

# Safety Data Sheet

## LH401 Low VOC Fast Hardener

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### 1. Identification

#### Product identifier used on the label

## LH401 Low VOC Fast Hardener

#### Recommended use of the chemical and restriction on use

Recommended use\*: for industrial use only

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

##### Company:

BASF Canada Inc.  
100 Milverton Drive  
Mississauga, ON L5R 4H1, CANADA

Telephone: +1 289 360-1300

#### Emergency telephone number

CANUTEC (reverse charges): (613) 996-6666  
BASF HOTLINE: (800) 454-COPE (2673)

#### Other means of identification

Chemical family: Coating

### 2. Hazards Identification

#### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

#### Classification of the product

Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Resp. Sens.	1	Respiratory sensitization
Skin Sens.	1	Skin sensitization
Repr.	1 (unborn child)	Reproductive toxicity
Repr.	1 (fertility)	Reproductive toxicity
STOT SE	3 (Vapours may cause drowsiness and dizziness.)	Specific target organ toxicity — single exposure
STOT RE	2	Specific target organ toxicity — repeated

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Aquatic Acute	3	exposure
Flam. Liq.	2	Hazardous to the aquatic environment - acute
		Flammable liquids

### Label elements

Pictogram:



Signal Word:  
Danger

Hazard Statement:

H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H402	Harmful to aquatic life.
H225	Highly flammable liquid and vapour.
H373	May cause damage to organs (Central nervous system) through prolonged or repeated exposure.
H336	May cause drowsiness or dizziness.
H360	May damage fertility. May damage the unborn child.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264	Wash with plenty of water and soap thoroughly after handling.
P281	Use personal protective equipment as required.
P271	Use only outdoors or in a well-ventilated area.
P242	Use only non-sparking tools.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P243	Take action to prevent static discharges.
P233	Keep container tightly closed.
P285	In case of inadequate ventilation wear respiratory protection.
P240	Ground and bond container and receiving equipment.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust or mist.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P201	Obtain special instructions before use.

Precautionary Statements (Response):

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P312	Call a POISON CENTER or doctor/physician 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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P370 + P378	In case of fire: Use water spray for extinction.
P363	Wash contaminated clothing before reuse.
P321	Specific treatment (see on this label).
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P314	Get medical advice/attention if you feel unwell.

#### Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

#### Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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### Hazards not otherwise classified

No applicable information available.

## 3. Composition / Information on Ingredients

### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
77-58-7	>= 0.1 - < 0.2%	dibutyltin dilaurate
108-88-3	>= 5.0 - < 7.0%	Toluene
109-60-4	>= 10.0 - < 15.0%	propyl acetate
123-86-4	>= 3.0 - < 5.0%	n-Butyl acetate
822-06-0	>= 0.1 - < 0.2%	1,6-hexamethylene diisocyanate
28182-81-2	>= 75.0 - <= 100.0%	Hexane, 1,6-diisocyanato-, homopolymer

## 4. First-Aid Measures

### Description of first aid measures

#### General advice:

Remove contaminated clothing.

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### If inhaled:

Keep patient calm, remove to fresh air. If breathing difficulties develop, aid in breathing and seek immediate medical attention.

### If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

### If in eyes:

Flush with copious amounts of water for at least 15 minutes. Hold eyelids open to facilitate rinsing. If irritation develops, seek medical attention. Seek medical attention.

### If swallowed:

Immediate medical attention required. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Rinse mouth and then drink 200-300 ml of water.

## Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

## Indication of any immediate medical attention and special treatment needed

### Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media:  
carbon dioxide, foam, dry powder, water spray

Unsuitable extinguishing media for safety reasons:  
water jet

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
Vapors and/or decomposition products are irritant and/or toxic. If product is heated above decomposition temperature acrid smoke and fumes will be released.

### Advice for fire-fighters

Protective equipment for fire-fighting:  
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Further information:

Avoid water contamination in closed containers of confined areas, because carbon dioxide gas is generated. Notify proper authorities. Do not flood burning material with water due to potential spreading of fire. Flash fire may occur. Run-off water from fire may cause pollution. Contain contaminated water/firefighting water. Remove product from areas of fire, or otherwise cool sealed containers with water in order to avoid pressure build up due to heat. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

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### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Use antistatic tools. Extinguish sources of ignition nearby and downwind. Avoid prolonged inhalation. Wear suitable personal protective clothing and equipment. Ensure adequate ventilation.

#### Environmental precautions

Do not discharge into drains/surface waters/groundwater.

#### Methods and material for containment and cleaning up

Dike spillage. Wash down spill area with decontamination solution. Spill area can be decontaminated with the following recommended decontamination solution: Allow solution to stand for at least 10 minutes. Remove containers to a safe place, cover loosely, and allow to stand for 24 to 48 hours before sealing and disposing. Shovel into open container. Add additional decontamination solution to waste container. Mixture of 80 % water and 20 % non-ionic surfactant, or 90 - 95 % water, 3 - 8 % concentrated ammonia and 2 % detergent.

