

Material Safety Data Sheet (MSDS)

Section 1: Chemical Product and Company Identification

Chemical Name: E962-788 Environmentally Friendly Insulating Varnish

Synonyms / Trade Name: Varnish; insulating varnish

Chemical Formula: Mixture

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

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Section 2: Hazards Identification

Emergency Overview: Highly flammable liquid and vapour.

GHS Classification: Flammable Liquids, Category 2.

Label elements in accordance with GB 15258-2009 (General Rules for Preparation of Chemical Safety Labels)

Pictograms:



Signal Word: Danger

Hazard Statements: Highly flammable liquid and vapour.

Precautionary Statements:

Prevention: Keep away from ignition sources and heat. Store in a shaded, cool and ventilated area. Keep container tightly closed. Use explosion-proof lighting and ventilation. Do not use spark-producing equipment or tools. Take precautions against static discharge.

Response: In case of fire, use foam, carbon dioxide or dry powder. Cool containers with water spray until the fire is extinguished. IF ON SKIN (or hair), immediately remove contaminated clothing and wash thoroughly with soap and clean water; shower.

Storage: Store in a shaded, cool and ventilated warehouse away from ignition sources and heat. Keep container tightly closed.

Disposal: Consult national and local regulations before disposal, or dispose of by incineration.

Physical and Chemical Hazards:

Physical and Chemical Hazards: Highly flammable. Vapour may form an explosive mixture with air and may ignite or explode when exposed to open flame or high heat.

Health Hazards: Central nervous system depressant. Initial excitation may be followed by depression. Long-term exposure to high vapour concentrations may cause headache,

Material Safety Data Sheet (MSDS)

dizziness and nausea, and may irritate the eyes, nose and throat. Prolonged skin contact may cause dryness, chapping and dermatitis.

Section 3: Composition / Information on Ingredients

Pure Substance Mixture ■

Ingredient Concentration CAS No.

Modified acrylic resin 35-45% 25035-69-2

Ether-ester solvents 25-35% 108-65-6; 107-98-2

Alcohol solvent 25-40% 64-17-5

Additives 0.5-1% Trade secret

Section 4: First Aid Measures

Inhalation: Immediately move the affected person to fresh air.

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

Eye Contact: Immediately hold the eyelids open and flush with running water or saline for at least 15 minutes. Seek medical attention.

Ingestion: Rinse the mouth with clean water and seek medical attention.

Section 5: Fire Fighting Measures

Extinguishing Media: Foam, carbon dioxide, dry powder or sand.

Special Hazards: Flammable. Vapour may form an explosive mixture with air. May react with oxidizing agents.

Firefighting Precautions: Firefighters shall wear respiratory protection and full protective clothing and fight the fire from upwind. Move containers to an open area if possible. Cool containers with water spray until the fire is completely extinguished. Evacuate immediately if a container emits abnormal sounds or shows abnormal signs.

Hazardous Combustion Products: Carbon monoxide and carbon dioxide.

Section 6: Accidental Release Measures

Personal Precautions: Evacuate personnel from the contaminated area to the upwind side, isolate the area and strictly restrict access. Eliminate ignition sources. Emergency responders should wear self-contained positive-pressure respirators and anti-static work clothing. Stop the leak if this can be done safely.

Environmental Precautions: Prevent the released material from entering water bodies, sewers, basements or confined spaces.

Containment and Cleanup:

Small Spill: Absorb with sand or another non-combustible material.

Large Spill: Construct dikes or excavate a pit for containment; cover with foam to reduce vapour hazards

Material Safety Data Sheet (MSDS)

Section 7: Handling and Storage

Handling Precautions: Use closed handling with adequate local exhaust and general ventilation. Operators shall be specially trained and follow operating procedures. Wear a filter respirator (half mask) and anti-static work clothes. Keep away from ignition sources and heat; smoking is prohibited. Use explosion-proof ventilation, lighting and equipment, and non-sparking tools. Prevent vapour release into workplace air. Avoid contact with oxidizing agents and alkalis. Keep appropriate fire-fighting and spill-response equipment available. Avoid inhalation of high concentrations.

Storage Precautions: Store in a shaded, cool and well-ventilated warehouse away from ignition sources and heat. Keep containers tightly closed. Use explosion-proof lighting and ventilation, with switches outside the warehouse. Do not use spark-producing equipment or tools. Keep spill-response equipment in the storage area. Shelf life: six months from the date of production when stored below 25°C.

Section 8: Exposure Controls / Personal Protection

Exposure Limit: No Chinese occupational exposure limit established.

Biological Exposure Limit: No standard established.

Monitoring Method: No standard method established for workplace air or biological monitoring.

Engineering Controls: Closed production process with general ventilation. Provide safety shower and eyewash facilities.

Respiratory Protection: No special protection is normally required. Wear a filter half-mask for prolonged or high-concentration exposure.

