Pro Form Products Ltd.
604 McGeachie Drive
Milton, Ontario, L9T 3Y5
Canada
905-878-4990

PRODUCT: PF 946C MOLDING ADHESION PROMOTER

SECTION 01: IDENTIFICATION

Initial supplier identifier.....	Pro Form Products Ltd. 604 McGeachie Drive Milton, Ontario L9T3Y5 Tel (905) 878-4990 Fax (905) 878-1189
Product identifier.....	PF 946C MOLDING ADHESION PROMOTER
Recommended use and restrictions on use ..	Adhesion promoter.
Chemical family.....	Mixture.
NFPA rating.....	Health: 2 Fire: 4 Reactivity: 0.
HMIS.....	H: 2 F:4 R: 0.
24 hour emergency number:.....	For transportation emergencies (in Canada) call CANUTEC 1-888-226-8832 (CAN-UTEC); IN THE UNITED STATES CALL CHEMTREC 1-800-424-9300. ** For medical emergencies contact your local poison control centre **.

SECTION 02: HAZARD IDENTIFICATION

Signal Word.....	DANGER.
Hazard Classification.....	Flammable Liquid 2. Eye Irritation — Category 2A. Specific Target Organ Toxicity — Single Exposure — Category 3. (narcotic effects). Reproductive Toxicity — Category 2. Specific Target Organ Toxicity — Repeated Exposure — Category 2. (Brain). (central nervous system).
Hazard Description.....	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.
Prevention.....	P201 Obtain special instructions before use. P202 Do not handle this product until all safety instructions have been read and understood. P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion proof equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe mist, vapours, or spray. P264 Wash thoroughly after handling. P271 Use only outdoors or in a well ventilated area. P280 Wear protective gloves and eye protection.
Response	P370 + P378 In case of fire - use dry chemical powder, CO2 or foam to extinguish. P303 + P361 + P353 If on skin or in hair: take off all contaminated clothing immediately. Rinse thoroughly with water and use safety shower . P305 + P351 + P338 If in eyes rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing until medical help arrives. P337 + P313 - If eye irritation persists get medical attention. P308 + P313 If exposed or concerned, get medical advice/attention. P304 + P340 - If inhaled remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/doctor if you feel unwell.
Storage.....	P233 Keep container tightly closed. P403 + P235 Store in well ventilated area. Keep cool. P405 Store locked up.
Disposal.....	P501 Dispose all unused, waste or empty containers in accordance with local regulations.
Note	This product mixture has been classified based on its ingredients. 1-5. % of the mixture consists of an ingredient or ingredients of unknown acute toxicity.

SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME AND SYNONYMS	CAS #	WT. %
Acetone	67-64-1	60-100
Toluene	108-88-3	1-5
Isopropyl Alcohol	67-63-0	0.1-1.0

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SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS

<<The actual concentration(s) withheld as a trade secret>> .

SECTION 04: FIRST-AID MEASURES

Eye contact.....	In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes. Obtain medical attention.
Skin contact.....	Immediately remove all contaminated clothing, flush skin with water for at least 15 minutes. Wash clothing before reuse. If irritation persists, seek medical attention. Do not remove clothing if adhered to skin.
Inhalation.....	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, obtain medical attention.
Ingestion.....	If ingestion is suspected, contact physician or poison control center immediately. If spontaneous vomiting occurs have victim lean forward with head down to prevent aspiration of fluid into the lungs. Never give anything by mouth to an unconscious person. Do not induce vomiting.
Most important symptoms and effects, ... whether acute or delayed	Harmful if swallowed, in contact with skin or if inhaled. Causes eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Additional information.....	Treat victims symptomatically. In the event of an incident involving this product ensure that medical authorities are provided a copy of this safety data sheet.