### 7. Handling and Storage

#### Precautions for safe handling

Handle and open container with care. Avoid water contamination in closed containers of confined areas, because carbon dioxide gas is generated. WARNING: Empty containers may still contain hazardous residue. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing. Do not reseal container if contamination of the product is suspected. Use static lines when mixing and transferring material. Do not puncture, drop, or slide containers. Ensure adequate ventilation. Avoid contact with the skin, eyes and clothing.

Protection against fire and explosion:

Risk of explosion if heated under confinement. Use antistatic tools. Exhaust fans should be explosion proof. Avoid all sources of ignition: heat, sparks, open flame. Provide adequate ventilation to remove solvent vapors from lower levels or work areas and to prevent solvent contact with ignition sources. Sealed containers should be protected against heat as this results in pressure build-up.

#### Conditions for safe storage, including any incompatibilities

Segregate from strong bases. Segregate from oxidizing agents. Segregate from incompatible substances. Segregate from metals. Segregate from strong acids. Keep away from water.

Suitable materials for containers: Carbon steel (Iron), tinned carbon steel (Tinplate)

Further information on storage conditions: Keep container tightly closed. Protect against moisture. Carbon dioxide gas can cause containers to expand and possibly rupture explosively. Store protected against freezing. Protect from direct sunlight. If moisture enters isocyanate containers, CO<sub>2</sub> forms and pressure builds up.

Storage stability:

Storage temperature: 25 - 35 °C

Consult local fire marshal for storage requirements.

Slow non-hazardous polymerization possible when at or exceeding maximum temperatures.

Protect from temperatures above: 49 °C

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### 8. Exposure Controls/Personal Protection

#### Components with occupational exposure limits

dibutyltin dilaurate	OSHA PEL	PEL 0.1 mg/m <sup>3</sup> (tin (Sn)); TWA value 0.1 mg/m <sup>3</sup> (tin (Sn)); SKIN_FINAL (tin (Sn)); The substance can be absorbed through the skin.
	ACGIH TLV	TWA value 0.1 mg/m <sup>3</sup> (tin (Sn)); Skin Designation (tin (Sn)); The substance can be absorbed through the skin. STEL value 0.2 mg/m <sup>3</sup> (tin (Sn));
Toluene	OSHA PEL	TWA value 100 ppm 375 mg/m <sup>3</sup> ; STEL value 150 ppm 560 mg/m <sup>3</sup> ; max. conc. 500 ppm ; CLV 300 ppm ; TWA value 200 ppm ;
	ACGIH TLV	TWA value 20 ppm ;
propyl acetate	OSHA PEL	PEL 200 ppm 840 mg/m <sup>3</sup> ; TWA value 200 ppm 840 mg/m <sup>3</sup> ; STEL value 250 ppm 1,050 mg/m <sup>3</sup> ;
	ACGIH TLV	TWA value 200 ppm ; STEL value 250 ppm ; STEL value 150 ppm ; TWA value 100 ppm ;
n-Butyl acetate	OSHA PEL	PEL 150 ppm 710 mg/m <sup>3</sup> ; STEL value 200 ppm 950 mg/m <sup>3</sup> ; TWA value 150 ppm 710 mg/m <sup>3</sup> ;
	ACGIH TLV	STEL value 150 ppm ; TWA value 50 ppm ;
1,6-hexamethylene diisocyanate	ACGIH TLV	TWA value 0.005 ppm ;

#### Personal protective equipment

##### **Respiratory protection:**

Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination.

##### **Hand protection:**

Chemical resistant protective gloves

##### **Eye protection:**

Wear face shield if splashing hazard exists. Tightly fitting safety goggles (chemical goggles).

##### **Body protection:**

Body protection must be chosen based on level of activity and exposure.

##### **General safety and hygiene measures:**

Work place should be equipped with a shower and an eye wash. Remove contaminated clothing. Remove contaminated clothing immediately and clean before re-use or dispose it if necessary. Contact lenses should not be worn. Hands and/or face should be washed before breaks and at the end of the shift.

### 9. Physical and Chemical Properties

Form:	liquid
Odour:	solvent-like
Odour threshold:	No applicable information available.

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Colour:	almost colourless	
pH value:	No applicable information available.	
Melting point:	No applicable information available.	
Boiling range:	101.00 - 125.00 °C	
Sublimation point:	No applicable information available.	
Flash point:	18.89 °C	(ASTM D3278)
Flammability:	No applicable information available.	
Lower explosion limit:	1.00 %(V)	
Upper explosion limit:	7.00 %(V)	
Autoignition:	No applicable information available.	
Vapour pressure:	21.99 mmHg ( 20 °C)	
Density:	1.0755 g/cm3 ( 20 °C)	(calculated)
Relative density:	1.0755 ( 20 °C)	
Vapour density:	No applicable information available.	
Partitioning coefficient n-octanol/water (log Pow):	No applicable information available.	
Thermal decomposition:	Risk of polymerization above the indicated temperature in the presence of moisture and isocyanate reactive substances. No applicable information available.	
Viscosity, dynamic:	No applicable information available.	
Viscosity, kinematic:	> 20.600 mm2/s	
Solubility in water:	No applicable information available.	
Solubility (quantitative):	No applicable information available.	
Solubility (qualitative):	No applicable information available.	
Evaporation rate:	No applicable information available.	

