

***** SECTION 1 - Product and Company Identification *****

Supplier: Axalta Coating Systems Canada Company
408 Fairall Street
Ajax, ON, L1S 1R6

Manufacturer: Axalta Coating Systems, LLC
1007 Market Street, D-13111
Wilmington, DE, 19898

Telephone: Product Information: (800) 387-2122
Medical Emergency (24 hours): (855) 274-5698
Transportation Emergency (24 hours): (613) 996-6666 (CANUTEC)

PRODUCT IDENTIFIER: Ful-Thane® Urethane Hardener

PRODUCT CODE: 483-15 120524

Product Use:
PAINT ADDITIVE

Prepared by: Regulatory Affairs

Chemical Family: Not Available

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Axalta Coating Systems products.

***** SECTION 2 - Composition, Information on Ingredients *****

CAS #	Ingredient	(%)	Exposure Limits**	
28182-81-2	ALIPHATIC POLYISOCYANATE- RESIN	60-100	S	0.5 mg/m3
			A	None
			O	None
123-86-4	BUTYL ACETATE	3- 7	A	200.0 ppm 15 min STEL
			A	150.0 ppm
			O	150.0 ppm
64742-95-6	AROMATIC HYDROCARBON	1- 5	D	50.0 ppm 8 & 12 hour TWA
			A	None
			O	None
95-63-6	1,2,4-TRIMETHYL BENZENE	1- 5	A	25.0 ppm
			O	25.0 ppm

** A = ACGIH, O = OSHA, D = Dupont, TWAEV = Ontario, S = Supplier

***** SECTION 2 - Composition, Information on Ingredients *****
Cont'd

D=Dupont Results obtained from E.I. duPont de Nemours and Company
(For additional definition of terms, see section 16)
Limits are 8-hour TWA unless otherwise specified.

***** SECTION 3 - Hazards Information *****

Emergency Overview:

DANGER! EXPOSURE MAY CAUSE LUNG INJURY AND ALLERGIC RESPIRATORY REACTION. EFFECTS MAY BE PERMANENT. COMBUSTIBLE LIQUID AND VAPOR. VAPORS AND SPRAY MIST HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS DIZZINESS, HEADACHE, OR NAUSEA. MAY CAUSE NOSE, THROAT, EYE AND SKIN IRRITATION. CAN BE ABSORBED THROUGH THE SKIN.

Potential Health Effects:

Inhalation:

Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion:

May result in gastrointestinal distress.

Skin or eye contact:

May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Other Potential Health Effects in addition to those listed above:

ALIPHATIC POLYISOCYANATE RESIN

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure.

The following medical conditions may be aggravated by exposure: asthma skin disorders respiratory disorders
Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

***** SECTION 3 - Hazards Information *****
Cont'd

BUTYL ACETATE

May cause abnormal liver function.

The following medical conditions may be aggravated by exposure:
respiratory system

Tests for embryotoxic activity in animals has been inconclusive.

Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown.

Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother.

AROMATIC HYDROCARBON

The following medical conditions may be aggravated by exposure: skin disorders

Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in kidney or liver tumors.

***** SECTION 4 - First Aid Measures *****

First Aid Procedures:

Inhalation:

If affected by inhalation of vapor or spray mist, move to fresh air.

If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing difficulty persists, or occurs later, consult a physician.

Ingestion:

In the unlikely event of ingestion, DO NOT induce vomiting. Call a physician immediately and have names of ingredients available.

Skin or eye:

In case of contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash thoroughly with soap and water. If irritation occurs, contact a physician.

***** SECTION 5 - Firefighting Measures *****

Flash Point (Method)	Between 38 to 60 deg C	Closed Cup
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Approx. flammable limits	Not Available
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Auto ignition temperature	Not Available
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Hazardous Combustion Products:

CO, CO₂, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Extinguishing media:

Universal aqueous film-forming foam, carbon dioxide, dry chemical.

Special fire fighting procedures:

***** SECTION 5 - Firefighting Measures *****
Cont'd

Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to prevent pressure build-up.

