caustics and strong bases.



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Hazardous decomposition products: carbon dioxide and carbon monoxide, Hydrocarbons
Hazardous reactions: Product will not undergo hazardous polymerization
Thermal decomposition: n. av.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	LD 50 Rat: 8,532 mg/kg
BUTANOL	LD 50 Rat: 790 mg/kg

Acute inhalation toxicity

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	LC 50 Rat: > 5,344 ppm, 4 h
BUTANOL	n. av.

Acute dermal toxicity

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	LD 50 Rabbit: > 5,000 mg/kg
BUTANOL	LD 50 Rabbit: 3,400 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Acute and Prolonged Toxicity to Fish -No data

Acute Toxicity to Aquatic Invertebrates -No data

Environmental fate and pathways -No data

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: This product may be classified as a liquid industrial waste or registered solid waste and may be subjected to waste generator requirements. Containers of this material maybe hazardous when emptied. Since emptied containers retain product residues, all hazard precautions given in the data sheet must be observed.

RCRA HAZARD CLASS: Characteristic Waste – D001 (Ignitable)

14. TRANSPORT INFORMATION

DOT:

Shipping Name: Resin solution

UN/NA #: UN1866



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Hazard Class: 3
Packing Group: III

TDG:
Shipping Name: Resin solution
UN/NA #: UN1866
Hazard Class: 3
Packing Group: III

Note: Not regulated under Transportation of Dangerous Goods Act when transported by road or rail in packagings or containers of 450 litres or less.

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping, documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

WHMIS Classification B3 Combustible liquid
 D2B Toxic Material Causing Other Toxic Effects

TSCA (Toxic Substances Control Act): All raw materials used in this product are listed on TSCA Inventory.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

	Health	Flammability	Reactivity	Other
HMIS	1	2	0	
NFPA	1	2	0	

16. OTHER INFORMATION

PREPARATION INFORMATION: MSDS prepared by HP Polymers Ltd. Safety Department

DISCLAIMER: The data set forth in these sheets are based on information provided by the suppliers of raw materials and chemicals used in the manufacture of the aforementioned product. HP Polymers Ltd. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereon. HP Polymers Ltd. warrants only that its product conforms to their published specifications, and no other expressed warranty is made with regards thereof. We do not guarantee favorable results, and we assume no liability in connection with the use of these products. They are intended for use by persons having technical skill and knowledge, at their own discretion and risk.