Plastique Royal
2809 Rue Etienne Lenoir
Laval; H7R 6J4
QC

PRODUCT: FUS2614LV HARDENER

Section 01: Chemical product and company identification

Product name	FUS2614LV HARDENER
Manufactured for	Plastique Royal Inc., 2809 Rue Etienne-Lenoir Laval, QC H7R 6J4
24 hour emergency number:	IN CANADA CALL CANUTEC (613) 996-6666-IN THE UNITED STATES CALL CHEMTREC (800) 424-9300.
Material use	Paints. Accelerator and activator.
Chemical family	Mixture.
Preparation date	December 30, 2014.
Hazard rate	
NFPA rating	Health: 2 Fire: 3 Reactivity: 0.
HMIS	H: 2* F: 3 R: 0.

Section 02: Hazards identification

Signal Word	DANGER.
Hazard Classification	Flammable Liquid 2. Skin Irritant 2. Skin Sensitizer 1. Eye Irritant 2. Respiratory Sensitizer 1. STOT SE 3. Mutagen 2. Carcinogen 2. Reproductive 2. STOT RE 2.
Hazard Description	H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H320 Causes 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. H341 Suspected of causing genetic defects. 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. H373 May cause damage to the liver and kidneys through prolonged or repeated contact.
Precautionary Statements	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. P211 Do not spray on an open flame or other ignition sources. P233 Keep container tightly closed. P235 Keep cool. 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. P251 Do not pierce or burn container, even after use. P261 Avoid breathing mists, vapours and sprays. 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. P273 Avoid release to the environment. P280 Wear protective gloves and eye protection. P284 In case of inadequate ventilation wear respiratory protection.
Response	P301 + P310 If swallowed IMMEDIATELY CALL A POISON CONTROL CENTRE and follow instructions provided by the centre. P303 + P361 + P353 If on skin or in hair: take off all contaminated clothing immediately. Rinse thoroughly with water and use safety shower . P308 + P313 If exposed or concerned, get medical advice/attention. P304 + P312 If inhaled call a poison control centre or doctor; remove person to fresh air and follow instructions from the poison control centre. 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. P370 + P378 In case of fire - use dry chemical powder, CO2 or 6% foam.
Storage	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.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS #	Wt. %
HOMOPOLYMER OF HDI	28182-81-2	10-30
HOMOPOLYMER OF IPDI	53880-05-0	10-30
ACETIC ACID, TERT-BUTYL ESTER	540-88-5	10-30
N-BUTYL ACETATE	123-86-4	10-30
ETHYL 3-ETHOXYPROPIONATE	763-69-9	7-13
METHYL ISOBUTYL KETONE	108-10-1	7-13

PRODUCT: FUS2614LV HARDENER

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

N-AMYL ACETATE	628-63-7	7-13
SOLVENT NAPHTHA, LIGHT AROMATICS	64742-95-6	3-7
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	3-7
DIISOBUTYL KETONE	108-83-8	1-5
PROPYL BENZENE	103-65-1	1-5
1,2,4-TRIMETHYLBENZENE	95-63-6	1-5
ISOPHORONE DIISOCYANATE	4098-71-9	0.1-1.0
ETHYLBENZENE	100-41-4	0.1-1.0

Section 04: First aid measures

Eye contact..... Check for and remove any contact lenses. In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes. 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.

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

Extinguishing media..... Dry chemical. Carbon dioxide. Foam. In cases of larger fires, water spray should be used.

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. During a fire, isocyanate vapours and other irritating, highly toxic gases may be generated by thermal decomposition or combustion.

Hazardous combustion products..... Oxides of carbon (CO, CO2). Oxides of nitrogen. Hydrogen cyanide. Isocyanates. Isocyanic acid. Dense black smoke. Other potentially toxic fumes.

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.

PRODUCT: FUS2614LV HARDENER

Section 06: Accidental release measures

Clean up..... Decontaminate spill area with decontamination solution. Area can then be washed with soap and water.

Section 07: Handling and storage

Handling procedures..... 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.

Storage needs..... 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

Protective equipment

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. 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. Be sure to use NIOSH approved respirator or equipment. Do not exceed the use limits of the respirator.

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.

Ventilation requirements..... 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.

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. These should include preemployment and periodic medical examinations with pulmonary function test (fev, fvc as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrant 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.

Monitoring..... Exposure levels must be monitored by accepted monitoring techniques to ensure that the TLV is not exceeded.

