



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

**PRODUCT: PF 462 MEDIUM ACTIVATOR FOR PF 460**

### SECTION 01: IDENTIFICATION

Product identifier..... PF 462 MEDIUM ACTIVATOR FOR PF 460  
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 \*\*.  
Recommended use and restrictions on .. Accelerator and activator. for industrial use only-keep out of reach of children . This product  
use should not be used for any other purpose other than the ones described in this section.  
Chemical family..... Mixture.  
NFPA rating..... Health: 2 Fire: 3 Reactivity: 0.  
HMIS..... H: 2 F: 3 R: 0.

### SECTION 02: HAZARD IDENTIFICATION



Signal Word..... DANGER.  
Hazard Classification..... Flammable Liquid 2. Eye Irritant 2. Skin Irritation — Category 2. Skin Sensitizer —  
Category 1. Respiratory Sensitizer — Category 1. Specific Target Organ Toxicity —  
Repeated Exposure — Category 2. Specific Target Organ Toxicity — Single Exposure —  
Category 3.  
Hazard Description..... H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H317 May cause an  
allergic skin reaction. H319 Causes serious eye irritation. H334 May cause allergy or  
asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness. H373 May cause damage to the liver and  
kidneys through prolonged or repeated contact.  
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.  
P242 Use only non-sparking tools. P241 Use explosion proof equipment. P243 Take  
precautionary measures against static discharge. P260 Do not breathe mist, vapours, or  
spray. P264 Wash thoroughly after handling. P270 Do not eat drink or smoke while using  
this product. 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. P284 In case of inadequate ventilation wear respiratory protection.  
Response ..... P308 + P311 If exposed or concerned; call a poison center or doctor. P321 - For specific  
treatment see section 4 on this SDS. P303 + P361 + P353 If on skin or in hair: take off all  
contaminated clothing immediately. Rinse thoroughly with water and use safety shower .  
P333 + P313 If skin irritation or rash occurs, 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. 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. P362 + P364 - Take off contaminated clothing and wash before reuse. P370 +  
P378 In case of fire - use dry chemical powder, CO2 or foam to extinguish.  
Storage..... P233 Keep container tightly closed. P403 Store in a well ventilated area. P405 Store  
locked up.  
Disposal..... P501 Dispose all unused, waste or empty containers in accordance with local regulations.

**PRODUCT: PF 462 MEDIUM ACTIVATOR FOR PF 460****SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS**

CHEMICAL NAME AND SYNONYMS	CAS #	WT. %
Homopolymer of HDI	28182-81-2	36-46
Methyl Acetate	79-20-9	47-52
Propylene Glycol Monomethyl Ether Acetate	108-65-6	5-10
n-Butyl Acetate	123-86-4	1-5
Solvent Naphtha, Light Aromatics	64742-95-6	0.5-1.5
Hexamethylene -1,6-Diisocyanate	822-06-0	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.
Additional information.....	Treat victims symptomatically. See sections 2 and 11. Skin: this compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. Respiratory: this compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate. The main hazard from ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. 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 <sub>2</sub> , dry chemical. Do not use water.
Specific hazards arising from the hazardous product, such as the nature of any hazardous combustion products	Oxides of carbon (CO, CO <sub>2</sub> ). Oxides of nitrogen.
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. Heat will cause pressure buildup and may cause explosive rupture.

**SECTION 06: ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	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.
Methods and materials for containment and cleaning up	If temporary control of isocyanate vapour is required, a blanket of protein foam may be placed over spill. Process can generate heat. Cover spill area with suitable absorbent material (e.g., sand, earth, sawdust, vermiculite, Oil-Dri, Kitty Litter, etc.). Saturate absorbent material with neutralizing solution. Recommended portion is ten parts neutralizing solution to one part spilled material. Suggested neutralization solution: 90% water + 5% concentrated ammonia + 5% detergent (dish soap). Add an additional layer of absorbent material. Use shovel to move absorbent material around to ensure that all spilled material comes in contact with the neutralizing solution. Shovel all absorbed material, including absorbent socks or spill pillows, into an appropriate salvage drum. Add further amounts of neutralizing solution. Allow to stand (covered loosely) for 48 to 72 hours, to allow any gases to escape. Decontaminate spill area with decontamination solution. Area can then be washed with soap and water.

**PRODUCT: PF 462 MEDIUM ACTIVATOR FOR PF 460****SECTION 07: HANDLING AND STORAGE**

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

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. Keep away from foodstuffs. Store away from sunlight.

**SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION**

INGREDIENTS	TWA	ACGIH TLV		PEL	OSHA PEL		REL	NIOSH
			STEL			STEL		
Homopolymer of HDI	5 mg/m3 Supplier: 0.5 mg/m3 (TWA)	Not established		5 mg/m3	Not established		5 mg/m3	
Methyl Acetate	200 ppm AB/BC/ON/PQ: 200ppm (TWA), 250ppm (STEL)	250 ppm		200 ppm	250 ppm in some States		200 ppm	
Propylene Glycol Monomethyl Ether Acetate	Not established	Not established		Not established	Not established		Not established	
n-Butyl Acetate	50 ppm CA ON: 50ppm (TWA), 150ppm (STEL)	150 ppm		150 ppm	200 ppm		150 ppm / STEL 200 ppm	
Solvent Naphtha, Light Aromatics	Not established	Not established		500 ppm (2000 mg/m3) TWA	Not established		350 mg/m3 TWA	
Hexamethylene -1,6-Diisocyanate	0.005 ppm	Not established		Not established	Not established		0.005 ppm	
Appropriate engineering controls.....	Local exhaust should be used to maintain levels below the TLV whenever isocyanate is processed, heated or spray applied.							
Eye/type.....	Liquid chemical goggles. Chemical safety goggles and full faceshield if a splash hazard exists.							
Respiratory/type.....	Wear an appropriate, properly fitted respirator when contaminant levels exceed the recommended exposure limits. Use NIOSH approved respirator or equipment. Do not exceed the use limits of the respirator.							
Gloves/ type.....	Chemical resistant gloves.							
Clothing/type.....	Wear adequate protective clothes. Wear long sleeves and trousers to prevent dermal exposure.							
Footwear/type.....	Safety boots per local regulations.							
Other/type.....	Eye wash facility and emergency shower should be in close proximity.							

**SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance/Physical state..... Liquid.

Colour..... Clear.

Odour..... Solvent odour.

Odour threshold (ppm)..... 4.6 ppm.

Vapour pressure (mm Hg)..... Not available.

Vapour density (air=1)..... >1.

pH..... Not applicable.

Relative Density (Specific Gravity)..... 1.017 - 8.49 lb/gal.

Melting / Freezing point (deg C)..... Not available.

Solubility..... Partially in water.

Initial boiling point / boiling range (deg C). 56°C (133 F).

Evaporation rate..... Moderate.

Flammability (solids and gases)..... Flammable liquid.

Flash point (deg C), method..... -15.6°C. (Setaflash Closed Cup).

Auto ignition temperature (deg C)..... 427°C.

Upper flammable limit (% vol)..... 16.0.

Lower flammable limit (% vol)..... 0.9.

Partition coefficient — n-octanol/water..... Not available.

Decomposition temperature..... Not exothermic to initial boiling point.

VOC (less water)..... 122.2 g/L - 1.02 lb/gal Total MIR: 0.29.

**PRODUCT: PF 462 MEDIUM ACTIVATOR FOR PF 460****SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

Viscosity..... 20 sec #2 Zahn.

**SECTION 10: STABILITY AND REACTIVITY**

Reactivity ..... This is a stable material.  
 Chemical stability..... Stable at normal temperatures and pressures.  
 Possibility of hazardous reactions..... Rapid polymerization will occur in the presence of water, amines, alkalis, and alcohol. Avoid skin contact.  
 Conditions to avoid, including static ..... Keep away from heat. Contamination.  
 discharge, shock or vibration  
 Incompatible materials..... Water, amines, strong acids and bases, strong oxidizing agents, alcohol, copper.  
 Hazardous decomposition products..... See hazardous combustion products section 5.

**SECTION 11: TOXICOLOGICAL INFORMATION**

INGREDIENTS	LC50	LD50
Homopolymer of HDI	390-453 mg/m <sup>3</sup> rat 4 hours	> 5,000 mg/kg (rat, oral); > 5,000 mg/kg (rabbit, dermal)
Methyl Acetate	>49 mg/L (4 hr) rat	6482 mg/kg (oral rat); >2,000 mg/kg (dermal rat)
Propylene Glycol Monomethyl Ether Acetate	Not Available	8,532 mg/kg (rat oral) >5,000 mg/kg (rabbit dermal)
n-Butyl Acetate	>33 mg/L vapour, 5.2 mg/L (rat) dust/mist	10760 mg/kg (rat, oral) 14112 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)
Hexamethylene -1,6-Diisocyanate	22 ppm 4 hours rat	738 mg/kg rat oral 593 mg/kg rabbit dermal
Route of exposure.....	Eye contact. Skin contact. Inhalation.	
Effects of acute exposure.....	Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal. Irritating to eyes, skin and respiratory system. Inhalation of high vapour may cause central nervous system effects, dizziness, headache, nausea, or loss of coordination.	
Effects of chronic exposure.....	Chronic exposure to organic solvent vapours 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.	
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.	
Carcinogenicity of material.....	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.	

**SECTION 12: ECOLOGICAL INFORMATION**

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

**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. Dispose of waste in accordance with all applicable federal, provincial/State and local regulations. Industrial incineration is the preferred method. Empty containers retain product residue; observe all precautions for the product. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty containers with electric or gas torch as vapours and gases may be toxic.

**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 49CFR 172.101 for additional non-bulk packaging requirements.  
 IATA Classification (Air)..... UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group II.  
 IMDG Classification (Marine)..... UN1263 - PAINT RELATED MATERIAL - Class 3 - Packing Group II - EmS: F-E S-E.

**PRODUCT: PF 462 MEDIUM ACTIVATOR FOR PF 460****SECTION 14: TRANSPORT INFORMATION**

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).  
 OSHA..... This product is considered hazardous under the OSHA Hazard Communication Standard.  
 SARA Title III  
 Section 302 - extremely hazardous ..... None.  
 substances  
 Section 311/312 - hazard categories..... Immediate health, delayed health, fire hazard.  
 Section 313..... Hexamethylene diisocyanate.  
 EPA hazardous air pollutants (HAPS) ..... Hexamethylene diisocyanate.  
 40CFR63  
 TSCA inventory status..... All components are listed.  
 California Proposition 65..... This product does not contain any chemical(s) known to the State of California to cause cancer or reproductive toxicity.

**SECTION 16: OTHER INFORMATION**

Prepared by: ..... REGULATORY AFFAIRS.  
 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.  
 Review Date:..... 2022-11-30.  
 Date of the latest revision of the safety .. 2016-06-22  
 data sheet