Safety Data Sheet
LD9600 – WB CRU - ISOCYANATE

Revision date: 2015/12/04

1. Identification

Product identifier used on the label

LD9600 – WB CRU - ISOCYANATE

Recommended use of the chemical and restriction on use:

Waterproofing/Concrete Masonry Sealer, Industrial Maintenance Coating

* 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:
Life Paint Company
12927 Sunshine Avenue
Santa Fe Springs, CA 90670

562-944-6391

Emergency telephone number

CHEMTREC: 1-800-424-9300

Other means of identification

Chemical family: Hydrophilic Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

Classification of the product

Acute Toxicity	4	(Inhalation - mist)
Skin Sensitization	1	
Specific Target Organ Toxicity – Single Exposure	3	(irritating to respiratory system)
Specific target organ toxicity – repeated exposure (Inhalation)	2	(lungs)
Aquatic Acute	3	

Label Elements
Pictogram:

Signal Word: Danger

Hazard Statement:
May cause an allergic skin reaction.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause damage to organs (Lungs) through prolonged or repeated exposure if inhaled.

Precautionary Statements (Prevention):
Wear eye/face protection.
Wear protective gloves.
Use only outdoors or in a well-ventilated area.
Do not breathe dust/gas/mist/vapors.
In case of inadequate ventilation wear respiratory protection. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134) or regional standards. For additional details, see section 8 of the SDS.
Avoid release to the environment.
Contaminated work clothing should not be allowed out of the workplace.
Wash with plenty of water and soap thoroughly after handling

Precautionary Statements (Response):
If eye or skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Take off contaminated clothing and wash before reuse.

Precautionary Statements (Storage):
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Precautionary Statements (Disposal):
Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified
No specific dangers known

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

WARNING:
May cause sensitization by skin contact. HARMFUL IF INHALED.
CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING,

SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.
Use with local exhaust ventilation. Wear protective clothing.
Wear full face shield if splashing hazard exists.

3. Composition / Information on Ingredients

Components	CAS Number	Concentration (Weight)
Poly(hexamethylene diisocyanate)	28182-81-2	> 60 %
Hydrophilic Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate	666723-27-9	< 30 %
Proprietary	Proprietary	< 25 %

4. First-Aid Measures

Description of first aid measures

General advice:
Immediately remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Seek medical attention.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

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

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary odema.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: dry powder, foam

Special hazards arising from the substance or mixture
Hazards during fire-fighting: harmful vapors
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

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

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing.

Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling
Protection against fire and explosion:
Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Storage stability:
If moisture enters isocyanate containers, CO_2 forms and pressure builds up.

8. Exposure Controls/Personal Protection

Engineering Measures

Provide readily accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator. Do not exceed the maximum use concentration for the respirator face piece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full face piece pressure demand self- contained breathing apparatus (SCBA) or a full face piece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves

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

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid inhalation of mists. Contact with eyes and skin must be avoided.

Occupational Exposure limit(s)

1, 6 – hexamethylene diisocyanate	Time Weighted Average (TWA): ACGIH TLV	0.005 ppm

9. Physical and Chemical Properties

Form:	liquid
Odor:	Slight, fruity
Color:	Clear, Colorless to slight yellow
pH value:	N/A
Melting point:	No data available
Boiling point:	Decomposition
Flash point:	> 185 °C
Flammability:	Not flammable
Lower explosion limit:	Not applicable
Upper explosion limit:	Not applicable
Auto ignition:	445 °C
Vapor pressure:	< 0.03 hPa at 20 °C
Density:	1.15 g/cm3 at 20 °C
Viscosity, Dynamic	500-1000 CPS
Solubility in Water	Insoluble - Reacts slowly with water to liberate C02 gas
Evaporation rate:	Not determined

10. Stability and Reactivity

Corrosion to metals:
Corrosion effect on metals are not anticipated

Chemical Stability:
Stable under normal conditions.

Conditions to avoid:
Heat, flames and sparks. Protect from freezing.

Materials to avoid:
Water, Amines, Strong bases, Alcohols, Copper alloys

Hazardous decompositionproducts:
By Fire and High Heat: Carbon dioxide (C02), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

Possibility of hazardousReactions/Reactivity:
Reacts with alcohols. Reacts with amines. Reacts with substances which contain active hydrogen. Reacts with water, with formation of carbon dioxide. The formation of gaseous decomposition products builds up pressure in tightly closed containers.

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 moderate toxicity after short-term inhalation.

Oral
Type of value: LD50

Species: rat
Value: > 5,000 mg/kg

Inhalation
Type of value: LC50 Species: rat
Value: (OECD Guideline 403) Exposure time: 4 h
The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm).

Dermal
Type of value: LD50 Species: rat
No data available.

Irritation / corrosion
Assessment of irritating effects: Not irritating to eyes and skin. Irritating to respiratory system.

