

Material Safety Data Sheet (MSDS)

Section 1: Chemical and Company Identification

Product name: M78H-86 Conformal Coating

Trade names: Moisture-proofing agent; protective coating

Chemical formula: Mixture

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

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Section 2: Hazards Identification

Emergency overview: Flammable liquid and vapor.

GHS hazard classification: Flammable liquids, Category 2.

Label elements according to GB 15258-2009 (General Rules for Preparation of Precautionary Labels for Chemicals)



Hazard symbols: Flammable Health hazard

Signal word: Danger

Hazard statement: Flammable liquid and vapor.

Precautionary statements:

Prevention: Keep away from sparks, open flames and heat. Keep container tightly closed.

Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilation and lighting equipment and non-sparking machinery and tools. Take precautions against static discharge. Wear protective gloves, safety goggles and a face shield.

Response: In case of fire, use foam, carbon dioxide, dry chemical or sand/earth. IF ON SKIN (or hair): Immediately remove contaminated clothing. Wash thoroughly with soap and water; shower.

Storage: Store in a cool, well-ventilated warehouse, protected from light. Keep container tightly closed. Keep cool.

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

Material Safety Data Sheet (MSDS)

Physical and chemical hazards:

Flammable. Vapors may form explosive mixtures with air.

Health hazards: Irritating to the eyes, nose and throat. Inhalation at high concentrations causes progressive narcotic effects and may cause respiratory paralysis. Accidental ingestion may cause nausea, vomiting and abdominal pain.

Environmental hazards: May be harmful to the environment.

Section 3: Composition / Information on Ingredients

Substance ☐

Mixture ☒

Component	Concentration (% w/w)	CAS No.
Modified polyurethane resin	30-40	9009-54-5
Hydrocarbon solvent	35-40	64742-48-9
Ester solvent	10-20	108-65-6
Additives	1-3	Trade secret

Section 4: First Aid Measures

Inhalation: Immediately move the exposed person to fresh air.

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

Eye contact: Immediately lift upper and lower eyelids and rinse with running water or saline for at least 15 minutes. Seek medical attention.

Ingestion: Rinse mouth with water. Seek medical attention.

Section 5: Firefighting Measures

Extinguishing media: Foam, carbon dioxide, dry chemical or sand/earth.

Specific hazards: Flammable. Vapors form explosive mixtures with air. May react with oxidizing agents.

Firefighting precautions and protection: Firefighters must wear protective respirators and full protective firefighting clothing. Fight fire from upwind. Move containers to an open area if possible. Cool fire-exposed containers with water spray until the fire is extinguished.

Withdraw immediately if containers emit unusual sounds or show abnormal signs.

Hazardous combustion products: CO and CO₂.

Material Safety Data Sheet (MSDS)

Section 6: Accidental Release Measures

Personal precautions: Evacuate personnel from the contaminated area to an upwind location. Isolate the area and strictly restrict access. Eliminate ignition sources. Emergency responders should wear positive-pressure self-contained breathing apparatus and antistatic clothing. Stop the leak if possible.

Environmental precautions: Prevent entry into bodies of water, sewers, basements or confined spaces.

Methods and materials for containment and cleanup:

Small spills: Adsorb or absorb with sand, earth or other noncombustible materials.

Large spills: Contain with dikes or a collection pit. Cover with foam to reduce vapor hazards.

Section 7: Handling and Storage

Handling precautions: Use closed systems and adequate ventilation. Operators must receive specific training and strictly follow operating procedures. A half-face air-purifying respirator and antistatic clothing are recommended. Keep away from ignition sources and heat.

Smoking is prohibited in the workplace. Use explosion-proof ventilation systems and equipment. Prevent vapor release into workplace air. Avoid contact with oxidizing agents and alkalis. Provide suitable firefighting equipment and spill response equipment in adequate quantities. Smoking is strictly prohibited. Avoid inhalation of high vapor concentrations.

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

Section 8: Exposure Controls / Personal Protection

Occupational exposure limits: No standard established in China.

Biological exposure limits: No standard established.

Monitoring methods: Methods for determination of toxic substances in air.

Engineering controls: Enclosed production processes and general ventilation. Provide safety showers and eyewash facilities.

Respiratory protection: A filtering half-face respirator may be worn for prolonged exposure at high concentrations.

Eye protection: Wear safety goggles.

