

Material Safety Data Sheet (MSDS) PAGE 1

Part 1: Chemicals and Corporate Identification

Chemical Name (Chinese): E962 insulating varnish

Common or trade names of chemicals: varnish, insulating oil

Chemical formula: mixture

Company Name: Zhuhai Changxian New Material Technology Co., Ltd.

Address: Langwan Road, Fine Chemical Industrial Zone, Gaolan Port Economic Zone, Zhuhai City

Postal code: 519050

Email address: szwkb@changxiankeji.com

Fax number: +86-755-26689087

Telephone numbers: +86-755-26852596 +86-755-26852597 +86-755-26864069

Company emergency hotline: +86-13802269905

National Emergency Hotline: +86-532-83889090

Part 2: Hazard Overview

Emergency Overview: Flammable liquids and vapors that may cause drowsiness or dizziness; inhalation is harmful.

GHS Hazard Categories: Flammable Liquids, Category 2; Skin Irritation/Corrosion: Category 2; Reproductive Toxicity: Category 2; Specific Target Organ Toxicity: Single Exposure, Category 3 (Anesthetic Effect); Specific Target Organ Toxicity: Repeated Exposure, Category 2; Inhalation Hazard: Category 1; Skin Irritation/Corrosion: Category 2; Hazards to the Aquatic Environment - Acute Hazards, Category 2; Hazards to the Aquatic Environment - Long-Term Hazards, Category 3

Label elements are in accordance with GB 15258-2009 (Regulations for the Preparation of Safety Labels for Chemicals).

Pictograms:



Warning word: Danger

Hazard statement: Flammable liquid and vapor; harmful if swallowed; harmful if inhaled; causes skin irritation; harmful to aquatic life.

Prevention instructions:

Preventive measures Keep away from sparks, open flames, and heat sources. Keep containers tightly sealed. Use explosion-proof electrical, ventilation, and lighting equipment, and use machinery and tools that do not generate electrical sparks. Take anti-static measures. Wear protective gloves, safety glasses, and a face shield. Avoid contact with eyes and skin; wash thoroughly after handling.

Material Safety Data Sheet (MSDS) PAGE 2

Avoid inhaling vapors or fumes. Do not release into the environment.

Incident Response: In case of fire, use foam, carbon dioxide, dry powder, or sand to extinguish the fire. If inhaled, move to a well-ventilated area to rest. Spray water to keep containers in the fire area cool until the fire is extinguished. If skin (or hair) comes into contact: Immediately remove contaminated clothing, wash thoroughly with soap and water, and take a shower. Secure storage Store in a cool, dark, and well-ventilated warehouse. Keep containers tightly sealed. Maintain a low temperature.

Waste disposal Before disposal, consult relevant national and local regulations, or use incineration.

Physical and chemical hazards:

It is flammable, and its vapor can form an explosive mixture when mixed with air.

Health hazards: It has an irritating effect on the skin and mucous membranes, and high concentrations have an anesthetic effect on the central nervous system.

Acute poisoning: Inhalation of high concentrations of this product in a short period of time can cause obvious irritation symptoms to the eyes and upper respiratory tract, as well as headache, dizziness, nausea, etc.

Chronic effects: Long-term exposure can cause neurasthenia syndrome, and prolonged skin contact can cause dryness, cracking, and dermatitis.

Part 3: Ingredient/Composition Information

Pure ☐ Mixtures ☒

Substance composition concentration CAS NO.

Modified polyester resin 30-50% 63148-69-6

Benzene solvents 30-50% 1330-20-7, 108-88-3

Alcohol solvents 1-3% 71-36-3

Other additives 1-3% Trade Secrets

Part 4: First Aid Measures

Inhalation: Immediately move to fresh air.

Skin contact: Remove contaminated clothing and wash skin thoroughly with soap and water.

Eye contact: Immediately open the upper and lower eyelids and rinse with running water or saline solution for at least 15 minutes, then seek medical attention.

If ingested: Rinse mouth with water and seek medical attention.

