

Material Safety Data Sheet (MSDS)

Part 1: Chemicals and Corporate Identification

Chemical Name (Chinese): E962-788 Insulating Varnish

Common name or trade name of chemical: Vapor insulating oil

Chemical formula: mixture

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

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National Emergency Hotline: +86-532-83889090

Part 2: Hazard Overview

Emergency Overview: Flammable Liquids and Vapors

GHS Hazard Class: Flammable Liquids, Category 2

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

Pictograms:



Signal word: flammable

Warning word: Danger

Hazard statement: Flammable liquids and vapors

Prevention instructions:

Preventive measures Keep away from fire and heat sources; protect from light, store in a cool, well-ventilated area; keep containers sealed. Warehouse lighting and ventilation systems should be explosion-proof. The use of machinery and tools that may generate sparks is prohibited. Implement anti-static measures.

Accident Response Foam, carbon dioxide, or dry powder can be used to extinguish the fire. Spray water to keep containers in the fire area cool until the fire is extinguished. If skin (or hair) comes into contact with the fire: 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, away from fire and heat sources. Keep containers sealed.

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

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Physical and chemical hazards:

It is flammable, and its vapor forms an explosive mixture with air, which can cause combustion and explosion when exposed to open flames or high heat.

Health hazards:

Central nervous system depressants initially cause excitation, followed by inhibition. Long-term exposure to high concentrations of vapor can cause headaches, dizziness, and nausea, and may cause irritation of the eyes, nose, and throat. Prolonged skin contact can cause dryness, cracking, and dermatitis.

Part 3: Ingredient/Composition Information

Pure ☐ Mixtures ☒

Concentration of substance components (W/W, %) CAS.NO

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

Ether ester solvent 25-35% 108-65-6, 107-98-2

Alcohol solvent 25-40% 64-17-5

Additives 0.5-1 % (Trade Secret)

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 . Seek medical attention.

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

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 self-priming protective 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

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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, providing adequate local exhaust and general ventilation. Operators must be specially trained and strictly adhere to operating procedures. It is recommended that operators wear self-priming filter 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 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 limits: China has not established standards.

Biological exposure limits: No standards have been established.

Monitoring methods: Methods for determining toxic substances in the air No standards have been established; biological detection methods No standards have

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been established.

Engineering controls: The production process is closed and fully ventilated.

Safe shower and eyewash stations are provided.

Respiratory protection: Generally, no special protection is required. For prolonged or high-concentration exposure, a filtering half-face mask may be worn.

Eye protection: Wear protective glasses

Body protection: Wear anti-static work clothes

Hand protection: Wear general protective gloves

Other precautions: Smoking, eating, and drinking are prohibited at the work site.

Pay attention to personal hygiene.

Part 9: Physical and Chemical Properties

Appearance and properties: Slightly yellow, transparent to slightly cloudy liquid

Viscosity (Ford cup 4 , seconds, 25 ° C): $52 \pm 3'' / 25^{\circ} \text{C}$

Relative density (20°C): 0.94 ± 0.03

(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.)

flash Point (° C): 18

Solid content (%): 37 ± 3

Upper explosive limit: 19.0%, lower explosive limit: 3.3%

Main uses: Primarily used for coating or impregnating the surfaces of electronic components such as transformers and inductors.

Part 10: Stability and Reactivity

Stability: Stable

Incompatible materials: strong oxidizing agents, strong acids

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

Harm of polymerization: Non-polymerization

Decomposition products: carbon monoxide, carbon dioxide

Part 11: Toxicological Information

name	result	type	dose	Exposure
alcohol solvents	LC50, Inhalation	rats	20000ppm	10H
Ether ester solvents	LC50, Inhalation	rats	1500ppm	7H

Conclusion/Overview

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Skin irritation or corrosion: Transdermal rabbit: 20 mg (24 h) moderate irritation

Eye irritation or corrosion: For home use, use via the eye: 500mg, severe irritation.

Respiratory or skin allergies: No data available

Mutagenicity: Not specified.

Carcinogenicity: IARC Carcinogenicity Review: Group 1 (Alcoholic Beverages)
Confirmed human carcinogen

Reproductive toxicity: Different doses administered orally or intravenously at different times after conception in rats, mice, and livestock caused malformations of the nervous system, genitourinary system, respiratory system, and facial development.

Inhalation information: No harm

Part 12: Ecological Information

name	result	type	Exposure
alcohol solvents	LC50 9268-14221 mg/L	Water fleas	48H
Ether ester solvents	LC50 > 10000 mg/L	Sunfish	96H

Durability and degradability: Biodegradability: Aerobic biodegradability (H): 6.5-26

Anaerobic biodegradation (H): 26-104

Non-biodegradability: Photo-oxidation half-life (H) in water: 8020 - 3.20 * 10⁵

Photo-oxidation half-life (H) in air: 12.2-122

Potential bioaccumulation: Based on the Kow value, the bioaccumulation of this substance is likely to be weak.

Soil mobility: Based on Kow values, this material is likely to migrate.

Part 13: Waste Disposal

Waste chemicals: Dispose of by incineration

Product disposal methods: 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.

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

Disposal precautions: Please refer to relevant national and local regulations.

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Part 14: Transportation Information

Dangerous goods number: 32198

UN Number: /

Packaging category: II

Packaging markings:



Packaging method: 20L/barrel

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 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 Occupational disease classification and catalog: Not listed

Regulations on the Safety Management of Hazardous Chemicals List of Hazardous Chemicals: Included. List of Easily Explosive Hazardous Chemicals: Not included. List of Key Monitored Hazardous Chemicals: Not included. GB18218-2018

"Identification of Major Hazard Installations of Hazardous Chemicals" (Table 1): Included. Category: Flammable liquid, Critical quantity (t): 500

Labor Protection Regulations for Workplaces Using Toxic Substances List of highly toxic substances: Not listed

Regulations on the Administration of Precursor Chemicals Classification and catalog of precursor chemicals: Not listed

International Conventions Stockholm Convention: Not included. Rotterdam Convention: Not included. Montreal Protocol: Not included.

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Part 16: Other Information

Drafting and Revision Information: March 10, 2025, Technical Department

Training Recommendation: Please 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.