



Material Safety Data Sheet

Chemical Name: YL-W6500C Waterborne Polyurethane Hardener

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MSDS Number: YL020004

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Given that this document contains important information, Yele Chemical would like you to read through the entire Chemical Safety Technical Instructions. Unless your Conditions of use require that other appropriate methods or measures be used. Otherwise, please follow the preventive measures listed in this document.

SECTION 1: IDENTIFICATION

Chemical Name: Waterborne Polyurethane Hardener

Product code: YL-W6500C

Purpose: Polyurethane hardener for paints or adhesives in industrial or commercial applications

Supplier: Guangdong Yele New Material Manufacturing Co., Ltd
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Recommended Applications: Decoration and protection of industrial, floor or wood products, preparation of adhesives, etc.

SECTION 2: HAZARDS IDENTIFICATION

- Key physical and chemical hazard information
 - Appearance: Water white to yellowish transparent liquid
 - Status: Liquid
 - Smell: Almost unscented
- GHS Hazard Category:
 - Acute toxicity, inhalation, Category 4 (H332)
 - Skin sensitivity, Category 1 (H317)
 - Eye irritation, Category 2 (H319)
 - Chronic hazard to the water environment, Category 3 (H412)
- Label elements:
 - Symbol: Exclamation mark.

Warning: Warning.



- Hazard Description:
 - H332: Harmful by inhalation
 - H317: May cause allergic skin reactions
 - H319: Causes severe eye irritation
 - H412: Harmful to aquatic organisms with long lasting effects
- Prevention Instructions:
 - P261: Avoid inhaling dust/smoke/gas/smoke/steam/spray
 - P280: Wear protective gloves/protective clothing/protective glasses/protective mask
 - P273: Do not release into the environment
 - P302+P352: If on skin: Rinse with plenty of soap and water
 - P312: Call a Poison Center or seek medical advice if you feel unwell
 - P378: Suitable fire extinguishers: carbon dioxide (CO₂), foam, powder, spray water in case of fire
 - Inappropriate fire extinguisher: high flow water jet
 - P403+P233: Store in a well ventilated place, keeping container airtight
 - P501: Dispose of containers of this product according to local regulations

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product Type: Chemical Mixtures.

Chemical name	CAS NO.	Content %
Water disperses polyisocyanate		100
1, 6-Hexamethylene diisocyanate	822-06-0	0.4MAX

Refer to section 8 for occupational exposure limits, if necessary.

SECTION 4: FIRST AID MEASURES

- General Rules: All suspicious phenomena or symptoms should be given medical attention. If unconscious,

Take reasonable care and seek medical attention. Do not give the unconscious person anything to eat.

- Inhalation: Give the sufferer fresh air, keep warm and ensure rest. If symptoms develop, consult a physician.
 - Eye Contact: Open eyes immediately rinse with plenty of water for 5-10 minutes, keep eyelids open, and consult an ophthalmologist.
 - Skin Contact: Remove the stained clothing and rinse the skin thoroughly with soap and water or with appropriate lotion. Organic solvents must not be used.
 - Intake: Keep the patient warm and ensure rest, as long as a little more to the hospital immediately sick, rest. Do not cause vomiting. If you are vomiting, keep your head down to reduce the risk of stomach contents passing into your lungs.
 - Note to the physician: There is no specific antidote and treatment should be based on the patient's symptoms and clinical status.
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SECTION 5: FIRE-FIGHTING MEASURES

- Medium suitable for fire extinguishing: Dry powder, foam, carbon dioxide. Close the container and spray it to cool it.
 - Not suitable method: Do not spray water, do not pour water, can spread the fire.
 - Harmful ingredients in products due to heat: Refer to section 10.
 - Special fire extinguishing method: Unknown.
 - Special protective equipment to protect fire personnel: Wear positive pressure self-contained breathing apparatus (SCBA) and fireproof clothing (including protection Fire helmet, clothes, trousers, boots and gloves). If there is no protective equipment or the protective equipment cannot be used, it should be protected fire protection area or safe distance.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

