



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

PRODUCT: PF 689C MEDIUM ACTIVATOR FOR PF 688C

SECTION 01: Chemical product and company identification

Manufactured for..... Pro Form Products Ltd.
604 McGeachie Drive
Milton, Ontario L9T3Y5
Tel (905) 878-4990 Fax (905) 878-1189

Product name..... PF 689C MEDIUM ACTIVATOR FOR PF 688C

Recommended use and restrictions on use.. Paints. Accelerator and activator.

Chemical family..... Mixture.

NFPA rating..... Health: 2 Fire: 3 Reactivity: 0.

HMIS..... H: 2 F: 3 R: 0.

24 hour emergency number:..... IN CANADA CALL CANUTEC 1-888-226-8832 (CAN-UTEC); IN THE UNITED STATES
CALL CHEMTREC 1-800-424-9300. .

SECTION 02: Hazards identification



Signal Word..... DANGER.

Hazard Classification..... Flammable Liquid 2. Aspiration Toxicity 1. Skin Sensitizer 1. Eye Irritant 2. Acute Toxicity 4. Respiratory Sensitizer 1. Single Target Organ Toxicity - Single Exposure 3. (respiratory system). Carcinogen 2. Reproductive 2.

Hazard Description..... H225 Highly flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 This product contains ingredients that are suspected of causing cancer. H361 This product contains ingredients that are suspected of damaging fertility or the unborn child.

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. P280 Wear protective gloves and eye protection. P264 Wash thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P261 Avoid breathing mists, vapours and sprays. P271 Use only outdoors or in a well ventilated area. P284 In case of inadequate ventilation wear respiratory 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 . P370 + P378 In case of fire - use dry chemical powder, CO2 or foam to extinguish. P301 + P310 If swallowed IMMEDIATELY CALL A POISON CONTROL CENTRE and follow instructions provided by the centre. P331 Do NOT induce vomiting. P302 + P352 - If on skin: wash with plenty of water. . P333 + P313 If skin irritation or rash occurs, get medical advice/attention. P362 + P364 - Take off contaminated clothing and wash before reuse. 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. P342 + P311 If experiencing respiratory symptoms; call poison center or doctor. P308 + P313 If exposed or concerned, get medical advice/attention. P321 - For specific treatment see section 4 on this SDS.

Storage..... P403 + P235 Store in well ventilated area. Keep cool. P405 Store locked up. P233 Keep container tightly closed.

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.

PRODUCT: PF 689C MEDIUM ACTIVATOR FOR PF 688C**SECTION 03: Composition/Information on Ingredients**

HAZARDOUS INGREDIENTS	CAS #	WT. %
tert-Butyl acetate	540-88-5	25-30
N-Butyl Acetate	123-86-4	15-25
Homopolymer of HDI	28182-81-2	9-15
Homopolymer of IPDI	53880-05-0	9-15
Methyl Isobutyl Ketone	108-10-1	4-8
Ethyl 3-Ethoxypropionate	763-69-9	4-8
n-Amyl acetate	628-63-7	4-8
Solvent Naphtha, Light Aromatics	64742-95-6	1-5
Propylene Glycol Monomethyl Ether Acetate	108-65-6	1-5
Propyl Benzene	103-65-1	1-3
Diisobutyl Ketone	108-83-8	1-3
1,3,5-Trimethylbenzene	108-67-8	1-3
1,2,4-Trimethylbenzene	95-63-6	1-3
Isophorone Diisocyanate	4098-71-9	0.1-1
Xylene	1330-20-7	0.1-1
Cumene	98-82-8	0.1-1

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.....	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.
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. Can cause skin sensitization. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. This product contains ingredients that may cause cancer. This product contains ingredients that are suspected of damaging fertility or the unborn child.
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, CO ₂ , dry chemical. 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. Do not use water in a jet.
Hazardous combustion products.....	Oxides of carbon (CO, CO ₂). Hydrogen cyanide. Oxides of nitrogen. Dense black smoke. Thermal decomposition may release isocyanate vapors.
Special fire fighting procedures.....	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

Leak/spill.....	Ventilate. Eliminate all sources of ignition. Contain the spill. Avoid all personal contact. Evacuate all non-essential personnel. 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%). 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.
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PRODUCT: PF 689C MEDIUM ACTIVATOR FOR PF 688C**SECTION 06: Accidental release measures**

Minor spills..... Absorb isocyanates with sawdust or other absorbent. Decontamination Solution: Mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%), or; water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of decontamination solution per part of isocyanate. Allow to stand in the open air for 7 to 14 days prior to disposal.

