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**PRODUCT: PF 12304 MEDIUM HARDENER FOR UNIVERSAL EURO 2:1**

### SECTION 01: IDENTIFICATION

Initial supplier identifier..... Wyatt Machine Tools (Rupes) NZ Limited  
388 Church Street, Penrose  
Auckland, New Zealand  
PH: (09) 525 1000  
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Product identifier..... PF 12304 MEDIUM HARDENER FOR UNIVERSAL EURO 2:1

Recommended use and restrictions on .. Clearcoat.  
use

Chemical family..... Aliphatic polyisocyanate. Solvent blend.

NFPA rating..... Health: 2 Fire: 3 Reactivity: 1.

HMIS..... H: 2 F: 3 R: 1.

24 hour emergency number..... NZ Emergency 0800 992 881 (0800WYATT1).

### SECTION 02: HAZARD IDENTIFICATION



Signal Word..... DANGER.

Hazard Classification..... Flammable Liquid 2. Aspiration Toxicity 1. Skin Irritation — Category 2. Skin Sensitizer 1. Eye Irritant 2. Acute Toxicity 4. Specific Target Organ Toxicity — Single Exposure — Category 3. (respiratory system). (narcotic effects). Carcinogenicity — Category 2. Reproductive Toxicity — Category 2.

Hazard Description..... H225 Highly flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. 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. H351 This product contains ingredients that are suspected of causing cancer. H361 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. P261 Avoid breathing mists, vapours and sprays. P271 Use only outdoors or in a well ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace.

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. 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. P301 + P310 If swallowed IMMEDIATELY CALL A POISON CONTROL CENTRE and follow instructions provided by the centre. P331 Do NOT induce vomiting. P304 + P340 - If inhaled remove person to fresh air and keep comfortable for breathing. 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 12304 MEDIUM HARDENER FOR UNIVERSAL EURO 2:1****SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS**

CHEMICAL NAME AND SYNONYMS	CAS #	WT. %
4-Chlorobenzotrifluoride	98-56-6	20-30
Xylene	1330-20-7	15-20
n-Butyl Acetate	123-86-4	15-20
Homopolymer of HDI	28182-81-2	5-15
Homopolymer of IPDI	53880-05-0	5-10
n-Amyl acetate	628-63-7	1-5
Ethyl 3-Ethoxypropionate	763-69-9	1-5
Methyl Isobutyl Ketone	108-10-1	1-5
2-Butoxyethyl Acetate	112-07-2	1-3
Propylene Glycol Monomethyl Ether Acetate	108-65-6	1-3
Solvent Naphtha, Light Aromatics	64742-95-6	1-3
Diisobutyl Ketone	108-83-8	<2
1,2,4-Trimethylbenzene	95-63-6	<2
1,3,5-Trimethylbenzene	108-67-8	<2
Cumene	98-82-8	<0.5
Isophorone Diisocyanate	4098-71-9	<0.2

**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. Check for and remove any contact lenses, if safe and easy to do so. Consult a physician if irritation continues.
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.
Inhalation.....	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, obtain medical attention.
Ingestion.....	Rinse mouth with water. Give 1 to 2 glasses of water to drink. Do not induce vomiting. 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. The main hazard from ingestion is aspiration of the liquid into the lungs.
Most important symptoms and effects, ..... whether acute or delayed	Harmful if swallowed, in contact with skin or if inhaled. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with eyes may cause temporary irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Additional information.....	Treat victims symptomatically. Eye: stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapours have produced reversible corneal epithelial edema impairing vision. 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. Ingestion: treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound. In all cases, if irritation persists seek medical attention. 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	Dry chemical. Carbon dioxide. Foam. In cases of larger fires, water spray should be used. Do not use water in a jet.
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. Hydrogen cyanide. Isocyanates. Isocyanic acid. Dense black smoke. Other potentially toxic fumes.
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.

**PRODUCT: PF 12304 MEDIUM HARDENER FOR UNIVERSAL EURO 2:1****SECTION 06: ACCIDENTAL RELEASE MEASURES**

Leak/spill.....	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.
Major spills.....	If temporary control of isocyanate vapour is required, a blanket of protein foam may be placed over spill. If transportation spill occurs in United States, call Chemtrec 1-800-424-9300. If transportation spill occurs in Canada, call Canutec at (613) 996-6666. Large quantities may be pumped into closed, but not sealed, containers for disposal.
Minor spills.....	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.
Clean up.....	Decontaminate spill area with decontamination solution. Area can then be washed with soap and water.

