

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

Section 1: Identification

1.1) Product identifier:

Product Name : Poly(vinylidene fluoride) binder

Synonyms : PVDF binder

Product Number : BR0210

CAS Number : NA

1.2) Company information:

Address: MSE Supplies, LLC
4400 E Broadway Blvd, Suite 600
Tucson, AZ 85711, USA

Telephone: +1 520-789-6673

Email: info@mse Supplies.com

Emergency Telephone : +1-703-527-3887

1.3) Relevant identified uses of the substance or mixture and uses advised against:

Identifies uses: Laboratory chemicals, Synthesis of substances

Section 2: Hazard(s) Identification

2.1) Classification of the substance or mixture GHS classification in accordance with 29 CFR 1910 (OSHA HCS):

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Reproductive toxicity (Category 1B), H360D

Specific target organ toxicity -single exposure (Category 3), Respiratory system, H335

2.2) GHS Label elements, including precautionary statements:

Pictograms:



SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

Signal Word: Danger

Hazard Statement(s)

| | |
|-------|-----------------------------------|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H360D | May damage the unborn child. |

Precautionary Statement(s)

| | |
|--------------------|--|
| P201 | Obtain special instructions before use. |
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308 + P313 | IF exposed or concerned: Get medical advice/Attention. |

2.3) Hazards not otherwise classified (HNOC) or covered by GHS:

None.

Section 3: Composition/Information on Ingredients

3.1) Mixture:

| Component | Classification | Concentration |
|--|--|---------------|
| Poly(vinylidene fluoride) CAS# 24937-79-9 | | 4 -6 %W/V |
| N-Methyl-2-pyrrolidone CAS# 872-50-4 | Skin Irrit.2; Eye Irrit.2; Repr.1B; STOT SE3; H315, H319, H360D, H335 Concentration limits: >=10%: STOT SE3, H335; | 94-96 %W/V |

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

Section 4: First-Aid Measures

4.1) Description of first aid measures:

General advice

Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3) Indication of any immediate medical attention and special treatment needed:

No data available

Section 5: Fire-Fighting Measures

5.1) Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2) Special hazards arising from the substance or mixture:

Carbon oxides, Nitrogen oxides (NO_x), Hydrogen fluoride

5.3) Advise for firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.

5.4) Further information:

None.

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

Section 6: Accidental Release Measures

6.1) Personal precautions, protective equipment, and emergency procedures:

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8

6.2) Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3) Methods and materials for containment and cleaning up:

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4) Reference to other sections:

For disposal see section 13.

Section 7: Handling and Storage

7.1) Precautions for safe handling:

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2) Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): 10: Combustible liquids

7.3) Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

Section 8: Exposure Controls/Personal Protection

8.1) Control parameters:

Components with workplace control parameters

| Component | CAS-Number | Value | Control Parameters | Basis |
|------------------------|------------|---------------|--------------------------------|---|
| n-Methyl-2-pyrrolidone | 872-50-4 | LTEL (8h TWA) | 10 ppm 40 mg/m ³ | Identifies the possibility of significant uptake through the skin. Indicative Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. |
| | | STEL | 20 ppm 80 mg/m ³ | |

8.2) Exposure controls:

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Personal protective equipment

Eye/face protection:

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection:

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

9.2) Information on basic physical and chemical properties:

| | |
|---|-------------------|
| a) Appearance (physical state, color, etc.) | Colorless Liquid |
| b) Upper/lower flammability or explosive limits | No data available |
| c) Odor | No data available |
| d) Odor threshold | No data available |
| e) Vapor pressure | No data available |
| f) Vapor density | No data available |
| g) pH | No data available |
| h) Density | No data available |
| i) Melting point/freezing point | -24°C |

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

| | |
|--|---|
| j) Solubility(ies) | No data available |
| k) Initial boiling point and boiling range | 202°C |
| l) Flash point | No data available |
| m) Evaporation rate | No data available |
| n) Flammability (solid, gas) | No data available |
| o) Partition coefficient: n-octanol/water | No data available |
| q) Auto-ignition temperature | No data available |
| r) Decomposition temperature | No data available |
| s) Viscosity | No data available |
| t) Explosive properties | Upper explosion limit: 9.5 %(V) Lower explosion limit: 1.3 %(V) |
| u) Oxidizing properties | No data available |

9.2) Other Safety information:

No data available

Section 10: Stability and Reactivity

10.1) Reactivity:

No data available

10.2) Chemical Stability:

Stable under recommended storage conditions.

10.3) Possibility of hazardous reactions:

No data available

10.4) Conditions to avoid:

Heat, flames and sparks

10.5) Incompatible materials:

Strong acids, Strong oxidizing agents, Strong reducing agents

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

10.6) Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides (NO_x), Hydrogen fluoride Other decomposition products: No data available In the event of fire: see section 5

Section 11: Toxicological Information

11.1) Information on toxicological effects:

Acute toxicity:

No data available

Skin corrosion/irritation:

No data available

Serious eye damage/ eye irritation:

No data available

Respiratory or skin sensitization:

No data available

Germ cell mutagenicity:

No data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity:

No data available

Specific target organ toxicity – single exposure:

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

No data available

Specific target organ toxicity – repeated exposure:

No data available

Aspiration hazard:

No data available

Additional information:

No data available

Section 12: Ecological Information

12.1) Toxicity:

No data available

12.2) Persistence and degradability:

No data available

12.3) Bioaccumulative potential:

No data available

12.4) Mobility in soil:

No data available

12.5) Results of PBT and vPvB assessment:

No data available

12.6) Other adverse effects:

No data available

Section 13: Disposal Considerations

13.1) Waste treatment methods:

Product:

SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

Burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations and directives on waste and hazardous waste. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging:

Dispose of as unused product.

Section 14: Transport Information

DOT (US):

Not dangerous goods.

IMDG:

Not dangerous goods.

IATA:

Not dangerous goods.

Section 15: Regulatory Information

SARA 302 Components:

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components:

The following components are subject to reporting levels established by SARA Title III, Section 313:

1-Methyl-5-pyrrolidinone CAS-No. 872-50-4 Revision Date 2007-03-01

SARA 311/312 Hazards:

Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components:

1-Methyl-5-pyrrolidinone CAS-No. 872-50-4 Revision Date 2007-03-01

Pennsylvania Right To Know Components:



SAFETY DATA SHEET: Poly(vinylidene fluoride) binder

Version: 1.1

Revision Date: 10/22/2020

1-Methyl-5-pyrrolidinone

CAS-No. 872-50-4 Revision Date 2007-03-01

New Jersey Right To Know Components:

1-Methyl-5-pyrrolidinone

CAS-No. 872-50-4 Revision Date 2007-03-01

Section 16: Other Information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MSE Supplies LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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Revision Date: 10/22/2020