- Precautions for workers: Avoid contact with skin and eyes. Follow the safe work instructions described in Section 7 and Section 8 regarding protective measures; Ensure adequate ventilation and exhaust to allow unauthorized personnel to leave. Stay away from fire.
 - Protective Equipment: Observe Section 8.
 - Environmental protection measures: Do not discharge into soil, ditches, sewers, drains and groundwater.
 - Leakage: Prevent from entering sewers, ditches and basements. Absorbed with substances that can not be chemically reacted, and put the spilled substances into a suitable waste box, do not close and keep wet in a safe and ventilated place for a few days.
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SECTION 7: HANDLING AND STORAGE

- Operation Disposal: provide adequate ventilation or exhaust at the work site; Avoid

contact with skin and eyes, and avoid inhalation of volatiles. Do not ingest, drink or inhale the product in the premises in which it is handled. Personal protective equipment should refer to Section 8 and be kept away from substances of opposite nature mentioned in Section 10.

- Storage: Keep container closed. Store in a dry, cool, ventilated place. Store temperature reference technical data. Stay away from the opposite substances mentioned in Section 10.
 - Packaging Substances: Do not use compressed air when emptying containers. This container is not a pressure tank and must be filled with the same material.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- Allowable Concentrations (e.g. occupational exposure or biological limits) :

Chemical name	The benchmark	Type	The numerical
1, 6-Hexamethylene Diisocyanate	CN OEL	STEL	0.03mg/m ³

Note: The above data refer to GBZ 2.1-2007 Occupational Exposure Limits of Hazardous Factors in the Workplace Chemical Hazardous Factors.

- Engineering control methods: provide ventilation or other engineering controls to keep gas concentrations below occupational exposure limits. Make sure eyedrops and safe flushes are close to the work area.
 - Hygiene Measures: After work and food, smoking, washing hands before the toilet, forearms and face. Always wash contact skin immediately. Use an appropriate skin cleanser.
 - Personal Protective Equipment:
 - Respiratory Protection: Respiratory protection is required in work areas with inadequate ventilation. It is recommended to wear an air supply mask. If you are susceptible to respiratory and skin allergies, do not operate this product. Symptoms of respiratory infection may appear several hours after overexposure.
 - Hand Protection: Wear suitable protective gloves. Preferred glove materials include PVC, neoprene, nitrile/butadiene rubber. Note: the option shall be applicable to the special gloves and the duration of the gloves in the workplace should consider all the relevant work by production factors, these factors include, but are not limited to: other possible disposal of chemical, physical requirements (cutting, holes, sensitivity, thermal protection), the potential impact of gloves, gloves and provider's instructions and directions for use.
 - Eye Protection: Wear protective glasses.
 - Skin and body protection: Wear appropriate protective cover. Choose masks, boots, aprons or full-body protective clothing depending on the situation.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: Liquid
- Color: Colorless or yellowish
- Smell: Almost unscented

- PH value: Not measurable
 - Pour point: About -18°C
 - Initial boiling point: < 300°C
 - Flash point: About 160°C
 - Evaporation rate: No data
 - Saturated vapor pressure: About 16hPa/50°C
 - Relative vapor density: No data
 - Density: 1.15 g/cm³/20 °C
 - Solubility: Insoluble in water /15°C
 - N-octanol/Water partition coefficient: No data
 - Spontaneous ignition temperature: Not applicable
 - Dynamic viscosity: About 800 cP /25°C
 - Evaporation rate: No data
 - Ignition temperature: About 350°C
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SECTION 10: STABILITY AND REACTIVITY

- Stability: Stable under correct use of temperature and pressure.
 - Incompatible substances: Avoid contact with strong acids, strong bases, strong oxidants, water, amines, alcohols.
 - Hazardous decomposition products: When properly stored and handled, there are no hazardous decomposition products.
 - Possible Hazardous Reactions: Exothermic reaction with amines and alcohols, reaction with water to produce CO₂, in closed containers, risk of bursting due to increased pressure.
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SECTION 11: TOXICOLOGICAL INFORMATION