Fire & explosion hazards:

Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

***** SECTION 6 - Accidental Release Measures *****

Procedures for cleaning up spills or leaks:

Ventilate area. If heated above the flashpoint, remove sources of ignition. Do not breathe vapors. Do not get in eyes or on skin.

Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TM 10) and 80% Water OR

0-10% Ammonia, 2-5% Detergent and Water (balance) Confine and remove with inert absorbent. Pressure can be generated. Do not seal waste containers for 48 hours to allow CO₂ to vent. After 48 hours, material may be sealed and disposed of properly.

***** SECTION 7 - Handling and Storage *****

Precautions to be taken in handling and storing:

Observe label precautions. Keep away from heat, sparks and flame, static discharge and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid.

Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.

OSHA/NFPA Storage Classification:

II

Other precautions:

If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves.

***** SECTION 8 - Exposure Controls or Personal Protection *****

Engineering controls and work practices:

Ventilation:

Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits.

Personal Protective Equipment:

Recommended PPE:

***** SECTION 8 - Exposure Controls or Personal Protection *****
Cont'd

Respiratory:

Do not breathe vapors or mists. Wear a positive-pressure, supplied air respirator (NIOSH approved TC-19C), while mixing activator with paint, during application and until all vapors and spray mists are exhausted. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area. Refer to the hardener/activator label instructions for further information. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to this product if mixed with isocyanate activators/hardeners.

Protective clothing:

Neoprene gloves and coveralls are recommended.

Eye protection:

Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

***** SECTION 9 - Physical and Chemical Properties *****

Evaporation Rate	Slower than Ether
Vapor Pressure of principal solvent	15.00 hPa @ 20 Deg C
Solubility of solvent in water	NIL
Vapour density (principal solvent)	4.00
Approx. Boiling range (deg C)	203 DEG (C)
Approx. Freezing range (deg C)	220 DEG (C)
Gallon weight (lbs/US gal)	9.45
Specific gravity	1.13
Percent volatile by volume	12.90
Percent volatile by weight	10.00
Percent solids by volume	87.10
Percent solids by weight	90.00
Odour	Characteristic Paint Odour
Appearance	semi-viscous liquid
Physical state	Liquid
pH (waterborne systems only)	Not Applicable
VOC* less exempt (g/l)	113.1
VOC* as packaged (g/l)	113.1

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

***** SECTION 10 - Stability and Reactivity *****

Stability:

Stable

Incompatibility (materials to avoid):

***** SECTION 10 - Stability and Reactivity *****
Cont'd

water, alcohols, amines

Hazardous decomposition products:

CO, CO₂, smoke, and oxides of any heavy metals that are reported in
"Composition, Information on Ingredients" section.

Hazardous polymerization:

Will not occur.

Sensitivity to static discharge:

If heated above the flash point, solvent vapors in air may explode if
static grounding and bonding is not used during transfer of this
product.

Sensitivity to mechanical impact: None Known

***** SECTION 11 - Toxicological Information *****

ALIPHATIC POLYISOCYANATE RESIN

Oral LD50	1000 mg/kg	Rat	SUPPLIER MSDS
Dermal LD50	5000 mg/kg	Rabbit	SUPPLIER MSDS
Inhalation LC50	137 mg/m ³	4 h Rat	SUPPLIER MSDS

BUTYL ACETATE

Oral LD50	5000 ml/kg	Rat	SUPPLIER MSDS
Dermal LD50	5000 ml/kg	Rabbit	SUPPLIER MSDS
Inhalation LC50	6335 ppm	4 h Rat	SUPPLIER MSDS

AROMATIC HYDROCARBON

Oral LD50	5000 mg/kg	Rat	CCOHS
Dermal LD50	3160 mg/kg	Rat	CCOHS
Inhalation LD50	3670 ppm	4 h Rat	SUPPLIER MSDS

1,2,4-TRIMETHYL BENZENE

Oral LD50	5000 mg/kg	Rat	RTECS
Inhalation LC50	18000 mg/m ³	4 HR Rat	RTECS

For all other ingredients, no information is available.