Clean up..... Decontaminate floor with decontamination solution, letting stand for at least 15 minutes.

SECTION 07: Handling and storage

Handling procedures..... 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. Ground handling equipment. Avoid all skin contact and ventilate adequately, otherwise wear an appropriate breathing apparatus. Avoid breathing vapours or mist. Handle and open container with care. Employees should wash hands and face before eating or drinking.

Storage needs..... 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.

SECTION 08: Exposure controls / personal protection

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL NIOSH
tert-Butyl acetate	200 ppm	Not established	200 ppm	Not established	200 ppm
N-Butyl Acetate	150 ppm	200 ppm	150 ppm	200 ppm	150 ppm / STEL 200 ppm
Homopolymer of HDI	5 mg/m3	Not established	5 mg/m3	Not established	5 mg/m3
Homopolymer of IPDI	Not established	Not established	Not established	Not established	Not established
Methyl Isobutyl Ketone	50 ppm	75 ppm	100 ppm	Not established	50 ppm / STEL 75 ppm
Ethyl 3-Ethoxypropionate	Not established	Not established	Not established	Not established	Not established
n-Amyl acetate	50 ppm/15 minutes	100 ppm	100 ppm	Not established	100 ppm
Solvent Naphtha, Light Aromatics	Not established	Not established	500 ppm (2000 mg/m3) TWA	Not established	350 mg/m3 TWA
Propylene Glycol Monomethyl Ether Acetate	Not established	Not established	Not established	Not established	Not established
Propyl Benzene	Not established	Not established	Not established	Not established	Not established
Diisobutyl Ketone	25 ppm	Not established	50 ppm	Not established	25 ppm
1,3,5-Trimethylbenzene	Not established	Not established	Not established	Not established	25 ppm
1,2,4-Trimethylbenzene	25 ppm	Not established	Not established	Not established	25 ppm
Isophorone Diisocyanate	0.005 ppm	Not established	Not established	Not established	0.005 ppm skin
Xylene	50 ppm	150 ppm	100 ppm TWA	Not established	Not established
Cumene	50 ppm	Not established	50 ppm TWA	Not established	Not established

Protective equipment

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.

Gloves/ type..... Chemical resistant gloves. Butyl rubber. Nitrile rubber.

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

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

Other/type..... Emergency showers and eye wash stations should be available.

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.

PRODUCT: PF 689C MEDIUM ACTIVATOR FOR PF 688C**SECTION 08: Exposure controls / personal protection**

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

Physical state..... Liquid.
 Colour..... Light yellow.
 Odour..... Solvent odour.
 Odour threshold (ppm)..... Not available.
 Vapour pressure (mm Hg)..... Not available.
 Vapour density (air=1)..... No data.
 pH..... Not applicable.
 Relative Density (Specific Gravity)..... 0.984 - 8.2 lb/USG.
 Melting / Freezing point (deg C)..... No data.
 Solubility..... No data.
 Initial boiling point / boiling range (deg C)..... No data.
 Flash point (deg C), method..... 4.4. (estimated).
 Evaporation rate..... No data.
 Auto ignition temperature (deg C)..... Not available.
 Upper flammable limit (% vol)..... 10.6%.
 Lower flammable limit (% vol)..... 1.0.
 Coefficient of water/oil distribution..... Not available.
 VOC..... 1.86 lb/usg - 222.88 g/L.
 % Volatile by volume..... 56.69.
 Viscosity..... 16.5 sec Zahn # 2 .

SECTION 10: Stability and reactivity

Chemical stability..... Stable at normal temperatures and pressures.
 Reactivity Avoid heat, sparks and flames. Explosive reactions can occur in the presence of strong oxidizing agents. Contact with moisture and other materials will react with isocyanates.
 Possibility of hazardous reactions..... Contact with moisture or other materials that react with isocyanates may cause polymerization.
 Conditions to avoid..... Keep away from heat. Incompatible with strong oxidizers. Water, amines, strong bases, alcohols. Nitrates. Acids. Copper alloys.
 Hazardous decomposition products..... By fire:. Isocyanates. Dense black smoke. Oxides of nitrogen. Oxides of carbon (CO,CO2).