- Acute toxicity: There is no toxicological study available for this product, similar products and the information provided by the supplier are as follows.
 - Water dispersible polyisocyanate
 - Oral: half lethal dose(LD50), rat: > 2000mg/kg.
 - Transdermal: May cause irritation and irritation in skin contact.
 - Inhalation: half lethal concentration (LC50), rat, female: > 390mg/m³, 4h.
- Skin irritation or corrosion: mild irritation, long contact with the skin, may have brown spots or irritant reaction.
- Eye irritation or corrosion: If this product splashes into the eyes, it may irritate and temporarily damage the eyes.

- Respiratory or skin irritation: Irritant to respiratory tract, allergenic to guinea pigs.
 - Germ cell mutation: No signs of mutation.
 - Carcinogenicity: No test data were provided.
 - Reproductive toxicity: There is no evidence that it is harmful.
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SECTION 12: ECOLOGICAL INFORMATION

- Ecotoxicity: There is no available ecotoxicological study for this product, similar products and the information provided by the supplier are as follows.

Water disperses polyisocyanate

Acute fish toxicity: Half lethal concentration (LC50), zebrafish: >28.3 mg/L, 96h.

Acute algae toxicity: Half effective concentration (EC50), *Scenedesmus subcordiformis* >100mg/L, 72h.

Acute bacterial toxicity: Half effective concentration (EC50), Activated sludge: >10000mg/L.

- Persistence and degradability: 2%, 28d, solid content is not easy to degrade.
 - Potential bioaccumulation: No test data were provided.
 - Migration in soil: No test data are available.
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SECTION 13: DISPOSAL CONSIDERATIONS

- Residual waste: Recycled or handed over to a qualified waste cleaner for disposal in accordance with current regulations.
 - Contaminated containers and packaging: Recycle or hand over to a qualified waste cleaner for disposal in accordance with current regulations.
 - Handling method: This product is not allowed to be discharged into any ditch or sewer. It must be transported, stored, used and treated according to local regulations.
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SECTION 14: TRANSPORT INFORMATION

- Land transport: Non-dangerous goods
 - IATA: Non-dangerous goods
 - IMDG: Non-dangerous goods
 - Special notices for users: Non-dangerous goods. Keep it dry; the temperature should not be higher than + 50°C, lower than -15°C, away from food, acid and alkali.
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SECTION 15: REGULATORY INFORMATION

- Name of regulations governing the chemical in the country or region where this MSDS is used:

China: The following regulations, regulations and standards provide for the safe use, storage, transportation, loading and unloading, classification and marking of chemicals.

- Environmental Protection Law of the People's Republic of China.
 - Regulations on the Safety Administration of Hazardous Chemicals (promulgated by the State Council on January 26, 2002).
 - Regulations on the Safe Use of Chemicals in the Workplace ([1996] No.423 of Ministry of Labor).
 - Classification and Marking of Commonly Used Hazardous Chemicals (GB13690-1992).
 - General Rules for Storage of Common Dangerous Chemicals (GB15603-1995).
 - Contents and Project Sequence of Technical Specification for Chemical Safety (GB/T16483-2008).
 - Global Harmonized Classification and Labelling of Chemicals (GHS).
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SECTION 16: OTHER INFORMATION

This MSDS(Material Safety Data Sheet) product provides guidance on health, safety and the environment and is based on current experience, EEC and national law without any guarantee of technical effectiveness or suitability for special application. When used, proper protection should be made with reference to this MSDS. Therefore, these products are only suitable for industrial or commercial applications and are not suitable for home use. As the supplier has no control over the specific conditions under which the product is used, it is the user's responsibility to ensure compliance with the relevant legal requirements

For more information please contact Guangdong Yele New Material Manufacturing Co., Ltd.