



1267 House St. NE, Belmont, MI 49306
(616) 887-8257 Fax (616) 887-7910 www.lenderink.com

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's
Hazard Communication Standard, 29CFR
1910.1200 Standard must be consulted
for specific requirements

US DEPARTMENT OF LABOR
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

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Company Information



**LENDERINK
TECHNOLOGIES**

and Associates

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**MSDS 700-1 R
Powder Adhesive**

1. HAZARDS INFORMATION

Classification according to regulation (EC) No. 1272/2008

The product is not classified as hazardous to health or environment according to CLP regulation.

Label elements

Labelling according to Regulation (EC) 1272/2008: Void

Hazard pictograms: None

Hazard statements: None

Precautionary pictograms: None

Precautionary statements: None

Special Provisions according to Annex XVII of REACH and subsequent amendments: None

Additional safety information for humans and the environment

See item 10 + 11

Risk of skin burns by hot melt.

Granular: Dust can occur through abrasion if the granulate is subjected to mechanical loading.

Powder: Dusts can form explosive mixtures with air.

Results of PBT and vPvB assessment

PBT: not applicable

vPvB: not applicable



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2. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances: N/A

2. Composition/information continued:

3.2 Mixtures: Information on ingredients/Hazardous components

Qty	Name	Identity Number	Classification
>= 97.9%	Polymeric blend-graft-maleic Anhydride (trade secret)	REACH No.: Polymer	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP)
< 1%	Other additives		The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP)
< 1%	Vinyl acetate	Index number: 607-023-00-0 CAS: 108-05-4 EC: 203-545-4	 2.6/2 Flam. Liq. 2 H225  3.6/2 Carc. 2 H351  3.1/4/Inhale Acute Tox. 4 H332  3.8/3 STOT SE 3 H335
< 0.1%	Maleic anhydride	Index number: 607-096-00-9 CAS: 108-31-6 EC: 203-571-6	 3.2/1B Skin Corrosion 1B H314  3.4.1/1-1A-1B Resp. Sens. 1,1A, 1B H 334  3.4.2/1-1A-1B Skin Sens. 1, 1A, 1B H317  3.1/4/Oral Acute Tox. 4 H302

3. FIRST AID MEASURES

Inhalation

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Obtain medical attention if

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symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion

Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. **Do Not Induce Vomiting Unless Directed to do so by Medical Personnel.** If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Obtain medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse at least 10 minutes. Get medical attention if irritation occurs.

Protection of first-aiders

No action shall be taken involving personal risk or without suitable training.

Notes to physician

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

4. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable:	Use an extinguishing agent suitable for the surrounding fire.
Not suitable:	None known.

Special exposure hazards No specific fire or explosion hazard.

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 any personal risk or without suitable training.

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Hazardous combustion products

Decomposition products may include the following materials: carbon oxides
Under certain fire conditions, traces of other toxic products may occur.

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.

Remark

Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming in contact with hot surfaces, sparks or other ignition sources.

5. ACCIDENTAL RELEASE MEASURES

Personal precautions

In case product dust is released: Dust mask

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions

Avoid dispersal of spilled material and 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).

Methods for clean up

Large spill

Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled container. Dispose of via a licensed waste disposal contractor. NOTE: see section 12 for waste disposal.

Small spill

Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled container. Dispose of via a licensed waste disposal contractor.

6. HANDLING AND STORAGE

Handling

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Put on appropriate personal protective equipment (see section 7). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored or processed. Workers should wash hands and face before eating, drinking or smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 9) and food and drink. Keep container 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. Never stack pallets more than two high to prevent the risk of falling over.

Packaging materials

Recommended Use original container.

7. EXPOSURE CONTROLS / PERSONAL PROTECTION

7.1. Components with workplace control parameters

- **Exposure limit for dust**

CAS-No.		
Control parameters	3 mg/m3	Time Weighted Average (TWA): (EH40 (UK))
Type of exposition	Respirable dust.	
Control parameters	10 mg/m3	Time Weighted Average (TWA): (EH40 (UK))
Type of exposition	Inhalable dust	
 - **Vinyl acetate**

CAS-No.	108-05-4	
Control parameters	17.6 mg/m3, 5ppm	EU-LITE (8h)
	35.2 mg/m3, 10ppm	STE (15 mins average value)
 - **Maleic anydride**

CAS-No.	108-31-6	
Control parameters	0.01 mg/m3	ACGIH – LTE (8H)
		DSEN, RSEN, A4, (IFV) – resp sens
- | | |
|----------------------------|------|
| DNEL Exposure Limit Values | N.A. |
| PNEC Exposure Limit Values | N.A. |

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7.2 Exposure controls

Engineering measures

In case of thermal processing, provide for extraction of the vapours or adequate ventilation.
In case of dust being formed, provide for adequate extraction.

Personal protective equipment

Respiratory protection

If maximum admissible concentration value at the workplace is exceeded, apply dust mask.

Hand Protection

Pellets: Wearing protective gloves is not required if the granulate is handled at room temperature.

Powder: Wearing protective gloves is not required if the powder is handled at room temperature.

Protective heat-insulating gloves are to be used during thermal processing.

Any areas of skin covered with dust must be washed immediately with soap and water as the powder draws out natural moisture from the skin.

