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Material Safety Data Sheet

1. Product and company identification

Product code	: PPT-ST-290
Product name	: ADHESION PROMOTOR
Material uses	: Printing.
Manufactured For	: IPPI Inc. 2284 Speers Road Oakville, Ontario L6L 2X8
In case of emergency	: Canutec (Canada) (613) 268-9017 Chemtrec (USA) 800-424-9300
	: Poison Control Centre (800) 268-9017
Other information	: (905) 825-5600
Date of revision	: 5/19/2013.

2. Hazards identification

Physical state	:	Liquid.
Color	:	Clear.
WHMIS (Classification)	:	Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2B: Material causing other toxic effects (Toxic).
	:	
Emergency overview	:	WARNING !
		CAUSES EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: KIDNEYS, LIVER.
		Do not ingest. Avoid prolonged contact with eyes, skin and clothing. Wash thoroughly after handling.
Routes of entry		Dermal contact. Inhalation.
Potential acute health effects		
Eyes	:	Irritating to eyes.
Skin	:	Harmful in contact with skin.
Inhalation	:	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	:	Harmful if swallowed.
Carcinogenic effects	:	No known significant effects or critical hazards.
Mutagenic effects	:	No known significant effects or critical hazards.
Teratogenicity / Reproductive toxicity	:	No known significant effects or critical hazards.
Medical conditions aggravated by over- exposure	:	Pre-existing skin and digestive disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
See toxicological information	(s	ection 11)

3. Composition/information on ingredients

Hazardous ingredients N-Vinylpyrrolidone <u>CAS number</u> <u>%</u> 88-12-0 > 70

4. First aid me	4. First aid measures				
Eye contact	: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Not applicable.				
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. Not applicable.				
Inhalation	 Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. 				
Ingestion	: Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.				
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing or wear gloves.				

5. Fire-fighting measures

Flammability of the product	:	In a fire or if heated, a pressure increase will occur and the container may burst.
Products of combustion	:	Decomposition products may include the following materials: carbon oxides nitrogen oxides
Extinguishing media		
Suitable	:	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	:	None known.
Special exposure hazards	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Flammability (OSHA criteria)	:	IIIB
Flash point	:	Lowest known value: >93.3°C (200°F) (Closed cup) [Tagliabue.]

6. Accidental release measures

Personal precautions	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling	: Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
	Neterrieshe

Not applicable.

8. Exposure controls/personal protection

N-Vinylpyrrolidone	ACGIH TLV (United States, 1/2007). TWA: 0.05 ppm 8 hour(s).				
Consult local authorities f	or acceptable exposure limits.				
Engineering measures	 If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. 				
Personal protection					
Eyes	 Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. 				
Skin	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.				
Respiratory	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.				
Hands	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.				

Exposure controls/personal protection 8.

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Physical and chemical properties 9.

Physical state	:	Liquid.
Color	:	Clear.
Taste	:	Not available.
Odor	:	Not available.
Odor threshold	:	Not available.
рН	:	Not available.
Boiling/condensation point	:	Lowest known value: 217°C (423°F)
Melting/freezing point	:	Not available.
Flash point	:	Lowest known value: >93.3°C (200°F) (Closed cup) [Tagliabue.]
VOC	:	0%
Auto-ignition temperature	:	Not available.
Flammable limits	:	Not available.
Vapor pressure	:	0.013 kPa (0.1 mm Hg)
Density	:	1.0389 g/cm³ (8.67 lbs/gal)
Solubility	:	Not available.
Viscosity	:	Not available.
Vapor density	:	Highest known value: >1 (Air = 1) (N-Vinylpyrrolidone).
Evaporation rate	:	<1 (N-Vinylpyrrolidone) compared with Butyl acetate.
Molecular weight	:	Not applicable.
Molecular formula	:	Not applicable.
Critical temperature	:	Not available.
lonicity (in water)	:	Not available.
Dispersibility properties	:	Not available.
Physical/chemical properties comments	:	Not available.

10. Stability and reactivity

Stability and reactivity	:	The product is stable.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Will not occur.
Reactivity - Light	:	Not applicable.

