SILVER FERN CHEMICAL, INC.

SAFETY DATA SHEET

3-Aminopropyltriethoxysilane (AMEO)

Section 1. Identification

Product Name: 3-Aminopropyltriethoxysilane (AMEO)
Product Use: Treat mineral fillers, adhesion promoter in various paints, adhesives, caulks and sealants. Certain plastics.
Effective Date: 18 May 2020 **Replaces:** 21 May 2019

Details of the supplier of the safety data sheet:

Distributed By:
Silver Fern Chemical, Inc.
121 W. De La Guerra Street, Suite B
Santa Barbara, CA 93101 USA
Phone: 1-866-282-3384
Website - www.silverfernchemical.com; Email Address - info@silverfernchemical.com

24 Hour Emergency Contact:
Infotrac: 1-800-535-5053 (USA & Canada); Outside USA & Canada: 1-352-323-3500

Section 2. Hazard(s) Identification

Emergency Overview: Clear combustible liquid. Prolonged contact causes skin burns and eye damage. Ingestion or inhalation will be harmful. Harmful to aquatic life with long lasting effects.
GHS Classification:

Skin Corrosion	**Category 1B**
Serious Eye Damage	**Category 1**
Acute toxicity (Oral)	**Category 4**

GHS Pictograms:
GHS Label: DANGER
POTENTIAL HEALTH EFFECTS:
CODE OF HAZARD STATEMENTS:
Physical Hazards
H227- Combustible liquid.
Health Hazards
H227- Combustible liquid.
H302- Harmful if swallowed.
H314- Causes severe skin burns and eye damage.
H332- Harmful if swallowed.
Environmental Hazards
H412- Harmful to aquatic life with long lasting effects.

CODE OF PRECAUTIONARY STATEMENTS:

General

P101- Keep out of reach of children.
P103- Read label before use.

Prevention Statements

P202- Do not handle until all safety precautions have been read and understood.
P210- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233- Keep container tightly closed.
P261- Avoid breathing dust/fume/gas/mist/vapor/spray.
P262- Do not get in eyes, on skin or on clothing.
P264- Wash thoroughly after handling using this product.
P270- Do not eat, drink, or smoke when using this product.
P271- Use only outdoors or in a well-ventilated area.
P273- Avoid release to the environment.
P280- Wear protective gloves/protective clothing/eye protection/face protection.

Response Statements

P301- P330- P331- IF SWALLOWED: Rinse mouth. Do Not induce vomiting.
P303- P353- P361- IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.
P304- P340- IF INHALED. Remove victim to fresh air and keep at rest in apposition comfortable and breathing.
P305- P338- P351- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310- Immediately call a Poison Center or doctor/ physician.
P363- Wash contaminated clothing before reuse.
P370- P378- In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage

P403 - P235- Keep cool. Store in well-ventilated place.
P405- Store locked up.

Disposal

P501- Dispose of contents/container to an approved waste disposal plant.

ROUTES OF ENTRY: Eye contact, skin adsorption, ingestion and inhalation.
CARCINOGENICITY: None listed in IARC, OSHA or NTP.

Section 3. Composition/Information on Ingredients

Ingredients	CAS No.	EINECS No.	%	Reach No.
3-Aminopropyltriethoxysilane	919-30-2	213-048-4	≥98	No
Ethanol	64-17-5	200-578-6	≤ 2	Yes

Section 4. First Aid Measures

General Advice: In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
Eye Contact: Flush eyes with water immediately while holding eyelids open. Remove contacts, if worn, after initial flushing and continue flushing for at least 15 minutes. Seek medical attention if irritation persists.
Skin Contact: Use soap and water to remove from the skin, remove contaminated clothing, clean thoroughly before reuse. If irritation persists, contact a physician.
Inhalation: Move to fresh air. If not breathing, give rescue breathing. If breathing is difficult, give oxygen. Seek medical attention if breathing is still difficult.
Ingestion: If swallowed, get medical attention immediately. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person.
Note to Physician: Treat symptomatically and supportively.

Section 5. Fire Fighting Measures

Flash Point: 204.8°F (96°C) Combustible liquid
Flammability Limits: LEL: 0.8% UEL: 4.5%
Fire Fighting Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special Fire Fighting Procedures: In case of fire cool endangered containers with water. Hazardous fumes in fires, specific to the product are ammonia, alcohols, amines, nitrogen and silicon oxides. First responders need to wear full-bunker gear with Self Contained Breathing Apparatus (SCBA), never enter a confined space unless fully protected with proper personal protective equipment (PPE).

Section 6. Accidental Release Measures

Use personal protective equipment, see section 8.
Clean-up Procedures: Stop the source of the release if you are not put at risk. Use inert absorbent material (such as earth, diatomaceous earth, vermiculite) to absorb the spill, use non-sparking shovel to pick up absorbent for disposal. Assure sufficient ventilation.
Spills and Leaks: Dispose in accordance to local, state or Federal regulations.

Section 7. Handling and Storage

Handling: Provide good ventilation. Wear personal protective equipment, see section 8. Do not get into eyes, on skin and on clothing. Do not breathe vapors or mists. Use with adequate ventilation. Wash thoroughly after handling.
Storage: Store in original labeled container. Keep in cool and dry areas.

Section 8. Exposure Controls/Personal Protection

Introductory Remarks: Use a local exhaust ventilation or other engineering controls to minimize airborne exposure. A safety shower and eye wash should be readily available. Ethanol permissible exposure limit (PEL) is 1 ppm.

Personal Protection:

Eyes: Wear safety goggles or face shield to prevent eye contact.

