Safety Data Sheet of Ethylene Vinyl Acetate

According to Regulation (EC) No. 1272/2008, Regulation (EC) 1907/2006

1. Identification of the substance/mixture and of the responsible company

1.1. Product Identifier:

Ethylene Vinyl Acetate (EVA) copolymer CAS NO: 24937-78-8

Ethylene vinyl acetate, EVA, Ethylene vinyl acetate copolymer, Ethylene vinyl acetate polymer

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: resin for packaging, adhesives, film-forming and molding resins, hot melt adhesive

Uses advised against: none identified

1.3. Details of the supplier of the safety data sheet:

Jiangsu ElephChem Holding Limited

No.21 Ruanjian Dadao, Nanjing, China 21002

1.4. Emergency telephone number: 0086-25-58823216 (24 hours)

2. Hazards Identification

EVA copolymer CAS 24937-78-8 Purity: >99.5%

Trace Impurities: vinyl acetate <0.1%

2.1 Classification of the substance or mixture:

Classification of Labeling in accordance with the CLP Regulations:

Index No	International Chemical Identification	EC No	CAS No	Classification		Labeling			Specific Conc. Limits, M-factors	Notes
				Hazard Class and Category Code(s)	Hazard statement Code(s)	Pictogram Signal Word Code(s)	Hazard Statement Code(s)	Suppl. Hazard statement Code(s)		
polymer	Ethylene vinyl acetate copolymer	429-840-1	24937-78-8	Non haz	Non haz	Non haz	Non haz	Non haz	100	
607-023-00-0	Vinyl acetate monomer	203-545-4	108-05-4	Carc, Cat 3 R40 F;Rll Xn:R20 Xi:R37	F; Xn R: 11-20-37-40 S(2-) 36/37-46				<0.1%	Residual only

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Classification according to Regulation 1272/2008/EC (CLP)
Basis for Classification This substance is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation, GHS)

Ethylene Vinyl Acetate (EVA) Copolymer CAS NO: 24937-78-8

Symbol(s):

Not required, non hazardous polymer

Signal Word: None

SAFETY DATA SHEET

Emergency overview:
May form combustible dust-air mixtures. Avoid skin contact. Avoid inhalation of hot resin fumes and vapors.

Potential chronic health effects:

CARCINOGENIC EFFECTS:	**No carcinogenic effects reported**
MUTAGENIC EFFECTS:	**No mutatenic effects reported**
REPRODUCTION TOXICITY:	**No reproductive toxicity effects reported.**

See Section 11 and 12 for additional data on vinyl acetate monomer.

2.1. Label: See table above.

2.2. Other hazards: None known.

3. Composition/information on ingredients

Formula	Polymer: --(C2H4)n—(C4H6O2)m--
CAS-No.	24937-78-8
EC-No.	----
Mol Wt.	varies, % VAM copolymer ranges from 4-22%

4. First Aid Measures

4.1. Description of first aid measures

Eye Contact: The product is an inert solid. Treat as for any foreign object in eye. Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately if eyes are irritated.

Skin Contact: First aid is normally not required. For contact with hot products, immediately flush skin with plenty of cold water for at least 15 minutes to dissipate heat. Remove contaminated clothing and shoes. Treat as for skin burns. Get medical attention.

Inhalation: For exposure to dusts, vapors and/or aerosols formed at elevated temperatures, move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion: Not a likely route of exposure. Wash out mouth and water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

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4.2. Most important symptoms and effects, both acute and delayed:

Skin and eye burns from molten product. Skin and eye irritation from product dusts. Irritated respiratory tract from dust inhalation.

4.3. Indication of immediate medical attention and special treatment needed:

Treat symptomatically and supportively.

5. Firefighting measures

5.1.Extinguishing media

Suitable extinguishing media: Water spray (fog), dry chemical, CO2, foams

Unsuitable extinguishing media: Do no use a water jet.

5.2. Special hazards arising from the substance or mixture:

Dusts may form explosive dust-air mixtures. Acetic acid and or vinyl acetate may be released at elevated temperatures or in a fire.

5.3. Advice for fire fighters:

Special protective equipment for fire fighters: Fire fighters should wear appropriate protective equipment and self - contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Prevent mixing with alkali and amines materials.