**SECTION 07: HANDLING AND STORAGE**

Precautions for safe handling.....	Avoid skin and eye contact. Avoid breathing vapours or mist. Use adequate ventilation. Wear respiratory protection if material is heated, sprayed, used in confined space, or if exposure limit is exceeded. 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. Keep container closed when not in use. Handle and open container with care. Do not reseal if contamination is suspected. Employees should wash hands and face before eating or drinking.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry and well ventilated area. Keep away from heat, sparks, and open flames. Store in tightly closed containers to prevent moisture contamination.

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

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL	NIOSH
4-Chlorobenzotrifluoride	Not established	Not established	Not established	Not established	Not established	Not established
Xylene	50 ppm	150 ppm	100 ppm TWA	Not established	Not established	Not established
n-Butyl Acetate	50 ppm	150 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	Not established
n-Amyl acetate	50 ppm/15 minutes	100 ppm	100 ppm	Not established	100 ppm	
Ethyl 3-Ethoxypropionate	Not established	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	
2-Butoxyethyl Acetate	20 ppm TLV	Not established	Not established	Not established	5 ppm	
Propylene Glycol Monomethyl Ether Acetate	Not established	Not established	Not established	Not established	Not established	Not established
Solvent Naphtha, Light Aromatics	Not established	Not established	500 ppm (2000 mg/m3) TWA	Not established	350 mg/m3 TWA	
Diisobutyl Ketone	25 ppm	Not established	50 ppm	Not established	25 ppm	
1,2,4-Trimethylbenzene	25 ppm	Not established	Not established	Not established	25 ppm	
1,3,5-Trimethylbenzene	Not established	Not established	Not established	Not established	25 ppm	
Cumene	50 ppm	Not established	50 ppm TWA	Not established	Not established	Not established
Isophorone Diisocyanate	0.005 ppm	Not established	Not established	Not established	0.005 ppm skin	
Personal Protective Equipment						

**PRODUCT: PF 12304 MEDIUM HARDENER FOR UNIVERSAL EURO 2:1****SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION**

Eye/type.....	Chemical safety goggles. Chemical safety goggles and full faceshield if a splash hazard exists. Contact lenses should not be worn when working with this chemical.
Respiratory/type.....	Whenever concentrations of isocyanates exceed the exposure limit or are not known, respiratory protection must be worn. Be sure to use NIOSH approved respirator or equipment. Do not exceed the use limits of the respirator. The use of a positive pressure air supplied respirator is mandatory when airborne concentrations are not known or airborne solvent levels are 10 times the appropriate exposure limit or spraying is performed in a confined space or with limited ventilation.
Gloves/ type.....	Chemical resistant gloves. Butyl rubber. Neoprene. Nitrile rubber. Practice good hygiene, wash thoroughly before handling any food.
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.
Appropriate engineering controls.....	Ventilate adequately. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. Avoid breathing mists; if general ventilation or local exhaust is inadequate, persons exposed to mists should wear approved breathing devices.
Monitoring.....	Exposure levels must be monitored by accepted monitoring techniques to ensure that the TLV is not exceeded.
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. Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent 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 to pale yellow.
Odour.....	Characteristic odour.
Odour threshold (ppm).....	Not available.
pH.....	No data.
Melting / Freezing point (deg C).....	Not available.
Initial boiling point / boiling range (deg C).....	No data.
Flash point (deg C), method.....	12 C. (estimated).
Evaporation rate.....	Not available.
Upper flammable limit (% vol).....	10.6.
Lower flammable limit (% vol).....	0.9.
Vapour pressure (mm Hg).....	Not available.
Vapour density (air=1).....	No data.
Relative Density (Specific Gravity).....	8.74 lbs/USG; 1.048.
Solubility.....	Reacts slowly with water to liberate CO2 gas.
Partition coefficient — n-octanol/water.....	Not available.
Auto ignition temperature (deg C).....	No data.
Decomposition temperature.....	Not available.
Viscosity.....	13.5 sec Zahn #2.
VOC.....	3.54 lbs/USG; 424.2 g/L.
% Volatile by volume.....	68.22.

**SECTION 10: STABILITY AND REACTIVITY**

Chemical stability.....	Stable at normal temperatures and pressures.
Reactivity .....	Avoid heat, sparks and flames. Contact with moisture and other materials will react with isocyanates.
Possibility of hazardous reactions.....	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 .....	Water, amines, strong bases, alcohols. Copper alloys.
Hazardous decomposition products.....	See hazardous combustion products section 5.

