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

PRODUCT: PF 698C MEDIUM ACTIVATOR FOR PF 697C

SECTION 01: IDENTIFICATION

Product identifier.....	PF 698C MEDIUM ACTIVATOR FOR PF 697C
Other means of identification	
Chemical family.....	Mixture.
Recommended use and restrictions on use ..	Paints. Accelerator and activator.
Initial supplier identifier.....	Pro Form Products Ltd. 604 McGeachie Drive Milton, Ontario L9T3Y5 Tel (905) 878-4990 Fax (905) 878-1189
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 **.
-	
NFPA rating.....	Health: 2 Fire: 4 Reactivity: 1.
HMIS.....	H: 2 F:4 R: 1.

SECTION 02: HAZARD IDENTIFICATION

Hazard Classification.....	Flammable Liquid 2. Skin Irritation — Category 2. Skin Sensitizer — Category 1. Eye Irritation — Category 2A. Acute Toxicity (Inhalation) — Category 4. Specific Target Organ Toxicity — Single Exposure — Category 3. (respiratory system). (narcotic effects).
Signal Word.....	DANGER.
Hazard Description.....	H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness.
Prevention.....	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. P261 Avoid breathing mists, vapours and sprays. P264 Wash thoroughly after handling. P271 Use only outdoors or in a well ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves and eye protection.
Response	P303 + P361 + P353 If on skin or in hair: take off all contaminated clothing immediately. Rinse thoroughly with water and use safety shower . P302 + P352 - If on skin: wash with plenty of water. P362 + P364 - Take off contaminated clothing and wash before reuse. P333 + P313 If skin irritation or rash occurs, get medical advice/attention. 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. 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.

SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME AND SYNONYMS	CAS #	WT. %
Homopolymer of HDI	28182-81-2	30-60
tert-Butyl acetate	540-88-5	15-40
4-Chlorobenzotrifluoride	98-56-6	10-30

PRODUCT: PF 698C MEDIUM ACTIVATOR FOR PF 697C

SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS

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

SECTION 04: FIRST-AID MEASURES

Skin contact.....	Remove all contaminated clothing and immediately wash the exposed areas with copious amounts of water for a minimum of 30 minutes or up to 60 minutes for critical body areas. If irritation persists, seek medical attention.
Eye contact.....	In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes. Obtain medical attention.
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.
Most important symptoms and effects, ... whether acute or delayed	Harmful if swallowed, in contact with skin or if inhaled. Causes severe skin and eye irritation. Can cause skin sensitization. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause respiratory irritation.
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. Do not use water in a jet. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Use cold water spray to cool exposed containers to minimize risk of rupture.
Specific hazards arising from the ..... hazardous product, such as the nature of any hazardous combustion products	Thermal decomposition products are toxic. May include:. Oxides of carbon (CO, CO2). Hydrogen cyanide. Oxides of nitrogen. Dense black smoke. Thermal decomposition may release isocyanate vapors. Under hot acidic conditions:. Isobutylene. Acetic acid.
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.

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. Take precautions against static discharge. Equipment should be grounded.
Methods and materials for containment and cleaning up	
Leak/spill.....	Ventilate. Eliminate all sources of ignition. Evacuate all non-essential personnel. Avoid all personal contact. Contain the spill. Prevent runoff into drains, sewers, and other waterways. Absorb with earth, sand, or another dry inert material. Shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%); or water (90%), concentrated ammonia (3-8%) and detergent (2%). Allow to stand uncovered for 72 hours to let carbon dioxide escape. 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.

SECTION 07: HANDLING AND STORAGE

Precautions for safe handling.....	Keep away from heat, sparks, and open flame. Always adopt precautionary measures against build-up of static which may arise from appliances, handling and the containers in which product is packed. Prevent accumulation of electrostatic charges. Ground handling equipment. Avoid all skin contact and ventilate adequately, otherwise wear an appropriate breathing apparatus. Avoid breathing vapours or mist. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed vapour or spray 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. Keep container closed when not in use. Store away from oxidizing and reducing materials. Store away from sunlight. Avoid contact with moisture. Attacks some types of rubber, plastics and coatings. Do not store above 40 deg c.

PRODUCT: PF 698C MEDIUM ACTIVATOR FOR PF 697C

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

INGREDIENTS	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL PEL	OSHA PEL STEL	NIOSH REL
Homopolymer of HDI	5 mg/m3	Not established	5 mg/m3	Not established	5 mg/m3
tert-Butyl acetate	200 ppm	Not established	200 ppm	Not established	200 ppm
4-Chlorobenzotrifluoride	Not established	Not established	Not established	Not established	Not established

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

Gloves/ type..... Wear skin protection equipment. The selection of skin protection equipment depends on the nature of the work to be performed. The following gloves are recommended :. Butyl rubber. Contact glove supplier for recommendations.

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

Respiratory/type..... Local exhaust ventilation is recommended. Wear an appropriate, properly fitted respirator when contaminant levels exceed the recommended exposure limits.

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.

Medical surveillance..... Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include preemployment and periodic medical examinations with pulmonary function test (FEC, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurring skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical state..... Liquid.
Colour..... Light yellow.
Odour..... Solvent odour.
Odour threshold (ppm)..... Not available.
pH..... Not applicable.
Melting / Freezing point (deg C)..... Not available.
Initial boiling point / boiling range (deg C). Not available.
Flash point (deg C), method..... 4°C. (estimate; lowest flash point ingredient).
Evaporation rate..... Not available.
Flammability (solids and gases)..... Not applicable. Flammable liquid.
Upper flammable limit (% vol)..... 10.5.
Lower flammable limit (% vol)..... 0.9.
Vapour pressure (mm Hg)..... Not available.
Vapour density (air=1)..... Not available.
Relative Density (Specific Gravity)..... 1.053.
Pounds / USG..... 8.79.
Solubility..... Not available.
Partition coefficient — n-octanol/water..... Not available.
Auto ignition temperature (deg C)..... Not available.
Decomposition temperature..... Not available.
Viscosity..... 14 sec. Zahn #2.
VOC..... 0.0.
% Volatile by volume..... 0.0.