Exposure limits

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
HOMOPOLYMER OF IPDI	Not established	Not established	Not established	Not established	Not established
ACETIC ACID, TERT-BUTYL ESTER	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
ETHYL 3-ETHOXYPROPIONATE	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
N-AMYL ACETATE	50 ppm/15 minutes	100 ppm	100 ppm	Not established	100 ppm
SOLVENT NAPHTHA, LIGHT AROMATICS	Not established	Not established	Not established	Not established	Not established

PRODUCT: FUS2614LV HARDENER

Section 08: Exposure controls / personal protection

Ingredients	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL PEL	OSHA PEL STEL	NIOSH REL
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	Not established	Not established	Not established	Not established	Not established
DIISOBUTYL KETONE	25 ppm	Not established	50 ppm	Not established	25 ppm
PROPYL BENZENE	Not established	Not established	Not established	Not established	Not established
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
ETHYLBENZENE	100 ppm	125 ppm	100 ppm	No data	100 ppm / STEL 125 ppm

Section 09: Physical and chemical properties

Physical state	Liquid.
Colour	Light yellow.
Odour	Characteristic odour.
Odour threshold (ppm)	No data.
Vapour pressure (mm Hg)	No data.
Vapour density (air=1)	No data.
pH	No data.
Specific gravity	8.655 lb/USG - 1.03.
Freezing point (deg C)	No data.
Solubility	Reacts slowly with water to liberate CO2 gas.
Boiling point (deg C)	98 °C (208 °F).
Evaporation rate	No data.
Flash point (deg C), method	16.7 Closed Cup.
Auto ignition temperature (deg C)	272°C .
Upper flammable limit (% vol)	7.6.
Lower flammable limit (% vol)	1.5.
Coefficient of water\oil distribution	No data.
% Volatile by volume	No data.
VOC	1.54 lb/USG - 184.5 g/l.
Viscosity	15.4 sec Zahn #2.

Section 10: Stability and reactivity

Stability	Stable at normal temperatures and pressures.
Reactivity conditions	Avoid heat, sparks and flames. Contact with moisture and other materials will react with isocyanates.
Incompatibility	Water, amines, strong bases, alcohols. Copper alloys.
Hazardous products of decomposition	See hazardous combustion products.
Hazardous polymerization	Contact with moisture, other materials that react with isocyanates, or temperatures above 177C, may cause polymerization.

Section 11: Toxicological information

Route of entry	Eye contact. Skin contact. Inhalation. Skin absorption.
Effects of acute exposure	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.
Effects of chronic exposure	Reports have associated repeated or prolonged overexposure to solvents with permanent brain and nervous system damage. Prolonged or repeated exposure may lead to liver, kidney or central nervous system symptoms. Repeated or prolonged contact with eyes may cause conjunctivitis. 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.
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 (Group 2B). Solvent Naphtha is classified as a possible carcinogen. Ethylbenzene is classified as an A3 known animal carcinogen.
Reproductive effects	Chronic exposure to Ethylbenzene has been associated with reproductive effects among women. Methyl isobutyl ketone passes through the placental barrier.

PRODUCT: FUS2614LV HARDENER

Section 11: Toxicological information

Mutagenicity..... Ethylbenzene has been shown to be mutagenic for mammalian somatic cells. Solvent Naphtha is classified as a possible mutagen .

Toxicological Data

Ingredients	LC50-inh, rat	LD50-Oral,rat
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	No data	No data
ACETIC ACID, TERT-BUTYL ESTER	>2,230 mg/m3 4 hours rat	4,100 mg/kg rat oral >2,000 mg/kg rabbit dermal
N-BUTYL ACETATE	1.36 - 2.38 mg/L 4 hours rat	>3200 mg/kg rat oral >5000 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
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	>5,000 mg/kg rat oral >3,160 mg/kg rabbit dermal
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	No data	8,532 mg/kg rat oral >5,000 mg/kg rabbit dermal
DIISOBUTYL KETONE	>2,300 ppm 4 hours	5,285 mg/kg rat oral >2,000 mg/kg rat dermal
PROPYL BENZENE	No data	6,040 mg/kg rat oral
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
ETHYLBENZENE	No data	3,500 mg/kg rat oral 17,800 mg/kg rabbit dermal

Section 12: Ecological information

Environmental..... Do not allow to enter waters, waste water or soil.
Biodegradability..... No data.

Section 13: Disposal considerations

Waste disposal..... 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 (Road)..... 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.
IMDG Classification (Marine)..... UN1263 - Paint Related Material - Class 3 - Packing Group II - EmS: F-E S-E.
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

WHMIS classification..... B2. D2A. D2B.
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 substances ..... Isophorone Diisocyanate TPQ 100.
Section 311/312 - hazard categories..... Immediate health, delayed health, fire hazard.
Section 313..... Methyl Isobutyl Ketone. Isophorone Diisocyanate. Ethylbenzene.
EPA hazardous air pollutants (HAPS) 40CFR63 ..... Methyl Isobutyl Ketone.
TSCA inventory status..... All components are listed.

PRODUCT: FUS2614LV HARDENER

Section 15: Regulatory information

California Proposition 65..... This product contains Methyl Isobutyl Ketone (MIBK) known to the State of California to cause cancer. Methyl Isobutyl Ketone is known by the State of California to cause adverse fetal developmental effects. This product contains Ethylbenzene that is known to the State of California to cause cancer.

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.
Preparation date: Dec30/14