SAFETY DATA SHEET

LINXIDAN(R) LX-4435-1 Coupling Agent

Section 1. Identification

GHS product identifier : **LINXIDAN(R) LX-4435-1 Coupling Agent**

Other means of identification : **Maleated PP Coupling & Compatibilizing Agent**

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : **SACO AEI Polymers, Inc.**
3220 Crocker Avenue
Sheboygan, WI 53081 USA
+1(920) 803-0778 ph. / +1(920)803-0779 fax

Emergency telephone number (with hours of operation) : **SACO AEI Polymers, Inc.**
3220 Crocker Avenue
Sheboygan, WI 53081 USA
+1(920) 803-0778 ph. / +1(920)803-0779 fax

Section 2. Hazards identification

OSHA/HCS status : This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : This material is a mixture of components that are encapsulated in polymer which minimizes the potential risk for exposure. During normal processing some vapors may be released, so the end-user should take the necessary precautions (adequate ventilation) to protect employees from exposure. The product has not been tested as a whole for health effects, but the exposure effects are based on the existing data for the identified components.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Not considered hazardous in its present form. However, vapors which may be formed at elevated temperatures may be irritating if inhaled.

Prevention : Do not handle until all safety precautions have been read and understood.

Response : Wash hands after handling.

Storage : Store container tightly closed in well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements :

Hazards not otherwise classified :

Section 3. Composition/information on ingredients

Substance/mixture : This material is a mixture of components that are encapsulated in polymer which minimizes the potential risk for exposure. During normal processing some vapors may be released, so the end-user should take the necessary precautions (adequate ventilation) to protect employees from exposure. The product has not been tested as a whole for health effects, but the exposure effects are based on the existing data for the identified components.

Other means of identification : **Maleated PP Coupling & Compatibilizing Agent**

CAS number/other identifiers

CAS number : Not applicable

Product code :

Ingredient name	%	CAS number
maleic anhydride	<3	108-31-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Remove contact lenses if worn. Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Do not rub. Seek medical attention if irritation persists.

Inhalation : Move exposed person to non-contaminated air. Assist breathing if necessary. Seek medical attention if unconscious, or if other symptoms persist. Inhalation of smoke following a fire may result in delayed pulmonary edema; seek immediate medical attention.

Skin contact : If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage.

Ingestion : Material is not expected to be absorbed from the gastrointestinal tract. Do not induce vomiting. Seek medical attention if any discomfort or other symptoms persist.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

Notes to physician : There is no specific antidote. Treatment of over exposure should be directed at the control of symptoms and the clinical condition of the patient.

Specific treatments : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO_2.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide carbon monoxide

Special protective actions for fire-fighters : Evacuate surrounding areas. Fight fire from protected location or maximum possible distance.

Special protective equipment for fire-fighters : Wear MSHA/NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Immediately contact emergency personnel. Do not touch or walk through spilled material.

For emergency responders : Avoid allowing the spilled material to get wet or using water to clean up spillages or residues, unless the quantity remaining is very small. Avoid breathing fumes.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods and materials for containment and cleaning up

Small spill : Avoid allowing the spilled material to get wet or using water to clean up spillages or residues, unless the quantity remaining is very small. Immediately contact emergency personnel. If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for disposal.

Large spill : Immediately contact emergency personnel. If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for disposal. Avoid creating dusty conditions and prevent wind dispersal. Avoid allowing the spilled material to get wet or using water to clean up spillages or residues, unless the quantity remaining is very small.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : After handling, always wash hands thoroughly with soap and water.

Advice on general occupational hygiene : Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).

Conditions for safe storage, including any incompatibilities : Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
maleic anhydride	**ACGIH TLV (United States, 2/2010). Skin sensitizer.** TWA: 0.1 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 0.25 ppm 8 hours. TWA: 1 mg/m³ 8 hours. **NIOSH REL (United States, 6/2009).** TWA: 1 mg/m³ 10 hours. TWA: 0.25 ppm 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 0.25 ppm 8 hours. TWA: 1 mg/m³ 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : No specific hazard. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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.

Eye/face protection : safety glasses with side-shields.

Skin protection

Hand protection : disposable vinyl

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : No measures required.

Respiratory protection : disposable particulate mask

Personal protective equipment (Pictograms) :

Section 9. Physical and chemical properties

Appearance

Physical state : Pellets.

Color : White.

Odor : Slight

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) :

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature :

Viscosity : Not available.

Aerosol product

Section 10. Stability and reactivity

Reactivity : Under normal conditions of storage and use, hazardous reactions will not occur.

Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

Possibility of hazardous reactions : Hazardous reactions or instability may occur under certain conditions of storage or use.

Conditions to avoid : No known significant effects or critical hazards.

Incompatible materials : None known.

Hazardous decomposition products : carbon dioxide Carbon monoxide.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Section 11. Toxicological information

Conclusion/Summary : This material is a mixture of components that are encapsulated in polymer which minimizes the potential risk for exposure. During normal processing some vapors may be released, so the end-user should take the necessary precautions (adequate ventilation) to protect employees from exposure. The product has not been tested as a whole for health effects, but the exposure effects are based on the existing data for the identified components.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure :

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects :

Potential delayed effects :

Section 11. Toxicological information

Long term exposure

Potential immediate effects :

Potential delayed effects :

Potential chronic health effects

Not available.

General :

Carcinogenicity :

Mutagenicity :

Teratogenicity :

Developmental effects :

Fertility effects :

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) :

Other adverse effects :

Section 13. Disposal considerations

Disposal methods :

Section 14. Transport information

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name				-		-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards						
Additional information	-	-	-	-	-	-

Special precautions for user :

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ :

SARA 311/312

Classification :

Composition/information on ingredients

No products were found.

SARA 313

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	maleic anhydride	108-31-6	<3
Supplier notification	maleic anhydride	108-31-6	>.1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

Not listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia :

Canada : All components are listed or exempted.

China :

Europe :

Japan :

Malaysia :

New Zealand :

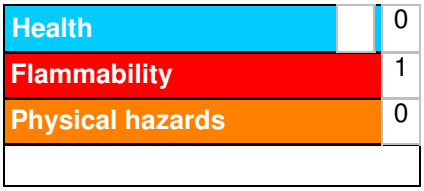
Philippines :

Republic of Korea :

Taiwan :

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 7/24/2017.

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Version : 0.06

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : - Manufacturer's Material Safety Data Sheet.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.