WASHINTA

# Material Safety Data Sheet(MSDS)

联全球，启未来
Join together, create future

## Part I : Chemical and Enterprise Identification

Chemical Chinese Name: Acrylic Polyurethane Clear Topcoat

English Name of Chemical: Clearcoat

Common or Trade Name: 2K Polyurethane Clear Coat (also known as: Polyurethane Varnish, 2K PU Clear Coat)

Enterprise Name: Zhaoqing Washinta Chemical Coatings Co., Ltd.

Address: No. 13 Baoshi Road, Dawang High-Tech Zone, Zhaoqing, Guangdong, China

Emergency Contact Number: +86-758-3602112

Fax: +86-758-6620303

Email Address: exp4@washinta.com

National Emergency Number: (0532) 3889090; (0532) 3889191

Safety Data Sheet Code: MSDS-HXT-1011

Date of Effect: March 20, 2019

## Part II : Hazardous Ingredients and Composition Information

**Pure Substance** ☐ **Mixture** ☑

| CAS# | Hazardous Components | MAC | TWA | STEL | Vapor Pressure | Color paint / Colored paint | Is it hazardous |
|---|---|---|---|---|---|---|---|
| | | mg/m³ | mg/m³ | mg/m³ | kPa/20℃ | Weight % | |
| 1330-20-7 | Xylene | -- | 50 | 100 | 0.88 | 10-20 | YES |
| 25551-13-7 | Trimethylbenzene | 125[b] | 100[a] | -- | 0.18~0.25 | 1-5 | YES |
| 123-86-4 | Butyl Acetate | -- | 200 | 300 | 1.2 | 10-20 | YES |
| 108-65-6 | Propylene Glycol Methyl Ether Acetate (PGMEA) | 275[a] | -- | -- | 0.5/25℃ | 5-10 | YES |
| | Additives | -- | 3 | 4 | NOT APPLICABLE | 0.1-1 | |
| 9003-01-4 | Acrylic Resin | -- | -- | -- | NOT APPLICABLE | 60-80 | |
| | Relative density (water = 1) | | | | | 0.99 | |
| | Flash point (closed cup, °C) | | | | | 25 | |
| | Hazard Class (GB 13690-92) | | | | | 3.3 | |
| | Packaging Category (GB/T 15098-94) | | | | | Ⅲ | |

Note: The data on MAC/TWA/STEL in the table are mainly sourced from the National Occupational Health Standards of the People's Republic of China (GBZ 2-2002).

a, b: Data are sourced from the International Chemical Safety Cards Handbook, International Chemical Safety Cards (www.brici.ac.cn/icsc/), and the Comprehensive Handbook of Safety Technology for Hazardous Chemicals. Among these, b is converted based on data from the American Conference of Governmental Industrial Hygienists (ACGIH).

**Part III : Hazard Overview**

Hazard Class: Class 3.3 High Flash Point Flammable Liquid

Routes of Entry: Inhalation, Ingestion, Skin Contact, Eye Contact

Health Hazards: This product can irritate and cause damage to the skin and eyes. Its vapors irritate the eyes and respiratory tract and have a paralyzing effect on the nervous system. Prolonged exposure to high concentrations may be harmful to health. Excessive inhalation of high concentrations of vapor over an extended period can lead to fainting or even death.

Main Symptoms: Excessive inhalation of vapor or spray mist may cause headaches, dizziness, nausea, and lack of coordination; eye and skin contact may result in congestion, itching, and a burning sensation.

Environmental Hazards: This substance is hazardous to the environment, and special attention should be paid to its potential for water pollution.

Fire and Explosion Hazard: Flammable; poses a combustion risk when exposed to open flames or high temperatures. May explode when exposed to high temperatures in a sealed container.

**Part IV: First Aid Measures**

Skin Contact: Remove contaminated clothing and thoroughly rinse the skin with soap and water.

Eye Contact: Immediately lift the upper and lower eyelids and rinse with flowing water or physiological saline for at least 15 minutes. Seek medical attention.

Inhalation: Quickly move away from the scene to fresh air. Keep the respiratory tract clear. Administer oxygen if breathing is difficult. If breathing and heartbeat stop, perform artificial respiration and cardiac massage immediately. Seek medical attention immediately.