Material Safety Data Sheet (MSDS) PAGE 3

Part 5: Fire Prevention Measures

Extinguishing agents: Foam, carbon dioxide, dry powder, and sand can be used to extinguish fires.

Special hazards: Flammable; its vapor forms an explosive mixture with air. It can react with oxidizers.

Firefighting Precautions and Protective Measures: Firefighters must wear gas masks and full-body fire suits and fight the fire from upwind. Move containers from the fire area to an open space if possible. Spray water to keep containers in the fire area cool until the fire is extinguished. If containers suddenly make unusual noises or exhibit unusual phenomena, evacuate immediately.

Hazardous combustion products: CO , CO2

Part 6 Leakage Emergency Handling

Personnel protective measures: Immediately evacuate personnel from the contaminated area to an upwind location and isolate the area, strictly restricting access. Eliminate ignition sources. Emergency responders are advised to wear self-contained positive pressure breathing apparatus and anti-static work clothes. Cut off the leak source if possible.

Environmental protection measures: Prevent leaked materials from entering water bodies, sewers, basements, or confined spaces.

Methods for containing and cleaning up spilled chemicals and the disposal materials used:

Small leak It can be adsorbed or absorbed by sand or other non-combustible materials.

Massive leak Construct dikes or dig pits to contain the vapors; cover with foam to reduce vapor hazards.

Part 7. Handling and Storage

Operating Precautions: Operate in a closed system with enhanced ventilation.

Operators must be specially trained and strictly adhere to operating procedures.

It is recommended that operators wear self-priming filter respirators (half-face masks) and anti-static work clothes. Keep away from sources of ignition and heat; smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. Prevent vapor leakage into the workplace air. Avoid contact with oxidizers and alkalis. Provide appropriate types and quantities of fire-fighting equipment and leakage emergency response

Material Safety Data Sheet (MSDS) PAGE 4

equipment. Smoking is strictly prohibited at the work site. Avoid inhalation of high concentrations.

Storage Precautions: Store in a dark, cool, and well-ventilated warehouse. Keep away from fire and heat sources. Keep containers sealed. Shelf life is generally six months from the date of production at temperatures below 25° C. Warehouse lighting and ventilation systems should be explosion-proof, with switches located outside the warehouse. The use of machinery and tools that may generate sparks is prohibited. The storage area should be equipped with spill response equipment.

Part 8 Exposure Controls/Personal Protection

Exposure limit: 100 mg/m³ (skin)

Biological exposure limit: 1.5 g/g (creatine liver)

Monitoring methods: Methods for determining toxic substances in the air

Engineering controls: The production process is closed, and ventilation is enhanced.

Respiratory protection: Wear a filter-type gas mask (half-face mask) for high-concentration exposure.

Eye protection: Wear chemical protective eyewear.

Body protection: Wear protective clothing against toxic substances.

Hand protection: Wear oil-resistant rubber gloves

Other protective measures: Smoking, eating, and drinking are prohibited at the work site. Shower and change clothes after work.

Part 9: Physical and Chemical Properties

Appearance and properties: Pale yellow transparent liquid.

Viscosity (Ford cup 4, seconds, 25° C): 40-60

Relative density (25°C): 0.95±0.02

(Generally, a 1° C increase in temperature results in a decrease in specific gravity of approximately 0.001, and conversely, a 1° C decrease in temperature results in an increase in specific gravity of approximately 0.001.)

Saturated vapor pressure (mmHg): 35/26.0°C

flash Point (° C): 23

Ignition temperature (° C): 528

Solid content (%): 40±2.0

Explosive limit (lower limit), % (vol): 1.0

Material Safety Data Sheet (MSDS) PAGE 5

(Maximum), % (vol): 7.0

Drying time: At room temperature and RH $\leq$ 65%, surface drying: 10-15 min;
complete drying: 24 h

(Copper sheet, tinplate) (80°C) Surface dry: 5-10 min; Hard dry: 75 min

Main applications: Primarily used for coating or impregnating the surfaces of various electronic components such as transformers and inductors. It can be air-dried or oven-dried. Baking temperature generally does not exceed 100°C.