Skin
Species: rabbit Result: non-irritant
Method: OECD Guideline 404

Eye
Species: rabbit Result: non-irritant

Sensitization
Assessment of sensitization: Caused skin sensitization in animal studies.

Guinea pig maximization test Species: guinea pig
Result: sensitizing
Sensitizing effect in animal tests

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: Based on available Data, the classification criteria are not met.

Symptoms of Exposure

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

Toxicity Data for Homopolymer of Hexamethylene Diisocyanate

Toxicity Note
Data is based on a similar product, including residual monomer.

Acute Oral Toxicity
LD50: > 5000 mg/kg (rat, female) (OECD Test Guideline 423) Toxicological studies at the product

Acute Inhalation Toxicity
LC50: 0.39 mg/1, 4 h (rat, female) (OECD Test Guideline 403)
Toxicological studies of a comparable product. The test atmosphere generated in the ani1nal study is not representative of workplace environments, how the substance is placed on the 1narket, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard. Based on the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

Acute Dermal Toxicity
LD50: > 2000 mg/kg (rat, male/female) (OECD Test Guideline 402) Studies of a comparable product.

LD50: > 2000 mg/kg (rabbit, male/female) Studies of a comparable product.

Skin Irritation
rabbit, OECD Test Guideline 404, slight irritant Toxicological studies at the product

Eye Irritation
rabbit, OECD Test Guideline 405, slight irritant Toxicological studies at the product

Sensitization
Skin sensitization (local lymph node assay (LLNA)) : Causes sensitization. (mouse, OECD Test Guideline 429) Toxicological studies at the product

Respiratory sensitization: sensitizer Studies of a comparable product.

Repeated Dose Toxicity
90 d, Inhalant: NOAEL: 3,3, (rat, male/female, 6 hours a day, 5 days a week)

Toxicological studies of a co1nparable product. Evidence of damage to organs other than the organs of respiration was not found.

Mutagenicity
Genetic Toxicity in Vitro:
Salmonellal microsome test (Ames test): No indication of mutagenic effects. (Metabolic Activation: with/without)
Toxicological studies at the product
Chromosome aberration test in vitro: negative (Chinese hamster V79 cell line, Metabolic Activation: with/without)
Toxicological studies of a comparable product.
Point mutation in mammalian cells (HPRT test): negative (Metabolic Activation: with/without) Toxicological studies of a comparable product.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish
LC0 (96 h) >= 100 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1, static)
The product may hydrolyse. The test result may be partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates
EC0 (48 h) >= 100 mg/l, Daphnia magna (Directive 92/69/EEC, C.2, static)
The product may hydrolyse. The test result may be partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.

Aquatic plants
EL50 (72 h) > 100 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static)
The product may hydrolyse. The test result may be partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. The details of the toxic effect relate to the nominal concentration.

Chronic toxicity to fish
Study does not need to be conducted.

Chronic toxicity to aquatic invertebrates
Study does not need to be conducted.

Assessment of terrestrial toxicity
Study does not need to be conducted.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 static
Activated sludge, domestic/EC20 (3 h): 134.5 mg/l
The product may hydrolyse. The test result may be partially due to degradation products. The details of the toxic effect relate to the nominal concentration.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Not readily biodegradable (by OECD criteria). The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information
1 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic, non-adapted)

Assessment of stability in water
In contact with water the substance will hydrolyze rapidly.

Information on Stability in Water (Hydrolysis)
Study does not need to be conducted.

Bioaccumulative Potential

Assessment bioaccumulation potential
Does not significantly accumulate in organisms.

Bioaccumulation potential
Study scientifically not justified.

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Additional information

Additional Remarks Environment Fate & Pathway:
Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other Ecotoxicological advice:
Do not release untreated into natural waters. The local regulations on waste-water treatment must be followed.

13. Disposal Considerations

Dispose of in a licensed facility. Do not discharge into waterways or sewer systems without proper authorization.

Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport
USDOT

Not Classified as a Dangerous Good under Transport Regulations

Sea transport
IMDG

Not Classified as a Dangerous Good under Transport Regulations

Air transport
IATA/ICAO

Not Classified as a Dangerous Good under Transport Regulations

15. Regulatory Information

Federal Regulations:
Chemical: TSCA, US - Released/Listed

CAS Number	Chemical Name
28182-81-2	Poly(hexamethylene diisocyanate)
666723-27-9	Hydrophilic Aliphatic Polyisocyanate based on hexamethylene diisocyanate
98-94-2	N,N- dimethylcyclohexylamine
822-06-0	1, 6-hexamethylene diisocyanate

CA Prop 65: TO THE BEST OF OUR KNOWLEDGE, THIS PRODUCT DOES NOT CONTAIN ANY OF THE LISTED CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM

16. Other Information

NFPA Hazard Codes:
Health : 2
Fire : 1
Reactivity : 0
Special :

HMIS Rating
Health : 2
Flammability : 1
Physical hazard : 1

SDS Prepared by:
Life Paint Company

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