Body: Chemical apron, long sleeve shirts, long pants, socks, and rubber boots.

Hands: Chemical resistant gloves.

Respiratory: Wear an approved respirator that provides protection from this product if the airborne concentrations exceed the recommended exposure limits.

Section 9. Physical and Chemical Properties

Physical State, Color, Odor	Clear liquid with amine odor	**Vapor Pressure**	< 13 hPa @ 212ºF (100ºC)
Ignition Temperature	518°F (270°C)	**Density(water=1)**	> 0.946 @ 77°F (25°C)
pH	11 @ 20g/L @ 68°F (20°C)	**Solubility**	Reacts with water
Freezing Point	-94°F (-70°C)	**Boiling Point**	251.6ºF (122ºC)
Flash Point	204.8°F (96°C)	**Vapor Density (Air)=1.0**	7.64

Section 10. Stability and Reactivity

Chemical Stability: Considered stable under normal ambient temperatures**.**

Hazardous Decomposition: In complete combustion, oxides of carbon, nitrogen and silicate are formed.

Hazardous Polymerization: Will not occur.

Incompatibility- Materials to Avoid: Acids and strong oxidizing agents.

Section 11. Toxicological Information

Toxicology: **Acute Oral $LD_{50\ (rat)}$ = 1,780 mg/kg**
Acute Dermal $LD_{50\ (rat)}$ = 3,800 mg/kg
Acute Inhalation $LC_{50\ (rat)}$ = 5 ppm (6 hour)

Skin Irritation: Causes burns in rabbits.

Eye Irritation: Causes eye damage.

Acute Eye Irritation: Severe.

Acute Skin Irritation: May cause burns.

Acute Dermal Toxicity: Not expected to be toxic through the skin.

Acute Inhalation Toxicity: Expected to be an irritant to the respiratory system.

Reproductive Toxicity: No evidence of adverse effects on sexual function and fertility or on development, based on animal experiments.

Carcinogenic Effects: None listed in IARC, OSHA or NTP.

Section 12. Ecological Information

Ecotoxicity: $LC_{50(Zebra\ Fish)}$ **= 934mg/L 96 hour**
$LC_{50(Water\ Flea)}$ **= 331 mg/L**
$EC_{50(Green\ Algae)}$ **=> 1,000 mg/L**

This is to aquatic organisms.

Environmental Fate: This product not readily bio-degradable. There is low bio accumulative potential. Very low adsorption in soil.

Section 13. Disposal Considerations

Waste Disposal Method: Whatever cannot be saved for recovery or recycling should be managed by the local, state or Federal Regulations.

Container Handling and Disposal: All containers should be triple rinsed and disposed of according to local, state and Federal regulations.

Section 14. Transport Information

Shipping Name: AMEO

Proper Shipping Description (Ground):
UN3267, Corrosive, Liquid, Basic, Organic, N.O.S., (3-Aminopropyltriethoxysilane), 8, II,

IATA: (Cargo aircraft only)
UN3267, Corrosive, Liquid, Basic, Organic, N.O.S., (3-Aminopropyltriethoxysilane), 8, II,
Use packing instruction 812. The maximum net capacity is 7.93 gal (30 L).

IMO (Water):
UN3267, Corrosive, Liquid, Basic, Organic, N.O.S., (3-Aminopropyltriethoxysilane), 8, II,
Use packing instruction P001.

Section 15. Regulatory Information

EPCRA 311/312 Categories:

Immediate (Acute) Health Effects:	Yes
Delayed (Chronic) Health Effects:	Yes
Fire Hazard:	Yes
Sudden Release of Pressure	No
Reactivity:	Yes

Right to Know Classification: Ethanol is listed in the states of CA MA, NJ and PA. 3-Aminopropyltriethoxysilane is listed in MA, NJ and PA

TSCA: Both ingredients are listed.

Reportable Quantity (RQ): Ethanol 5,000 lbs. (2,270 KGS.) Not reached in current packaging.

Prop. 65: None

CANADA: These two products are listed in either DSL or NDSL.

Compounds are listed as chemical inventories of Australia, Canada, China, European Union, Germany, Japanese, Korea, Ministry of International Trade and Industry, Netherlands, Philippines, Switzerland, Taiwan, United Kingdom and United States of America.

Abbreviations:

CAS #	Chemical Abstract Service Number		
ºC	Celsius Temperature Scale	ºF	Fahrenheit Temperature Scale
EINECS #	European Inventory of Existing Chemical Substances Number		
hPa	Hectopascal	LD_{50}	Lethal Dose Oral or Dermal
LC_{50}	Lethal Inhalation	LEL	Lower Explosive Limit
UEL	Upper Explosive Limit	PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment	Prop.	Proprietary
PSI	Pounds Per Square Inch	NA	Not applicable
ND	Not Determined	STEL	Short Term Exposure Limit
TLV	Threshold Limit Value	TSCA	Toxic Substance Control Act
TWA	Time Weighted Average		

Section 16. Other Information

Hazardous Material Information System		**National Fire Protection Association**	
HMIS		**NFPA**	
2	Health	2	Health
1	Fire	1	Fire
2	Reactivity	2	Instability
H	Personal Protection		NA

Health	4 Deadly	3 Extreme Danger	2 Dangerous	1 Slight hazard	0 No hazard
Fire	4 < 73 ºC	3 < 100 ºC	2 < 200 ºC	1 >200 ºC	0 Will not burn
Reactivity/ Instability	4 – May detonate	3 Explosive	2 Unstable	1 Normally stable	0 Stable

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) this product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all information required by CPR.

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