SECTION 05: FIRE-FIGHTING MEASURES

Suitable and unsuitable extinguishing ..... media	"Alcohol" foam, CO2, dry chemical. Water fog. Do not use water in a jet. Water may be ineffective but should be used to keep fire-exposed containers cool.
Specific hazards arising from the ..... hazardous product, such as the nature of any hazardous combustion products	Extremely flammable. Thermal decomposition products are toxic. May include:. Oxides of carbon (CO, CO2). Toxic vapours may be evolved upon exposure to heat or open flame.
Special protective equipment and ..... precautions for fire-fighters	Firefighter should be equipped with self-contained breathing apparatus and full protective clothing to protect against potentially toxic and irritating fumes. Solvent vapours may be heavier than air and may build up and travel along the ground to an ignition source, which may result in a flash back to the source of the vapours. Cool fire-exposed containers with cold water spray. Heat will cause pressure buildup and may cause explosive rupture. Water may be ineffective but should be used to keep fire-exposed containers cool.
Unusual fire / explosion hazards.....	Extremely flammable. Vapours may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapour source. Acetone is a highly flammable liquid. It is easily ignited in the presence of heat, an ignition source such as a naked flame or a spark (including electrostatic discharge). Aqueous solutions of acetone can also ignite. Acetone vapors are heavier than air and can travel a long distance to an ignition source and cause flashback.

SECTION 06: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective ..... equipment and emergency procedures	No action shall be taken involving any personal risk or without suitable training. Isolate area and keep unauthorized people away. Do not walk through spilled material. Wear recommended protective equipment. Ventilate. Open windows and doors to allow air circulation. Dike area to prevent spreading. The use of absorbent socks or spill pillows may be required. Stop leak if safe to do so. Prevent runoff into drains, sewers, and other waterways. Use non-sparking tools and equipment to pick up the spilled material.
Methods and materials for containment and cleaning up	
Leak/spill.....	Ventilate. Eliminate all sources of ignition. Avoid all personal contact. Evacuate all non-essential personnel. Contain the spill. Prevent runoff into drains, sewers, and other waterways. Absorb with an inert dry material and place in an appropriate waste container. Spilled material and water rinses are classified as chemical waste, and must be disposed of in accordance with current local, provincial, state, and federal regulations. Evacuate area and stay upwind. If it is safe to do so, trained personnel should attempt to stop or reduce leak. Large spills should be contained and pumped into salvage drums or other appropriate containers. Full acid resistant suits and self-contained breathing apparatus should be worn during emergency operations. Vapor clouds formed by reaction of the spilled thionyl chloride with atmospheric moisture can be controlled by water fog or water spray. After bulk of material is removed, large quantities of soda ash, lime or a combination of these can be used to soak up and netralize the remaining thionyl chloride. Water should never be directed onto a leaking bulk container. The acid solution produced will cause more corrosive activity to the container than the thionyl chloride and will enlarge the leak. If conditions permit, properly trained personnel should patch or plug the leak to reduce the

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SECTION 06: ACCIDENTAL RELEASE MEASURES

Leak/spill..... volume of spill flow. Leaking thionyl chloride should be diverted into a containment area for removal. Small spills can be handled by absorption with vermiculite or other similar non-reactive absorbents and then reacted with large amounts of dry alkali (sodium bicarbonate, soda ash, sodium carbonate or hydrated lime. Note: sodium hydroxide should not be utilized to neutralize thionyl chloride as the reaction is too violent). Shovel into appropriate container for disposal.

SECTION 07: HANDLING AND STORAGE

Precautions for safe handling..... Keep away from heat, sparks, and open flame. Avoid all skin contact and ventilate adequately, otherwise wear an appropriate breathing apparatus. Always adopt precautionary measures against build-up of static which may arise from appliances, handling and the containers in which product is packed. Ground handling equipment. Avoid breathing vapours or mist. Handle and open container with care. Employees should wash hands and face before eating or drinking.

Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks, and open flames. Store in a cool and dry place, for product integrity. Keep container closed when not in use. Store away from oxidizing and reducing materials. Store away from sunlight.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

INGREDIENTS	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL PEL	OSHA PEL STEL	NIOSH REL
Acetone	250 ppm TLV	500 ppm	1,000 ppm	Not established	250 ppm
	CA ON: 500ppm (TWA); 750ppm (STEL)				
Toluene	20 ppm	Not established	200 ppm	500 ppm 10 minutes	100 ppm / STEL 150 ppm
	CA ON: TWA: 20 ppm				
Isopropyl Alcohol	200 ppm	400 ppm	400 ppm (TWA)	500 ppm	400 ppm
	CA ON: 200 ppm (TWA), 400 ppm (STEL)				

Appropriate engineering controls..... Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits. Local mechanical exhaust ventilation should be used at sources of air contamination, such as open process equipment, or during purging operations, to capture gases and fumes that may be emitted. Standard reference sources regarding industrial ventilation (ie. ACGIH industrial ventilation) should be consulted for guidance about adequate ventilation. Explosion-proof exhaust ventilation.

Personal Protective Equipment

Respiratory/type..... Local exhaust ventilation is recommended. Wear an appropriate, properly fitted respirator when contaminant levels exceed the recommended exposure limits. An air-purifying particulate/organic vapour cartridge respirator is required anytime inhalation of vapour above the exposure limit is possible. Observe OSHA regulations for respirator use (29 CRF1910.134).

Eye/type..... Liquid chemical goggles. Chemical safety goggles and full faceshield if a splash hazard exists.

Gloves/ type..... Wear skin protection equipment. The selection of this equipment depends on the nature of the work to be done.

Clothing/type..... Wear adequate protective clothes.

Footwear/type..... Safety boots per local regulations.

Other/type..... Emergency showers and eye wash stations should be available. Employees should wash their hands and face before eating, drinking, or using tobacco products.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical state..... Liquid.
Colour..... Colourless.
Odour..... Sweet mint-like odour.
Odour threshold (ppm)..... Not available.
pH..... No data.
Melting / Freezing point (deg C)..... Not available.
Initial boiling point / boiling range (deg C). 56°C (133 F).
Flash point (deg C), method..... -15 Tag Closed Cup.
Evaporation rate..... 11.6. (butyl acetate = 1).
Flammability (solids and gases)..... Not applicable. Flammable liquid.
Upper flammable limit (% vol)..... 12.8.
Lower flammable limit (% vol)..... 2.6.
Vapour pressure (mm Hg)..... 184 mm Hg @ 20C.

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SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

Vapour density (air=1).....	2.0.
Relative Density (Specific Gravity).....	0.8.
Pounds / USG.....	6.68.
Solubility.....	Soluble.
Partition coefficient — n-octanol/water.....	Not available.
Auto ignition temperature (deg C).....	Not available.
Decomposition temperature.....	Not available.
Viscosity.....	No data.
% Volatile by volume.....	Not available.
VOC (less water).....	0.35 lb/USG .

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Product is stable; hazardous polymerization will not occur.
Chemical stability.....	Stable at normal temperatures and pressures.
Possibility of hazardous reactions.....	Will not occur under normal temperature and pressure.
Conditions to avoid, including static ..... discharge, shock or vibration	Avoid heat, spark, open flames. Electrostatic discharge can cause a fire and explosion of a mixture of air and acetone vapor when the concentration in air is within explosive limits.
Incompatible materails.....	Strong oxidizing agents. Alkalies.
Hazardous decomposition products.....	Oxides of carbon (CO,CO2). Unidentified organic compounds. No hazardous decomposition products when stored and handled correctly.