SECTION 11: Toxicological information

INGREDIENTS	LC50	LD50
tert-Butyl acetate	>2,230 mg/m ³ 4 hours rat	4,100 mg/kg rat oral >2,000 mg/kg rabbit dermal
N-Butyl Acetate	>29.2 mg/L 4 hour rat >23.4 mg/L aerosol 4 hour rat	>3200 mg/kg rat oral >5000 mg/kg rabbit dermal
Homopolymer of HDI	390-453 mg/m ³ rat 4 hours	> 5,000 mg/kg rat oral; > 5,000 mg/kg rabbit dermal
Homopolymer of IPDI	Not Available	Not Available
Methyl Isobutyl Ketone	8.2 - 16.4 mg/L 4 hours rat	2080 mg/kg rat oral >16,000 mg/kg rabbit dermal
Ethyl 3-Ethoxypropionate	>998 ppm 6 hours	4,309 mg/kg rat oral 4,080 mg/kg rabbit dermal
n-Amyl acetate	>976 ppm 4 hours rat	6500 mg/kg rat oral 8359 mg/kg rabbit dermal
Solvent Naphtha, Light Aromatics	5.2 mg/L 4 hours, rat 3400 ppm 4 hours, rat	>5,000 mg/kg rat oral >2,000 mg/kg rabbit dermal
Propylene Glycol Monomethyl Ether Acetate	Not Available	8,532 mg/kg (rat oral) >5,000 mg/kg (rabbit dermal)
Propyl Benzene	Not Available	6,040 mg/kg rat oral
Diisobutyl Ketone	>2,300 ppm 4 hours	5,285 mg/kg rat oral >2,000 mg/kg rat dermal

PRODUCT: PF 689C MEDIUM ACTIVATOR FOR PF 688C**SECTION 11: Toxicological information**

INGREDIENTS	LC50	LD50
1,3,5-Trimethylbenzene	Not Available	Not Available
1,2,4-Trimethylbenzene	>2,000 ppm 48 hours rat	3,280 mg/kg rat oral
Isophorone Diisocyanate	123 mg/m3 4 hours rat	>1,000 mg/kg rat oral 1,060 mg/kg rat dermal
Xylene	6350 ppm 4 hours rat	>3523 mg/kg rat oral
Cumene	No Data	50 PPM, SKIN
Route of exposure.....	Eye contact. Skin contact. Inhalation.	
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.	
Effects of chronic exposure.....	Breathing high concentrations of vapour may cause anesthetic effects and serious health effects. Contains an ingredient which caused reproductive effects in rats after repeated application of large amounts to skin. These effects have not been reported in humans. Prolonged or repeated exposure may result in skin sensitization. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal .	
Skin contact.....	Can cause moderate irritation, defatting and dermatitis.	
Skin absorption.....	Chronic skin exposure to solvents may cause effects similar to those identified under chronic inhalation.	
Eye contact.....	Can cause redness, irritation, tissue destruction.	
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.	
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.	
Ingestion.....	Aspiration of material into lungs can cause chemical pneumonitis which can be fatal. May be harmful or fatal if swallowed.	
Carcinogenicity of material.....	Methyl Isobutyl Ketone is possibly carcinogenic to humans (Group 2B). Cumene is listed by IARC in Group 2B as a possible carcinogen. .	
Reproductive effects.....	Methyl isobutyl ketone passes through the placental barrier. High level exposure to Xylene in some animal studies have been reported to cause health effects on the developing embryo/fetus. The relevance of this to humans is not known.	
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.	

SECTION 12: Ecological information

Environmental..... Do not allow to enter waters, waste water or soil.
 Persistence and degradability..... Not available.

SECTION 13: Disposal considerations

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

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 (5 Liters/1.3 Gallons).
 IATA Classification (Air)..... UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group II. Limited Quantity.
 IMDG Classification (Marine)..... UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group II - EmS: F-E S-E. Limited Quantity.
 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. .

PRODUCT: PF 689C MEDIUM ACTIVATOR FOR PF 688C**SECTION 15: Regulatory information**

WHMIS 1988 classification.....	B2, D2A, D2B.
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	Isophorone Diisocyanate.
Section 311/312 - hazard categories.....	Immediate health, delayed health, fire hazard.
Section 313.....	1,2,4-Trimethylbenzene. Cumene. Isophorone Diisocyanate. Methyl Isobutyl Ketone.
EPA hazardous air pollutants (HAPS) 40CFR63	Cumene. Hexamethylene diisocyanate. Methyl Isobutyl Ketone. Xylene.
California Proposition 65.....	*WARNING: This product contains a chemical known to the State of California to cause cancer.

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.
Preparation date:	OCT 10/2017