



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

**PRODUCT: PF 457 ULTRA FAST CLEAR ACTIVATOR FOR PF 456**

### SECTION 01: IDENTIFICATION

Product identifier..... PF 457 ULTRA FAST CLEAR ACTIVATOR FOR PF 456  
 Other means of identification  
 Chemical family..... Mixture.  
 Recommended use and restrictions on .. Paints. This product should not be used for any other purpose other than the ones  
 use described in this section.  
 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 \*\*.  
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 NFPA rating..... Health: 2 Fire: 4 Reactivity: 0.  
 HMIS..... H: 2 F: 4 R: 0.

### SECTION 02: HAZARD IDENTIFICATION



Hazard Classification..... Flammable Liquid 2. Skin Sensitizer — Category 1. Eye Irritation — Category 2A. Acute Toxicity (Inhalation) — Category 4. Specific Target Organ Toxicity — Single Exposure — Category 3. (narcotic effects). (respiratory system).  
 Signal Word..... DANGER.  
 Hazard Description..... H225 Highly flammable liquid and vapour. 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 ..... 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 . 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. %
Hexane, 1,6-diisocyanato-, homopolymer	28182-81-2	30-60
tert-Butyl acetate	540-88-5	15-40
Methyl Acetate	79-20-9	7-13

**PRODUCT: PF 457 ULTRA FAST CLEAR ACTIVATOR FOR PF 456****SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS**

Hexamethylene -1,6-Diisocyanate	822-06-0	0.1-1
<<The actual concentration(s) withheld as a trade secret>> .		

**SECTION 04: FIRST-AID MEASURES**

Inhalation.....	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, obtain medical attention.
Ingestion.....	Do not induce vomiting. Wash mouth out with water. 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. Obtain medical attention immediately.
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. Wash clothing before reuse. Obtain medical attention.
Eye contact.....	In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes. Check for and remove any contact lenses, if safe and easy to do so. Obtain medical attention.
Most important symptoms and effects, ..... whether acute or delayed	Harmful if swallowed, in contact with skin or if inhaled. Can cause skin sensitization. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. High vapour concentrations may be irritating to the respiratory tract. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
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. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate.

**SECTION 05: FIRE-FIGHTING MEASURES**

Suitable and unsuitable extinguishing ..... media	Carbon dioxide, dry chemical, foam. Water spray. Do not use water in a jet.
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, CO <sub>2</sub> ). Nitrogen oxides. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. 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. Vapour forms a flammable / explosive mixture with air between upper and lower flammable limits. 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	Extremely flammable liquid. Take precautions against static discharge. Use non-sparking tools and equipment to pick up the spilled material. 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.
Methods and materials for containment and cleaning up Leak/spill.....	Isolate area and keep unauthorized people away. Do not walk through spilled material. Eliminate all sources of ignition. Wear proper protective equipment. Ventilate area to remove the remaining vapours. Absorb with an inert dry material and place in an appropriate waste container. Allow to stand uncovered for 72 hours to let carbon dioxide escape. Decontaminate the spill surface area using a neutralization solution. 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.....	Extremely flammable. Containers must be grounded and bonded. Do not use near sources of ignition, open flames or sparks. Do not cut, drill, weld or grind on or near the container. Open containers slowly to allow for any pressure build-up to escape. Keep containers closed when not in use. Avoid skin and eye contact. Avoid breathing vapours or mist.
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**PRODUCT: PF 457 ULTRA FAST CLEAR ACTIVATOR FOR PF 456****SECTION 07: HANDLING AND STORAGE**

Precautions for safe handling..... Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed vapour or spray mist. 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, dry and well ventilated area. Store away from oxidizing and reducing materials. Avoid: Water, Amines, Strong bases, Alcohols, Copper alloys. Attacks some types of rubber, plastics and coatings.

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

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL NIOSH
Hexane, 1,6-diisocyanato- homopolymer	Not Established	Not Established	Not Established	Not Established	Not Established
tert-Butyl acetate	Supplier OEL: 0.5mg/m3 (TWA) 200 ppm	Not established	200 ppm	Not established	200 ppm
Methyl Acetate	200 ppm	250 ppm	200 ppm	250 ppm in some States	200 ppm
Hexamethylene -1,6-Diisocyanate	0.005 ppm	Not established	Not established	Not established	0.005 ppm
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.				
Respiratory/type.....	Local exhaust ventilation is recommended. Use NIOSH approved respirator or equipment. Do not exceed the use limits of the respirator. Use a respirator that is recommended or approved for use in isocyanate-containing environments. Whenever concentrations of isocyanates exceed the exposure limit or are not known, respiratory protection must be worn.				
Eye/type.....	Chemical safety goggles. Chemical safety goggles and full faceshield if a splash hazard exists.				
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. Nitrile rubber. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Contact glove supplier for recommendations.				
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. 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..... Clear, colourless.