Further information: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving an personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Do not allow fire extinguishing water to contaminate surface or groundwater systems.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Evacuate the danger zone; follow emergency precautions. Secure emergency assistance immediately. Avoid contact with the material; do not breath dusts. If possible, provide additional ventilation.

Advice for emergency responders: Do not take action without proper training and emergency equipment. See Section 8 for additional information. Evacuate surrounding areas. Eliminate all ignition sources including flares and all open flames. Avoid all contact with spilled material. Maintain adequate ventilation and wear appropriate respiratory protection.

6.2.Environmental precautions:

Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3. Methods and materials for containment:

Stop spill if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, surface waters, basements or confined areas. Wash spillage into effluent treatment plant. Contain and collect spillage using appropriate personal protective equipment. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handing chemical products or if a risk assessment indicates this is necessary. Collect and contain spillage with non-combustible, absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in a container for disposal according to local regulations. Use spark-proof tools and explosion proof equipment if flammable gasses, liquids or vapors are present in the spill area. Contaminated absorbent material may pose the same hazard(s) as the spilled product.

6.4. Reference to other sections:

See disposal instruction 13 and exposure controls Section 8.

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7. Handling and storage

7.1. Precautions for safe handling:

Observe all label precautions. Use appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

Advice on protection against fire and explosion: Keep away from flames and sources of ignition - including static.

7.2. Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in a segregated and approved area. Store in original or bulk storage container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials, amines and alkalis.

Bulk storage should be in approved vessels, preferably steel that is grounded and vented Keep use containers tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3. Specific end uses:

No other additional special end uses are anticipated.

8. Exposure controls/personal protection

8.1. Control parameters:

Personal, workplace or environmental monitoring may be necessary to ensure exposures are below recommended and legal limits.

Exposure limits:

ACGIH, NIOSH, OSHA (US), Mexico, and EU have not developed specific exposure limits for EVA compolymer. Nuisance dust exposure limits are 10mg/m3 and 3 mg/m3 for respirable particles (8 hr TWA). Use recommended safe handling practices to minimize unnecessary exposure.

Exposure Limits for Chemicals which may be generated during processing

During processing residual vinyl acetate may be released into the work environment. Maintain ventilation to ensure exposure limits are below 10 ppm TWA 8 hr and 15 ppm STEL 15 min (US); 5 ppm TWA and 10 ppm (EU). Vinyl acetate is classified as A3 carcinogen (animals).

8.2. Exposure controls:

Engineering measures:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Individual protection measures:

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Discard contaminated clothing or wash thoroughly before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to product dusts, liquid splashes or mists. Goggles should be worn where eye contact is possible.

Hand protection:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is required.

Glove material:

cotton or plastic (thermal resistant)

Glove thickness: 0.7 mm or thicker

Break through time: > 240 minutes

Other protective equipment:

Flame retardant antistatic protective clothing may be required if used in areas where flammables are processed.

Respiratory protection:

A properly fitted air purifying respirator or air supply respirator should be worn if a risk assessment indicates that respiratory protection is necessary. Respirator selection must be based upon known or measured levels of exposure.

Environmental exposure controls:

Ventilation and engineering controls to protect workers and ventilate work area to at or below recommended employee exposure levels. Technical measures are preferred over use of personal protective equipment. Environmental controls, such as scrubber or thermal oxidizer may be required to prevent process releases to the atmosphere. Do not empty or flush into drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Physical State: Solid, wax like	**Appearance:** white (off-white, clear or pigmented)
Color: clear, opaque, off-white	**Physical Form:** solid pellets, chubs
Odor: faint odor	**Odor Threshold:** Not available
Texture: wax like solid	**pH:** not applicable
Melting Point: 80-120 °C	**Boiling Point:** 228 °C
Evaporation Rate: not applicable	**Flash Point:** >340 °C estimated
LEL: not applicable	**OSHA Flammability Class:** not applicable
UEL: not applicable	**Autoignition:** Not available
Vapor Pressure: Not applicable	**Vapor Density (air = 1):** Not applicable
Density: Not available	**Specific Gravity (water = 1):** 0.92-.95
Water Solubility: insoluble	**Coeff. Water/Oil Dist:** Not available
Viscosity: not applicable	**Volatility:** 0 %
Molecular Weight: varies depending on product	**Molecular Formula:** --(C2H4)n—(C4H6O2)m--

Solvent Solubility

Soluble: slightly soluble hydrocarbon solvents

10.Stability and reactivity

10.1. Reactivity:

No hazardous reactivity.