Body protection: Wear antistatic work clothing.

Hand protection: Wear rubber gloves.

Other protection: No smoking, eating or drinking in the workplace. Maintain personal

Material Safety Data Sheet (MSDS)

hygiene.

Section 9: Physical and Chemical Properties

Appearance: Transparent yellowish-brown liquid

Relative density: 0.90 ± 0.05

Solids content (%): 33 ± 3

Auto-ignition temperature (°C): 420

Flash point (°C): 25

Drying time: 25°C, 55% RH: ≤ 15 min

60-80°C: ≤ 5 min

Explosive limits: Upper (% by volume): 6

Lower (% by volume): 1.2

Recommended drying method: 60-80°C for 1-5 minutes, followed by drying at room temperature.

Time to achieve optimum properties at room temperature: 7 days.

Main uses: Surface coating of printed circuit boards and electronic components, and encapsulation of network transformers, for moisture protection, electrical insulation and corrosion protection.

Section 10: Stability and Reactivity

Stability: Stable.

Incompatible materials: Strong oxidizing agents and strong acids.

Conditions to avoid: Open flames, excessive heat and static electricity.

Hazardous polymerization: Will not occur.

Decomposition products: Carbon monoxide and carbon dioxide.

Section 11: Toxicological Information

Name	Result	Species	Dose	Exposure
Hydrocarbon solvent	LD ₅₀ , oral	Rat	13,000 mg/kg	
Ether ester solvent	TWA		50 ppm	8 h

Conclusion / Summary

Skin irritation or corrosion: No data available.

Eye irritation or corrosion: No data available.

Respiratory or skin sensitization: No data available.

Mutagenicity: No data available.

Material Safety Data Sheet (MSDS)

Carcinogenicity: No data available.

Inhalation hazard: No data available.

Section 12: Ecological Information

Ecotoxicity: No data available.

Persistence and degradability: Biodegradability: No data available.

Abiotic degradability: No data available.

Bioaccumulative potential: Low bioaccumulation potential is predicted based on the Kow value.

Mobility in soil: Mobility is predicted based on the Kow value.

Section 13: Disposal Considerations

Waste chemicals: Dispose of by incineration.

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

Disposal precautions: Avoid or minimize waste generation wherever possible. Significant quantities of residual product waste should be handled by a licensed waste disposal contractor. Dispose of surplus and non-recyclable products through such a contractor. Disposal of the product, solutions and by-products must comply with environmental protection and waste disposal legislation and applicable local regulations.

Section 14: Transport Information

Packing group: II

Package markings:



Packaging: Metal pails, 4 L or 20 L

Transport precautions: Equip vehicles with suitable firefighting and spill response equipment in adequate quantities. In summer, transport preferably in the morning or evening. Tank vehicles must have grounding chains; perforated baffles may be fitted inside tanks to reduce static from agitation. Do not transport with oxidizing agents, acids, alkali metals, amines or food-grade chemicals. Protect from sunlight, rain and high temperatures. When stopping, keep away from ignition sources, heat and high-temperature areas. Vehicle exhaust pipes must have flame arresters. Do not use spark-producing machinery or tools for loading or unloading. Follow designated road routes and avoid stopping in residential or densely populated areas. Loose shunting is prohibited during rail transport.

Material Safety Data Sheet (MSDS)

Section 15: Regulatory Information

The following laws, regulations, rules and standards contain provisions governing this chemical.

PRC Law on Prevention and Control of Occupational Diseases — Classification and Catalogue of Occupational Diseases: Not listed.

Regulations on the Safe Management of Hazardous Chemicals — Catalogue of Hazardous Chemicals: Listed. Catalogue of Explosive Precursor Hazardous Chemicals: Not listed. Catalogue of Hazardous Chemicals Subject to Priority Supervision: Not listed. GB 18218-2018, Identification of Major Hazard Installations for Hazardous Chemicals (Table 1): Listed. Category: Flammable liquids; threshold quantity: 500 t. Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used — Catalogue of Highly Toxic Substances: Not listed.

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

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

Section 16: Other Information

Preparation / revision: May 18, 2024 — Technical Department

Training advice: Provide relevant training for users.

Disclaimer: The above information is for reference only and does not constitute product specifications or any warranty. The recommended industrial safety and hygiene procedures are believed to be appropriate under normal conditions. Users must determine whether these recommendations are suitable for their particular conditions of use.