Eye Protection: Wear safety glasses.

Body Protection: Wear anti-static work clothes.

Hand Protection: Wear general protective gloves.

Other Protection: No smoking, eating or drinking in the workplace. Observe good personal hygiene.

Section 9: Physical and Chemical Properties

Appearance and State: Slightly yellow transparent to slightly hazy liquid.

Viscosity (Tu-4 cup, 25°C): 52±3 s.

Relative Density (20°C): 0.94±0.03.

Flash Point: 18°C. Non-volatile content: 37±3%. Explosive Limits: 3.3-19.0 vol%.

Main Uses: Surface coating or impregnation of transformers, inductive coils and other electronic components.

Section 10: Stability and Reactivity

Stability: Stable.

Incompatible Materials: Strong oxidizing agents and strong acids.

Material Safety Data Sheet (MSDS)

Conditions to Avoid: Open flame, high heat and static electricity.

Polymerization Hazard: Will not occur.

Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

Section 11: Toxicological Information

Acute Toxicity: Alcohol solvent — inhalation LC50, rat, 20,000 ppm/10 h; ether-ester solvent — inhalation LC50, rat, 1,500 ppm/7 h.

Skin Corrosion/Irritation: Rabbit dermal, 20 mg/24 h — moderate irritation.

Serious Eye Damage/Irritation: Rabbit eye, 500 mg — severe irritation.

Respiratory or Skin Sensitization: No data available.

Carcinogenicity: IARC Group 1 classification applies to alcoholic beverages as stated in the source MSDS.

Reproductive Toxicity: Developmental effects were reported in animal studies at various doses and routes.

Section 12: Ecological Information

Alcohol solvent: Daphnia LC50 9,268-14,221 mg/L (48 h). Ether-ester solvent: sunfish LC50 >10,000 mg/L (96 h).

Biodegradability: Aerobic biodegradation half-life 6.5-26 h; anaerobic biodegradation half-life 26-104 h.

Abiotic Degradability: Photo-oxidation half-life in water: 8,020-3.20×10⁵ h.

Photo-oxidation half-life in air: 12.2-122 h.

Bioaccumulative Potential: Based on the Kow value, bioaccumulation is expected to be low.

Mobility in Soil: Based on the Kow value, the substance may be mobile in soil.

Section 13: Disposal Considerations

Waste Chemical: Dispose of by incineration.

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

Disposal Precautions: Avoid or minimize waste generation where possible. Significant quantities of residual product shall be handled by a licensed waste disposal contractor.

Disposal of the product, solutions and by-products shall comply with environmental protection, waste disposal and applicable local regulations.

Disposal Method: Consult national and local regulations before disposal; use controlled incineration.

Material Safety Data Sheet (MSDS)

Section 14: Transport Information

Dangerous Goods Number: 32198

UN Number: Not specified

Packing Group: II

Packaging Method: 20 L pail

Transport Precautions: Vehicles shall carry suitable fire-fighting and spill-response equipment. Prefer transport in the early morning or evening during summer. Ground tank vehicles to reduce static electricity. Do not transport together with oxidizers, acids, alkali metals, amines or food chemicals. Protect from sunlight, rain and high temperatures. Keep away from ignition sources and heat during stops. Vehicle exhaust pipes shall be fitted with flame arresters. Do not use spark-producing equipment for loading or unloading. Follow prescribed road routes and avoid stopping in residential or densely populated areas. Railway transport shall not use loose shunting.

Section 15: Regulatory Information

The following laws, regulations, rules and standards provide for the management of this chemical.

Law of the People's Republic of China on Prevention and Control of Occupational Diseases — Catalogue of Occupational Disease Classification: Not listed.

Regulations on the Safety Management of Hazardous Chemicals — Catalogue of Hazardous Chemicals: Listed. Catalogue of Explosive-Prone Hazardous Chemicals: Not listed. Catalogue of Hazardous Chemicals Subject to Key Supervision: Not listed. GB 18218-2018 Identification of Major Hazard Installations for Hazardous Chemicals (Table 1): Listed as a flammable liquid; threshold quantity: 500 t.

Regulations on Labour Protection in Workplaces Using Toxic Substances — Catalogue of Highly Toxic Substances: Not listed.

Regulations on the Administration of Precursor Chemicals — Catalogue of Classification and Varieties of Precursor Chemicals: Not listed.

International Conventions — Stockholm Convention: Not listed. Rotterdam Convention: Not listed. Montreal Protocol: Not listed.

Section 16: Other Information

Preparation and Revision Information: 2025.03.10 — Technical Department.

Training Recommendations: Provide relevant training to users.

Disclaimer: The above information is not a product specification and is provided for reference only; no warranty is assumed. The recommended industrial safety and hygiene procedures are considered practicable under normal conditions. Users remain responsible for determining whether these recommendations are appropriate for their specific conditions of use.