Key:

RTECHS - Registry of Toxic Effects of Chemical Substances
CCOHS - Canadian Center for Occupational Health and Safety
Patty's - Patty's Industrial Hygiene and Toxicology, 3rd Edition

***** SECTION 12 - Ecological Information *****

ALIPHATIC POLYISOCYANATE RESIN

1000 mg/l	3 h	BACTERIA
1000 mg/l	72 h	AQUATIC PLANTS

BUTYL ACETATE

100 mg/l	4 days	Bluegill Sunfish	FISH
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***** SECTION 12 - Ecological Information *****
Cont'd

18 mg/l	4 days	Fathead Minnow	FISH
73 mg/l	2 days	Daphnia	INVERTEBRATES
AROMATIC HYDROCARBON			
170 mg/l	24 h	Daphnia	INVERTEBRATES
10 mg/l	72 h	Algae	AQUATIC PLANTS
10 mg/l	96 h	zebra fish	FISH
1,2,4-TRIMETHYL BENZENE			
9 mg/l	96 h	Rainbow Trout	FISH
6 mg/l	48 h	Daphnia	INVERTEBRATES

***** SECTION 13 - Disposal Considerations *****

Provincial Waste Classification:

Check appropriate provincial and local waste disposal regulations for proper classifications.

Waste disposal method:

Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Use only approved waste management contractors. Do not incinerate in closed containers.

***** SECTION 14 - Transportation Information *****

TDG Shipping Name:

PAINT RELATED MATERIAL	
Hazard Class:	3
UN/NA#	1263
Packing Group:	III

***** SECTION 15 - Regulatory Information *****

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

TSCA Status:

In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status:

All components of the mixture are listed on the DSL.

OCI:

All components of the mixture are listed with the Ontario Inventory.

WHMIS Classification:

Class B Division 3

***** SECTION 15 - Regulatory Information *****
Cont'd

Class	D	Division 1	Subdivision	A	
Class	D	Division 2	Subdivision	A	56
Class	D	Division 2	Subdivision	B	60
Class	D	Division 2	Subdivision	B	61

WHMIS symbols:

Flame

Skull and Crossbones

Photochemical Reactivity: Photochemically reactive

Other Regulatory Information:

CAS #	Ingredient	302	TPQ/RQ	EPCRA		CERCLA		HAP
				311/312	313	RQ (lbs)		
28182-81-2	ALIPHATIC POLYISOCYANATE- RESIN	N	NR	A, C, R	N	NR		N
123-86-4	BUTYL ACETATE	N	NR	A, C, F	N	NR		N
64742-95-6	AROMATIC HYDROCARBON	N	NR	A, C, F	N	NR		N
95-63-6	1,2,4-TRIMETHYL BENZENE	N	NR	A, C	Y	NR		N

Key:

EPCRA: Emergency Planning and Community Right-to-Know Act
(aka Title III, SARA)

302: Extremely hazardous substances

311/312 Categories: F = Fire Hazard A = Acute Hazard
R = Reactivity Hazard C = Chronic Hazard
P = Pressure Related Hazard313 Information: Section 313 Supplier Notification - The chemicals
listed above with a 'Y' in the 313 column are
subject to reporting requirements of Section 313
of the Emergency Planning and Community
Right-to-Know act of 1986 and of 40 CFR 372.CERCLA: Comprehensive Emergency Response, Compensation and
Liability Act of 1980.

HAP = Listed as a Clean Air Act Hazardous Air Pollutant

TPQ = Threshold planning quantity

RQ = Reportable quantity

NA = not available

NR = not regulated

***** SECTION 16 - Additional Information *****

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

NFPA Rating: H: ☐ F: ☐ R: ☐

Glossary of Terms:

- ACGIH - American Conference of Governmental Industrial Hygienists
- IARC - International Agency for Research on Cancer
- NTP - National Toxicology Program

***** SECTION 16 - Additional Information *****
Cont'd

OSHA - Occupational Safety and Health Administration
STEL - Short term exposure limit
TWA - Time-weighted average
PNOR - Particles not otherwise regulated
PNOC - Particles not otherwise classified

Notice from Axalta Coating Systems

The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Approved by:
Technical Manager