Ingestion: If the victim is about to lose consciousness, is unconscious, or convulsing, do not administer anything by mouth. If the victim is conscious, have them rinse their mouth thoroughly with water. Do not induce vomiting forcefully. Provide the victim with plenty of warm water to drink. If spontaneous vomiting occurs, have the victim lean forward to reduce the risk of aspiration and allow them to rinse their mouth and repeatedly drink water. Seek medical attention immediately.

**Part V: Firefighting Measures**

Hazard Characteristics: This product is flammable and may ignite upon contact with open flames or high heat. Its vapor is heavier than air and can spread to considerable distances at low levels, potentially igniting upon contact with a fire source. Exposure to high temperatures may increase pressure inside the container, posing a risk of rupture and explosion.

Hazardous Combustion Products: CO, $CO_2$

Firefighting Methods and Agents: Foam, carbon dioxide, dry chemical powder, or sand can be used for extinguishing. Unsuitable extinguishing agent: Water jet.

Firefighting Precautions: Firefighters should wear self-contained breathing apparatus, firefighting clothing, and protective gloves. Water spray is ineffective for extinguishing; fine water spray can be used to cool the external walls of sealed containers to prevent excessive internal pressure, spontaneous combustion due to high temperatures, or even explosion.

**Part VI: Leakage Emergency Response**

Emergency Response: Cut off ignition sources and ensure adequate ventilation at the scene. Emergency personnel are advised to wear self-contained positive pressure breathing apparatus. Attempt to cut off the source of the leak if possible. Prevent the substance from entering sewers, flood drainage ditches, or other confined spaces.

Cleanup Methods: Absorb with sand, activated carbon, or other inert materials, and collect in labeled, covered containers.

**Part VII: Handling and Storage**

Precautions for Handling: Keep away from heat sources and open flames. Avoid contact with eyes and skin. Keep containers tightly closed. Use adequate ventilation equipment on-site. Employ approved grounding devices. Thoroughly clean after use.

Storage Precautions: Store in a cool, well-ventilated warehouse. Keep containers sealed. Prohibit smoking in storage areas. Keep away from ignition sources, heat, and direct sunlight. Use explosion-proof lighting and ventilation facilities. Avoid using mechanical equipment and tools that may generate sparks. Employ approved grounding devices. Storage areas should be equipped with emergency leak-handling equipment and appropriate containment materials.

**Part VIII: Exposure Controls/Personal Protection**

Maximum Allowable Concentration: For China MAC, TWA, and STEL, refer to Part II.

Monitoring Method: Gas chromatography

Engineering Controls: Implement local exhaust ventilation.

Respiratory Protection: If local ventilation is insufficient, wear a filtering half-mask respirator for organic vapors. During spraying operations, use a self-contained breathing apparatus. During grinding operations, wear a dust mask.

Eye Protection: Wear safety goggles.

Body Protection: Wear standard-configured work clothing.

Hand Protection: Wear solvent-resistant rubber gloves.

Other Precautions: Prohibit smoking, eating, and drinking in the work area. Shower and change clothes after work. Conduct pre-employment and periodic health examinations.

**Part IX: Physical and Chemical Properties**

Appearance and State: White viscous liquid with a characteristic odor.

Melting Point (°C): < -20°C

Relative Density (water = 1): See Part II

Boiling Point (°C): 126-146°C

Relative Vapor Density (air = 1): Heavier than air

Saturated Vapor Pressure (kPa): See Part II

Heat of Combustion (kJ/mol): No data available

Critical Temperature (°C): No data available

Critical Pressure (MPa): No data available

Log Pow (Octanol-Water Partition Coefficient): No data available

Flash Point (°C): See Part II

Upper Explosion Limit % (V/V): 1.0 (based on xylene) / 1.2 (based on butyl acetate)

Ignition Temperature (°C): No data available

Lower Explosion Limit % (V/V): 7.0 (based on xylene) / 7.6 (based on butyl acetate)

Solubility: Insoluble in water; miscible with esters, ketones, alcohol ethers, aromatic hydrocarbons, and other solvents.