11. Toxicological information

Acute toxicity					
Product/ingredient name N-Vinylpyrrolidone		Result LD50 Dermal LD50 Oral	Species Rabbit Rat	Dose 560 mg/kg 1470 mg/kg	Exposure - -
Conclusion/Summary	: No know	n significant effects	or critical hazards	5.	
Chronic toxicity					
Conclusion/Summary	: No know	n significant effects	or critical hazards	i.	
Carcinogenicity					
Conclusion/Summary	: No know	n significant effects	or critical hazards	i.	
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11. Toxicological information

<u>Classification</u>							
Product/ingredient name N-Vinylpyrrolidone		ACGIH A3	IARC 3	EPA -	NIOSH -	NTP -	OSHA -
Mutagenicity							
Conclusion/Summary	: No kno	wn significant	t effects or c	ritical hazard	s.		
Teratogenicity							
Conclusion/Summary	: No kno	wn significant	t effects or c	ritical hazard	s.		
Reproductive toxicity							
Conclusion/Summary	: No kno	wn significant	t effects or c	ritical hazard	s.		
Synergistic products	: Not ava	ailable.					

12. Ecological information

Environmental effects	: No known significant effects or critical hazards.
Aquatic ecotoxicity	
Conclusion/Summary	: Not available.
Biodegradability	
Conclusion/Summary	: Not available.
Octanol/water partition coefficient	: Not available.
Bioconcentration factor	: Not available.
Mobility	: Not available.
Toxicity of the products of biodegradation	: Not available.
Other adverse effects	: No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Refer to protective measures listed in sections 7 and 8. Empty containers or liners may retain some product residues.

14. Transport information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
TDG Classification	UN2810	TOXIC LIQUID, ORGANIC, N.O.S. (CONTAINS:N- VINYL-2- PYRROLIDONE)	6.1	111		-

PG* : Packing group

15. Regulatory information

WHMIS (Classification)

: Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2B: Material causing other toxic effects (Toxic).

CANADA INVENTORY (DSL) : Listed

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Fire hazard		1
Reactivity		0

References	: Not available.
Other special considerations	: Not available.
Version	: 0.02
Notice to reader	

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

VOLATILE COMPONENT INFORMATION

				US EPA Designate
A. Product 1.) 1.0	Density: 389 g/cm³ (8.67 lbs/gal)			=(Dc)s
B. Nonvolat	ile Content:			
1.)	100 Weight percent of nonvolatiles in pro	oduct		=(Wn)s
2.)	100 Volume percent of nonvolatiles in pr	oduct		=(Vn)s
3.)	8.66 Density, lb nonvolatiles/gal nonvolat	iles		=(Dn)s
C. Volatiles	:			
1.)	0 Weight percent of total volatiles in p	roduct		=(Wv)s
2.)	0 Density, lb volatiles/gal volatiles			=(Dv)s
D. Water C	ontent:			
1.)	0 Weight percent of water in product			=(Ww)s
2.)	0 Volume percent of water in product			=(Vw)s
E. Volatile	Drganic Compounds, (VOCs):			
1.)	0 Weight percent of organic volatiles i	n product		=(Wo)s
2.)	0 Volume percent of organic volatiles	in product		=(Vo)s
3.)	0 Density, lb organic volatiles/gal orga	inic volatiles		=(Do)s
4.)	0 Weight percent of VOCs in total vola	atiles		=(Wo)v
5.)	0 Volume percent of VOCs in total vol	atiles		=(Vo)v
F. VOC Co	ntent in Product Expressed in Other Terms:			
1.) a.)	0 lb VOC / gal Product			
1.) b.)	0 grams VOC / liter Product			
2.) a.)	0 lb VOC / gal Product less water & ex	kempt solvent		
2.) b.)	0 grams VOC / liter Product less wate	r & exempt solv	vent	
3.)	0 lb VOC / gal total nonvolatiles			
G. Volatiles	(all VOCs, HAPs, water & ammonia)			
Ingredient		CAS number	% by weight Den	sity (lb/gal)
Hazardous Other VOC	Air Pollutants VOCs (HAPs) s (Non-HAPs)		0	
Water		7732-18-5	0	
Ammonia.		7664-41-7	0	

NOTE: The term Volatile Organic Compounds (VOC) refers only to volatile organic materials as defined by the US EPA and does not include water, ammonia, acetone or other exempt solvents. Unless otherwise stated, the VOC values reported above are based on materials of construction.