Use barrier cream regularly.

Eye protection

Safety glasses

Hygiene measures

Smoking, eating and drinking should be prohibited in the application area.

8. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form/ physical state	Granule / Powder
Color	Off-white
Odor	N/D

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Safety data

pH-Value N/A
Melting point 60 to 115°C (140 to 239°F)
Boiling point Decomposition temperature: >300°C (>572°F)
Flash point N/D
Explosive properties Dusts can form explosive mixtures with air.

Explosive in the presence of the following materials and conditions: open flames, sparks and static discharge. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources.

Solubility Insoluble in the following materials: cold and hot water.
Auto-ignition temperature ca.360°C (ca. 680°F)

Further information

Other information The range of values given complies with the variation range of the product Group.
The specific physical chemical data can be read in the product information.

9. STABILITY AND REACTIVITY

Stability The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid No specific data.

Materials to avoid No specific data.

Hazardous decomposition products Under normal conditions of storage and use, hazardous decomposition will not be produced.

10. TOXICOLOGICAL INFORMATION

10.1 Information on toxicological effects

Toxicological information of the mixture: N.A.
Toxicological information of the main substances found in the mixture: N.A.



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11. ECOLOGICAL INFORMATION

11.1. Toxicity

Adopt sound working practices, so that the product is not released into the environment.

maleic anhydride

2) Aquatic acute toxicity:

Endpoint: L50 – Species: Fish = mg/l – Duration h: 48 – Notes: DIN 38412, Part 15

Endpoint: EC50 – Species: Daphnia = 88 mg/l – Duration h: 24 – Notes: DIN 38412, Part 11

Endpoint: EC50 – Species: Algae = 29 mg/l – Duration: 72 – Notes: Umweltbundesamt

11.2. Persistence and degradability

Biodegradability: Not readily biodegradable. – Test: N.A. – Duration: N.A. - %: N.A. – Notes: N.A.

maleic anhydride

Biodegradability: Readily biodegradable –Test: OECD301B –Duration: 28gg -%: 93.2 –Notes: >90%

11.3. Bioaccumulative potential N.A.

11.4. Mobility in soil N.A.

11.5. Results of PBT and vPvB assessment

vPvB Substances: None – PBT Substances: None

11.6. Other adverse effects None

12. DISPOSAL CONSIDERATIONS

Product

Waste must be disposed of according to regulations.

With respect to local regulations, e.g. dispose of to suitable waste incineration plant. No waste key number as per the European Waste Types List can be assigned to this product, since classification is based on the (as yet undetermined) use to which the product is put by the consumer. The waste key number is determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

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13. TRANSPORT INFORMATION

Not a dangerous material under the amended E>E>C> Council Directives

- | | |
|---|------------------------------------|
| 13.1 UN number: | N.A. |
| 13.2 UN proper shipping name: | N.A. |
| 13.3 Transport hazard class: | N.A. |
| 13.4 Packing group: | N.A. |
| 13.5 Environmental hazards | Environmental/Marine pollution: No |
| 13.6. Special precautions for user: | N.A. |
| 13.7. Transport in bulk according to Annex II of Marpol and the IBC Code: | N. A. |

14. REGULATORY INFORMATION

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

Dir. 98/24/EC (risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) 2015/830

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATO 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Restrictions related to the product of the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: Restriction 40

Restrictions related to the substances contained: No restrictions

Where applicable, refer to the following regulatory provisions:

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III): N.A.



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14.2. Chemical safety assessment

No

Commission Regulation Other Hazards

Ethylene vinyl acetate is listed in the TSCA Chemical Inventory (EPA, June 1993).

15. OTHER INFORMATION

Glossary

CAS: Chemical Abstract Service

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists.

TLV: Threshold Limit Value

TWA: Time Weighted Average

STEL: Short-term Exposure Level

REL: Recommendable Exposure Limit

PEL: Permissible Exposure Limit

VLA-ED: Environmental limit value – daily exposure

VLA-EC: Limit environmental value – short exposure

DNEL/DMEL: Derived no-effect level / Derivation of minimal effects levels

PNEC: Predicted No Effect Concentration LD50: Lethal Dose Medium LC50: Lethal Concentration Medium EC50:

Effective Concentration Medium IC50: Inhibitory Concentration Medium

BOD: Biological Oxygen Demand

NOAEL: No observable adverse effect level

NOEL: No observed effect level

NOAEC: No observed adverse effect concentration

NOEC: No observed effect level

N/A: Not applicable

| : Changes from the last revision Data Bases consulted

EINECS: European Inventory of Existing Commercial Substance

TSCA: Toxic Substances Control Act, US Environmental Protection Agency.

HSDB: US National Library of Medicine.

RTECS: US Dept. of Health & Human Services.



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R phrases/Hazard Class-and-Category shown in the document

Text of phrases referred to under heading 2:

H225 Highly flammable liquid and vapor.

H351 Suspected of causing cancer.

H332 Harmful if inhaled

H335 May cause respiratory irritation.

H314 Causes severe skin burns and eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H302 Harmful if swallowed.

* All remarks and precautions are premised on ordinary handling and it is the user's responsibility to take into consideration in case of particular use.