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10.2. Chemical stability:

Stable at normal temperatures and pressure

10.3. Possibility of hazardous reactions:

Does not react at normal processing temperatures.

10.4. Conditions to avoid:

Avoid dust-air mixtures, static generation. Avoid contact with incompatible materials

10.5. Incompatible materials:

Avoid strong oxidizing materials.

10.6. Hazardous decomposition products:

Thermal decomposition will yield oxides of carbon and/or acetic acid and vinyl acetate.

11.Toxicological information

11.1. Information on toxicological effects:

Acute oral toxicity LD50 rat:	*Non toxic*
Dermal LD50 rabbit:	*No skin irritation*
Acute inhalation toxicity:	*No data available*
Skin irritation:	*Non irritating*
Eye irritation (rabbit):	*No eye irritation*
Sensitization (guinea pig):	*No data available*
Genotoxicity and Reproductive Effects:	*No data available*
Ames test:	*No data available*
Specific target organ toxicity - single exposure:	*No data available.*
Specific target organ toxicity - repeated exposure:	*No data available.*
Aspiration hazard:	*No information available*

11.2. Additional information:

No additional information.

Further data: Handle using good occupational and environmental health practices.

12.Ecological information

12.1. Toxicity

Toxicity in fish LC50:	*No data available*
Toxicity to daphnia and other aquatic invertebrates:	*No data available*
Toxicity to algae:	*No data available*

12.2. Persistence and degradability:

No data available

12.3. Bio accumulative potential:

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Bioaccumulation not expected.

Mobility in soil:

No information available.

12.4. Results of PBT and vPvB assessment:

Assessment not available.

12.5. Other adverse effects:

No additional environmental adverse effects are known.

Additional ecological information: Do not allow product to enter surface waters, wastewater or soil.

13.Disposal considerations

Waste treatment methods: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14.Transport Information

The transport regulations are cited according to international and/or harmonized transport regulations. Possible national deviations and country specific requirements are not considered.

US DOT Information: No Classification assigned.
TDG Information: No Classification assigned.
ADR Information: No Classification assigned.
RID Information: No Classification assigned.
IATA Information: No Classification assigned.
ICAO Information: No Classification assigned.
IMDG Information: No Classification assigned.

15.Regulatory information

15.1.Safety, health and environmental regulations/legislation specific for the substance or mixture:

U.S. Federal Regulations

This product is not listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: No Chronic Health: No Fire: No Pressure: No Reactive: No

U.S. State Regulations

This product is not listed on the state lists from CA, MA, MN, NJ or PA. Not listed under California Proposition 65. Note: residual vinyl acetate is a listed material.

Germany Water Classification (110-63-4): ID Number 1338, hazard class 1 - low hazard to water

Regulatory Inventory Status

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
EVA copolymer	24937-78-8	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

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Globally Harmonized System of Classification and Labelling (GHS)

This product has been checked for country-specific published classifications according to the Globally Harmonized System of Classification and Labelling (GHS).

Australia GHS Classifications:	No published information available.
European Union GHS Classifications:	No published information available.
Indonesia GHS Classifications:	No published information available.
Japan GHS Classifications:	No published information available.
Korea GHS Classifications (SV):	No published information available.
New Zealand GHS Classifications:	No published information available.
South Africa GHS Classifications:	No published information available.
Taiwan GHS Classifications:	No published information available.

15.2. Chemical Safety Assessment:

Sipchem has not conducted a chemical safety assessment for this product.

16.Other information

16.1. Training Advice:

Provide safety information, instruction and training to operators handling EVA copolymer.

The information and recommendations herein are taken from data contained in independent, industry recognized references. Although reasonable care has been taken in the preparation of the information herein, Sipchem and International Polymers Company make no guarantee, warranty (express or implied) or other representation and assume no responsibility as to the accuracy or suitability of such information for application of the information, since conditions of its use are beyond control of these companies. Jiangsu ElephChem Holding Limited shall not bear any liability whatsoever for any loss or damage incurred in connection with the use of this substance.

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