SECTION 10: STABILITY AND REACTIVITY

Reactivity ..... Contact with moisture, other materials that react with isocyanates, or temperatures above 177 C, may cause polymerization.

Chemical stability..... Stable at normal temperatures and pressures.

Possibility of hazardous reactions..... Contact with moisture or other materials that react with isocyanates may cause polymerization.

Conditions to avoid, including static ..... discharge, shock or vibration Keep away from heat. Incompatible with strong oxidizers. Water, amines, strong bases, alcohols. Nitrates. Acids. Copper alloys.

Incompatible materails..... Strong oxidizing agents. Amines. Acids. Alkalies. Nitrates. Plastics. Copper alloys. Water.

Hazardous decomposition products..... No hazardous decomposition products when stored and handled correctly. See hazardous combustion products section 5.

PRODUCT: PF 698C MEDIUM ACTIVATOR FOR PF 697C

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
Homopolymer of HDI	390-453 mg/m3 rat 4 hours	> 5,000 mg/kg (rat, oral); > 5,000 mg/kg (rabbit, dermal)
tert-Butyl acetate	>2,230 mg/m3 4 hours rat	4,100 mg/kg (rat, oral); >2,000 mg/kg (rabbit, dermal)
4-Chlorobenzotrifluoride	4479 ppm	>6,800 mg/kg (rat oral); >2,700 mg/kg (rabbit dermal)

Route of exposure..... Eye contact. Skin contact. Inhalation.

Symptoms related to the physical, chemical and toxicological characteristics

Effects of acute exposure..... The aromatic hydrocarbon solvents in this product can be irritating to the eyes, nose and throat. In high concentration, they may cause central nervous system depression and narcosis characterized by nausea, lightheadedness and dizziness from overexposure by inhalation. Can cause moderate skin irritation. Skin irritation signs and symptoms may include a burning sensation, redness, swelling and blisters. May be absorbed through the skin. May cause drying or flaking of the skin. Isocyanate vapour/mists at concentrations above the exposure limits can irritate (burning sensation) the mucous membranes in the respiratory tract. This can cause a runny nose, sore throat, coughing, chest discomfort, difficult breathing and reduced pulmonary functioning. Persons with pre-existing, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV with similar symptoms, as well as asthma attack. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema. Chemical or hypersensitive pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure. Effects are usually reversible.

Inhalation (acute)..... Solvent vapours may be irritating to the eyes, nose and throat, resulting in redness, burning and itching of eyes, dryness of the throat and tightness in the chest. Breathing of high vapour concentrations may cause anesthetic effects and serious health effects. Isocyanate vapour/mists at concentrations above the exposure limits can irritate (burning sensation) the mucous membranes in the respiratory tract. This can cause a runny nose, sore throat, coughing, chest discomfort, difficult breathing and reduced pulmonary functioning.

Effects of chronic exposure..... Breathing high concentrations of vapour may cause anesthetic effects and serious health effects. Prolonged or repeated exposure may result in skin sensitization. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal .

Inhalation (chronic)..... Chronic exposure to organic solvent vapors have been associated with various neurotoxic effects including permanent brain and/or nervous system damage, kidney, liver, blood damage and reproductive effects among women. Symptoms may include nausea, vomiting, abdominal pain, headache, impaired memory, loss of coordination, insomnia and breathing difficulties. Excessive inhalation of vapours can cause respiratory irritation, dizziness, headache, nausea and asphyxiation.

Carcinogenicity of material..... No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC or ACGIH.

Reproductive effects..... No component of this product present at levels greater than or equal to 0.1% .

Sensitizing capability of material..... Isocyanates are known to cause skin and respiratory sensitization in humans. Animal tests have indicated that respiratory sensitization can result from skin contact with diisocyanates.

Specific Target Organ Toxicity ..... May cause drowsiness or dizziness. May cause respiratory irritation.

Acute Toxicity Estimate (ATE)..... ATE mix (oral): . >5000 mg/kg. ATE mix (dermal):. >2800 mg/kg . ATE mix (inhalation):. 791 mg/m3 .

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity..... No product data.

Persistence and degradability..... No product data.

Bioaccumulative potential..... No product data.

Mobility in soil..... No product data.

Other adverse effects..... 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 . This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Empty containers must be handled with care due to product residue.

PRODUCT: PF 698C MEDIUM ACTIVATOR FOR PF 697C

SECTION 14: TRANSPORT INFORMATION

TDG Classification	UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group II - This product meets the Limited Quantity exemption when packaged in containers less than 5 liters.
DOT Classification (Road)	UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group II - Ltd Qty (1 litre). Refer to 49CRF 172.101 for additional non-bulk packaging requirements.
IATA Classification (Air)	UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group II. Limited Quantity. Do not ship by air without checking appropriate IATA regulations.
IMDG Classification (Marine)	UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group 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	On Domestic Substances List (DSL).
TSCA inventory status	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	None above De minimus % limit.
EPA hazardous air pollutants (HAPS) 40CFR63	Hexamethylene diisocyanate.
California Proposition 65	This product does not contain any chemical(s) known to the State of California to cause cancer or reproductive toxicity. 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	2020-09-10