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
Acetone	50,100 mg/m3 8 hours, rat	5,800 mg/kg (rat oral)
Toluene	8000ppm rat inhalation 400ppm mouse inhalation 24hr	5,000 mg/kg rat oral; 12,124 mg/kg rabbit dermal
Isopropyl Alcohol	72600 mg/m3, rat (4 hr)	1870 mg/kg (oral, rat). 4059 mg/kg (dermal, rabbit)

Route of exposure.....	Eye contact. Skin contact. Inhalation. Ingestion.
Symptoms related to the physical, chemical and toxicological characteristics	
Effects of acute exposure.....	Causes eye irritation. Can cause tearing, reddening and swelling. May cause temporary corneal damage. Inhalation of higher concentration may result in central nervous system depression and unconsiousness. Inhalation of vapours or mist may cause drowsiness or dizziness. Mild skin irritant.
Effects of chronic exposure.....	Prolonged overexposure may cause central nervous system depression with narcotic effects (headaches, dizziness, unconsciousness). Prolonged or repeated skin contact may cause drying or cracking of skin.
Carcinogenicity of material.....	The components of this product are not listed by IARC, NTP or regulated as a carcinogen by OSHA.
Reproductive effects.....	Acetone has been shown to cause reproductive effects in rats by ingestion and inhalation. Toluene is fetotoxic in rats and mice at maternally toxic levels. Prolonged and repeated exposure of pregnant animals (>1500 ppm) to Toluene have been reported to cause adverse fetal developmental effects.
Sensitizing capability of material.....	None known.
Specific Target Organ Toxicity	Causes damage to organs through prolonged or repeated exposure . Damage to central nervous system. Damage to brain.

SECTION 12: ECOLOGICAL INFORMATION

Environmental.....	No product data. Do not allow to enter waters, waste water or soil.

SECTION 13: DISPOSAL CONSIDERATIONS

Information on safe handling for disposal . and methods of disposal, including any contaminated packaging	Dispose of as an industrial waste in a manner acceptable to good waste management practice and in accordance with applicable local, provincial/State or federal regulations. Empty containers must be handled with care due to product residue.

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SECTION 14: TRANSPORT INFORMATION

TDG Classification	UN1133 - ADHESIVES - Class 3, PG II. Limited Quantity Index: 5 L.
DOT Classification (Road)	UN1133 - ADHESIVES - Class 3 - Packing Group II - Ltd Qty (1 Liters/0.3 Gallons). Refer to 49CRF 172.101 for additional non-bulk packaging requirements.
IATA Classification (Air)	UN1133 - ADHESIVES - Class 3 - PG II. Limited Quantity. Do not ship by air without checking appropriate IATA regulations.
IMDG Classification (Marine)	UN1133 - ADHESIVES - Class 3 - PG II EmS: F-E S-E. Limited Quantity. Check IMDG regulations for limited quantity exemptions.
Marine Pollutant	No.
Proof of Classification	In accordance with Part 2.2.1 of the Transportation of Dangerous Goods Regulations (July 2, 2014) - we certify that classification of this product is correct. .

SECTION 15: REGULATORY INFORMATION

CEPA status	A component of this product is not on the NDSL.
TSCA inventory status	Not all components are listed.
OSHA	This product is considered hazardous under the OSHA Hazard Communication Standard.
SARA Title III	
Section 302 - extremely hazardous substances	None.
Section 311/312 - hazard categories	Immediate health, delayed health, fire hazard.
Section 313	Toluene. Isopropyl alcohol.
EPA hazardous air pollutants (HAPS) 40CFR63	Toluene.
California Proposition 65	*** ! WARNING: This product can expose you to chemicals including [see below], which are known to the State of California to cause birth defects or other reproductive harm. (Toluene). For more information, go to www.P65Warnings.ca.gov.

SECTION 16: OTHER INFORMATION

Prepared by:	REGULATORY AFFAIRS. Trivalent Data Systems Ltd. www.trivalent.com.
Telephone number:	(800) 387-7981.
Disclaimer:	DISCLAIMER: All information appearing herein is based upon data obtained from experience and recognized technical sources. To the best of our knowledge, it is believed to be correct as of the date of issue but we make no representations as to its accuracy or sufficiency and do not suggest or guarantee that any hazards listed herein are the only ones which exist. The hazard information contained herein is offered solely for the consideration of the user, subject to his own investigation and verification of compliance with applicable regulations, including the safe use of the product under every foreseeable condition. The information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.
Date of the latest revision of the safety data sheet	2019-12-17