Main Applications: Used as a primer coat in automotive coatings to improve adhesion of the entire coating to specific materials.

**Part X : Stability and Reactivity**

Stability: Stable

Incompatible Materials: Strong oxidizing agents.

Conditions to Avoid: Open flames, high heat.

Polymerization Hazard: Will not occur.

Decomposition Products: Carbon monoxide, carbon dioxide.

**Part XI : Toxicological Information**

*Health hazards are primarily caused by organic solvents contained in the composition.

Acute Toxicity: $LD_{50}$ 2–4.3 g/kg (rat, oral); $LC_{50}$ 19.0 g/$m^3$, 4h (rat inhalation) (based on xylene).

Acute Poisoning: Excessive inhalation may cause headaches, dizziness, fatigue, nausea, and other symptoms.

Chronic Poisoning: No data available on chronic poisoning via inhalation; prolonged skin contact may cause dryness and cracking, potentially leading to dermatitis.

Irritancy: Vapors irritate the nose and throat, with increasing irritation at higher concentrations; liquid contact with the skin may cause itching.

| | |
|---|---|
| Subacute and Chronic Toxicity: | No data available. |
| Mutagenicity: | No data available. |
| Teratogenicity: | No data available. |
| Carcinogenicity: | No data available. |

**Part XII: Ecological Information**

Ecotoxicity: Prevent the product from contacting groundwater, waterways, and drainage systems. Biodegradability: Animal studies indicate rapid decomposition into acetic acid and butanol, which are excreted via urine.

| | |
|---|---|
| Abiotic Degradation: | No data available. |
| Bioaccumulation: | No data available. |

**Part XIII : Disposal Considerations**

Waste Nature: Hazardous waste.

Disposal Methods: Dispose of in accordance with local regulations. Controlled incineration is recommended. Used containers may be reused after thorough cleaning.

**Part XIV: Transport Information**

Dangerous Goods Number (CN No.): 32198, High Flash Point Flammable Liquid (as per GB 12268-2005/GB 6944-2005).

UN Number: 1263

Packaging Labels: Primary label, Class 7, Flammable; Secondary label, Class 15, Harmful (as per GB 190-90).

Packaging Category: III (as per GB/T 15098-94).

Packaging Methods: Open steel drums; metal drums (cans) in ordinary cardboard or wooden boxes.

Transport Precautions: Transport during early morning or evening in summer to avoid direct sunlight. Follow designated routes during transportation.

**Part XV: Regulatory Information**

Regulations on the Safe Management of Hazardous Chemicals (issued by the State Council on March 15, 2002) specify corresponding requirements for the safe production, use, storage, transport, and handling of hazardous chemicals.

Classification and Labels of Common Hazardous Chemicals (GB 13690-92) classify this product as a Class 3.3 High Flash Point Flammable Liquid.

**Part XVI : Other Information**

**References:**

Zhou Guotai, Comprehensive Handbook of Safety Technology for Hazardous Chemicals, Chemical Industry Press, 1997.

Cai Jianqiu, Handbook of International Chemical Safety Cards, Chemical Industry Press, 1995.

National Bureau of Environmental Protection Toxic Chemicals Management Office & Beijing Chemical Research Institute (Eds.), Handbook of Chemical Toxicity Regulations and Environmental Data, China Environmental Science Press, 1992.

Occupational Exposure Limits for Hazardous Agents in the Workplace, National Occupational Health Standards of the People's Republic of China (GBZ 2-2002).

International Chemical Safety Cards, www.brici.ac.cn/icsc/.

Explanation of Some Abbreviations:

MAC: Maximum Allowable Concentration (adopted in China and the former Soviet Union), referring to the concentration that should not be exceeded at any time during a workday.

TWA: Time-Weighted Average Permissible Concentration (8 hours), a standard adopted by the United States, Western Europe, Japan, and others. Also written as TLV-TWA.

STEL: Short-Term Exposure Limit (15 minutes). Also written as TLV-STEL.

Date of Form Completion: March 20, 2019

Department: Technology Department, Washinta Chemical Coatings Co., Ltd.

Data Review Unit: ×××

Revision Notes: ×××