Odour..... Characteristic odour. Camphor-like.

Odour threshold (ppm)..... Not available.

pH..... Not applicable.

Melting / Freezing point (deg C)..... < -30°C.

Initial boiling point / boiling range (deg C)..... >55 °C.

Flash point (deg C), method..... -15.6°C. (estimate; lowest flash point ingredient).

Evaporation rate..... 1.0.

Flammability (solids and gases)..... Not applicable. Flammable liquid.

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

**PRODUCT: PF 457 ULTRA FAST CLEAR ACTIVATOR FOR PF 456****SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

Lower flammable limit (% vol).....	1.0.
Vapour pressure (mm Hg).....	< . 179.5 mmHg @ 20°C.
Vapour density (air=1).....	Not available.
Relative Density (Specific Gravity).....	1.029.
Pounds / USG.....	8.59.
Solubility.....	Contains an ingredient that reacts with water.
Partition coefficient — n-octanol/water.....	Not available.
Decomposition temperature.....	Not available.
Auto ignition temperature (deg C).....	445°C.
Viscosity.....	15 sec Zahn #2.
% Volatile by volume.....	0.0.
VOC (less water).....	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.....	Will not occur under normal temperature and pressure. Contact with moisture, other materials that react with isocyanates, or temperatures above 177C, may cause polymerization.
Conditions to avoid, including static discharge, shock or vibration .....	Avoid heat, spark, open flames. Keep away from freezing temperatures.
Incompatible materials.....	Water, Amines, Strong bases, Alcohols, Copper alloys. Strong oxidizing agents. Acids. Nitrates. Plastics.
Hazardous decomposition products.....	Hazardous decomposition products depend on temperature, air supply, and the presence of other materials. See hazardous combustion products section 5.

**SECTION 11: TOXICOLOGICAL INFORMATION**

INGREDIENTS	LC50	LD50
Hexane, 1,6-diisocyanato-, homopolymer	4.63 mg/L rat 4 hours	>5,000 mg/kg oral rat >5,000 mg/kg dermal rabbit
tert-Butyl acetate	>2,230 mg/m <sup>3</sup> 4 hours rat	4,100 mg/kg (rat, oral); >2,000 mg/kg (rabbit, dermal)
Methyl Acetate	>49 mg/L (4 hr) rat	6482 mg/kg (oral rat); >2,000 mg/kg (dermal rat)
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.	
Symptoms related to the physical, chemical and toxicological characteristics		
Effects of acute exposure.....	Hazardous in contact with skin, by ingestion, and by inhalation. Breathing this material may be harmful. Irritating to mucous membranes and upper respiratory tract. Excessive inhalation of this product may cause dizziness. Causes skin irritation. Causes serious eye irritation. 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.....	Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.	
Carcinogenicity of material.....	The components of this product are not listed by IARC, NTP or regulated as a carcinogen by OSHA.	
Reproductive effects.....	No known reproductive effects.	
Sensitizing capability of material.....	May cause sensitization by skin contact. 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.	

**SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicity.....	Product data not available.
Persistence and degradability.....	Product data not available.
Bioaccumulative potential.....	Product data not available.
Mobility in soil.....	Product data not available.
Other adverse effects.....	Do not allow to enter waters, waste water or soil.

**PRODUCT: PF 457 ULTRA FAST CLEAR ACTIVATOR FOR PF 456****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. Do not heat or cut empty containers with electric or gas torch.

**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. 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..... Potential marine pollutant.  
 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 ..... 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  
 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](http://www.P65Warnings.ca.gov).

**SECTION 16: OTHER INFORMATION**

Prepared by: ..... REGULATORY AFFAIRS. Trivalent Data Systems Ltd. [www.trivalent.com](http://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.  
 Review Date:..... 2022-11-30.  
 Date of the latest revision of the safety .. 2021-01-14  
 data sheet