Part 10: Stability and Reactivity

Stability: Stable

Incompatible materials: strong oxidizing agents, strong acids.

Conditions to avoid: open flame, high heat, static electricity

Polymerization hazard: Cannot occur

Decomposition products: carbon monoxide, carbon dioxide

Part 11: Toxicological Information

name	result	type	dose	Exposure
xylene	LC50 inhalation	rats	5000ppm	4H
Toluene	LC50 inhalation	rats	49g/m3	4H

Conclusion/Overview

Skin irritation or corrosion: Transdermal rabbit irritation: 500mg (24h), moderate irritation.

Eye irritation or corrosion: 300 ppm in human eyes can cause irritation.

Respiratory or skin allergies: No data available

Mutagenicity: Micronucleus assay: Mice orally, 200 mg/kg

Carcinogenicity: No data available.

Reproductive toxicity: In rats, inhalation of the lowest toxic concentration of TCL0, 1800 mg/m³ (24H), 7-20 days after conception, caused central nervous system toxicity and embryotoxicity.

Part 12: Ecological Information

LC50 34.27 mg/L (96H) Blackhead Carp

Durability and Degradability: Biodegradability: Easily and rapidly biodegraded

Non-biodegradability: Photo-oxidation half-life (H) in water: 321-1284

Photo-oxidation half-life (H) in air: 10⁻¹⁰⁴

Material Safety Data Sheet (MSDS) PAGE 6

Potential bioaccumulation: Based on the Kow value, this substance may have some bioaccumulation potential.

Soil mobility: Based on Kow values, this substance may have some mobility.

Part 13: Waste Disposal

Waste chemicals: Dispose of by incineration

Contaminated packaging: Return the containers to the manufacturer or dispose of them in accordance with relevant national and local regulations.

Waste Disposal Considerations: Waste generation should be avoided or minimized as much as possible. Significant quantities of residual product waste should be disposed of by a licensed waste management contractor, including residues and non-renewable products. The disposal of products, solutions, and their byproducts should comply with environmental protection, waste management regulations, and applicable local regulations.

Waste disposal methods: Before disposal, relevant national and local regulations should be consulted, and controlled incineration should be used.

Part 14: Transportation Information

Dangerous goods number: 33646

UN number: 1866

Packaging category: II

Packaging markings:



Packaging method: 20L/drum

Transportation Precautions: Transport vehicles should be equipped with appropriate types and quantities of fire-fighting equipment and leakage emergency handling equipment. Transportation is best done in the early morning or late evening during summer. Tank trucks used for transportation should have grounding chains, and perforated baffles can be installed inside the tank to reduce static electricity generated by vibration. Mixing or transporting with oxidizers, acids, alkali metals, amines, or food chemicals is strictly prohibited. Protect from exposure to sunlight, rain, and high temperatures during transportation. When stopping en route, keep away from sources of ignition, heat sources, and high-temperature areas. Vehicles transporting this item must have flame arresters on their exhaust pipes, and the use of machinery and tools that may generate sparks during loading and unloading is prohibited. When transporting by road, follow the prescribed routes and do not stop in

Material Safety Data Sheet (MSDS) PAGE 7

residential areas or densely populated areas. When transporting by rail, shunting is prohibited .

Part 15: Regulatory Information

The following laws, regulations, rules and standards stipulate the corresponding provisions for the management of this chemical.

- Occupational Disease Prevention and Control Law of the People's Republic of China
- Regulations on the Safety Management of Hazardous Chemicals
- Labor Protection Regulations for Workplaces Using Toxic Substances
- Regulations on the Administration of Precursor Chemicals
- International Conventions

Part 16: Other Information

Drafting and revision information: 2025.01.05. Technical Department

Training Recommendation: Provide relevant training to users.

Disclaimer: The above information is not specific to this product and is for reference only. No warranty is provided. It is believed that the above-mentioned industrial safety and hygiene procedures are generally feasible. However, users should assess for themselves whether the above recommendations are appropriate for their individual circumstances.