**PRODUCT: PF 12304 MEDIUM HARDENER FOR UNIVERSAL EURO 2:1****SECTION 11: TOXICOLOGICAL INFORMATION**

INGREDIENTS	LC50	LD50
4-Chlorobenzotrifluoride	4479 ppm	>6,800 mg/kg rat oral; >2,700 mg/kg rabbit dermal
Xylene	6350 ppm 4 hours rat	>3523 mg/kg rat oral
n-Butyl Acetate	390 ppm (4 hr.)	10768 mg/kg (rat oral) 17600 mg/kg (rabbit dermal)
Homopolymer of HDI	390-453 mg/m3 rat 4 hours	> 5,000 mg/kg rat oral; > 5,000 mg/kg rabbit dermal
Homopolymer of IPDI	Not Available	Not Available
n-Amyl acetate	>976 ppm 4 hours rat	6500 mg/kg rat oral 8359 mg/kg rabbit dermal
Ethyl 3-Ethoxypropionate	>998 ppm 6 hours	4,309 mg/kg rat oral 4,080 mg/kg rabbit dermal
Methyl Isobutyl Ketone	8.2 - 16.4 mg/L 4 hours rat	2080 mg/kg rat oral >16,000 mg/kg rabbit dermal
2-Butoxyethyl Acetate	> 450 ppm rat 6h	1,600 mg/kg rat oral 1,480 mg/kg rabbit dermal
Propylene Glycol Monomethyl Ether Acetate	Not Available	8,532 mg/kg (rat oral) >5,000 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
Diisobutyl Ketone	>2,300 ppm 4 hours	5,285 mg/kg rat oral >2,000 mg/kg rat dermal
1,2,4-Trimethylbenzene	>2,000 ppm 48 hours rat	3,280 mg/kg rat oral
1,3,5-Trimethylbenzene	Not Available	Not Available
Cumene	No Data	50 PPM, SKIN
Isophorone Diisocyanate	123 mg/m3 4 hours rat	>1,000 mg/kg rat oral 1,060 mg/kg rat dermal

Route of exposure.....	Eye contact. Skin contact. Inhalation. Skin absorption.
Effects of acute exposure.....	Hazardous in contact with skin, by ingestion, and by inhalation. Irritating to eyes, skin and respiratory system. May be harmful if absorbed through the skin. Can result in irritation in the digestive tract. Aspiration of liquid into lungs can cause chemical pneumonitis. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Breathing of high vapour concentrations may cause anesthetic effects and serious health effects.
Effects of chronic exposure.....	Reports have associated repeated or prolonged overexposure to solvents with permanent brain and nervous system damage. Prolonged vapour contact may cause conjunctivitis. Prolonged or repeated exposure may cause lung damage, including a decrease in lung function. As a result of previous repeated overexposure or a single large dose, certain individuals develop sensitization which will cause them to react to a later exposure to product at levels well below the exposure limit. Sensitization can be permanent. There is some evidence to suggest that long-term exposure to Toluene may affect hearing.
Skin absorption.....	May be harmful if absorbed through the skin.
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.....	Methyl Isobutyl Ketone is possibly carcinogenic to humans (IARC Group 2B). Cumene is listed by IARC in Group 2B as a possible carcinogen. Solvent Naphtha is classified as a possible carcinogen.
Reproductive effects.....	Xylene has been classified by The Commission on Health and Safety as causing reproductive effects. Methyl isobutyl ketone passes through the placental barrier.
Mutagenicity.....	Solvent Naphtha is classified as a possible mutagen.

**SECTION 12: ECOLOGICAL INFORMATION**

Environmental..... Do not allow to enter waters, waste water or soil.

**PRODUCT: PF 12304 MEDIUM HARDENER FOR UNIVERSAL EURO 2:1****SECTION 13: DISPOSAL CONSIDERATIONS**

Information on safe handling for disposal and methods of disposal, including any contaminated packaging . 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. 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.  
 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 ..... Isophorone Diisocyanate.  
 Section 311/312 - hazard categories..... Immediate health, delayed health, fire hazard.  
 Section 313..... 1,2,4-Trimethylbenzene. Methyl Isobutyl Ketone. Xylene.  
 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 birth defects or other reproductive harm. \*WARNING: This product contains a chemical known to the State of California to cause cancer.  
 (NZ) Statement..... This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017.  
 (NZ) HSNO Classifications..... 3.1B. 6.1A. 6.3A. 6.5B. 6.4A. 6.1D. 6.1E. 6.9A.  
 (NZ) HSNO Group Standard..... Surface Coatings/Colourants - Flammable toxic 6.7A HSR002669.

**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 .. 2019-11-12