## 10. Stability and Reactivity

### Reactivity

No applicable information available.

### Chemical stability

The product is chemically stable.

### Possibility of hazardous reactions

On contact with water, gaseous decomposition products are formed, which cause build-up of pressure in tightly closed containers. Reacts with water.

### Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid direct contact with water. Avoid electrostatic discharge.

### Incompatible materials

strong oxidizing agents, strong bases, strong acids, thiols, transition metal salts, water, amines, alcohols

### Hazardous decomposition products

Decomposition products:

nitrogen oxides, carbon dioxide, carbon monoxide, hydrogen cyanide

Thermal decomposition:

Risk of polymerization above the indicated temperature in the presence of moisture and isocyanate reactive substances. No applicable information available.

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### 11. Toxicological information

#### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

#### Acute Toxicity/Effects

##### Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of very high toxicity after short-term inhalation.

##### *Information on: dibutyltin dilaurate*

*Assessment of acute toxicity: Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact.*

##### *Information on: 1,6-hexamethylene diisocyanate*

*Assessment of acute toxicity: Of high toxicity after short-term inhalation. In animal studies the substance is virtually nontoxic after a single skin contact. Of moderate toxicity after single ingestion.*

##### Oral

Type of value: LD50

Species: rat

Value: > 5,000.000000 mg/kg

##### Inhalation

Type of value: LC50

Species: rat

Value: 0.390000 mg/l

##### Dermal

Type of value: LD50

Species: rat

Value: > 5,000.000000 mg/kg

##### Assessment other acute effects

Assessment of STOT single:

Possible narcotic effects (drowsiness or dizziness).

##### Irritation / corrosion

Assessment of irritating effects: Eye contact causes irritation. Skin contact causes irritation.

##### *Information on: dibutyltin dilaurate*

*Assessment of irritating effects: Corrosive! Damages skin and eyes. May cause severe damage to the eyes.*

##### *Information on: Toluene*

*Assessment of irritating effects: Skin contact causes irritation. May cause slight irritation to the eyes.*

##### *Information on: propyl acetate*

*Assessment of irritating effects: Not irritating to the skin. Eye contact causes irritation.*

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### Sensitization

*Information on: 1,6-hexamethylene diisocyanate*

*Assessment of sensitization:*

*The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.*

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### Aspiration Hazard

No applicable information available.

## Chronic Toxicity/Effects

### Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated exposure may affect certain organs.

*Information on: dibutyltin dilaurate*

*Assessment of repeated dose toxicity: Repeated oral exposure may affect certain organs.*

*Information on: Toluene*

*Assessment of repeated dose toxicity: Repeated exposure to large quantities may affect certain organs. Damages the central nerve system. The substance may cause deafness after repeated inhalation.*

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### Carcinogenicity

Assessment of carcinogenicity: No data available concerning carcinogenic effects.

### Reproductive toxicity

*Information on: dibutyltin dilaurate*

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*Information on: propyl acetate*

*Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.*

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### Teratogenicity

*Information on: dibutyltin dilaurate*

*Information on: Toluene*

*Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.*

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*Information on: Toluene*

*Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.*

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## Symptoms of Exposure

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The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

### Medical conditions aggravated by overexposure

Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended. The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing.

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## 12. Ecological Information

No applicable information available.

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## 13. Disposal considerations

### **Waste disposal of substance:**

Do not incinerate closed containers. The use and processing of this product, or addition of other constituents, may cause it to be considered a hazardous waste. Do not discharge into drains/surface waters/groundwater.

Must be disposed of or incinerated in accordance with local regulations.

### **Container disposal:**

WARNING: Empty containers may still contain hazardous residue.

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## 14. Transport Information

### **Land transport**

TDG

Hazard class:	3
Packing group:	II
ID number:	UN 1263
Hazard label:	3
Proper shipping name:	PAINT RELATED MATERIAL

### **Sea transport**

IMDG

Hazard class:	3
Packing group:	II
ID number:	UN 1263
Hazard label:	3
Marine pollutant:	NO
Proper shipping name:	PAINT RELATED MATERIAL

### **Air transport**

IATA/ICAO

Hazard class:	3
Packing group:	II
ID number:	UN 1263

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Hazard label: 3  
Proper shipping name: PAINT RELATED MATERIAL

### 15. Regulatory Information

#### Federal Regulations

##### **Registration status:**

Chemical DSL, CA released / listed

##### **NFPA Hazard codes:**

Health: 2 Fire: 3 Reactivity: 0 Special:

### 16. Other Information

#### **SDS Prepared by:**

BASF NA Product Regulations

SDS Prepared on: 2018/11/02

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET