

ALANE-TRIMETHYLAMINE COMPLEX

Safety Data Sheet OMAL008

Date of issue: 01/26/2015

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Substance
Physical state	: Solid
Substance name	: ALANE-TRIMETHYLAMINE COMPLEX
Product code	: OMAL008
Formula	: C ₃ H ₁₂ AlN
Synonyms	: TMAA; (N,N-DIMETHYLMETHANAMINE)TRIHYDROALUMINUM; TRIHYDRO(TRIMETHYLAMINE)ALUMINIUM
Chemical family	: METAL HYDRIDE

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

Use of the substance/mixture	: Chemical intermediate For research and industrial use only
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1.3. Details of the supplier of the safety data sheet**GELEST, INC.**11 East Steel Road
Morrisville, PA 19067**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com**1.4. Emergency telephone number**

Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
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SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification (GHS-US)**

Pyr. Sol. 1	H250
Water-react. 1	H260
Skin Corr. 1B	H314
Eye Dam. 1	H318

Full text of H-phrases: see section 16

2.2. Label elements**GHS-US labeling**

Hazard pictograms (GHS-US)



GHS02

GHS05

Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H250 - Catches fire spontaneously if exposed to air
 H260 - In contact with water releases flammable gases which may ignite spontaneously
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage

Precautionary statements (GHS-US)

: P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P210 - Keep away from heat, open flames, sparks. - No smoking
 P222 - Do not allow contact with air
 P223 - Do not allow contact with water
 P231+P232 - Handle under inert gas. Protect from moisture
 P260 - Do not breathe dust
 P264 - Wash hands thoroughly after handling
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - 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 doctor
 P335+P334 - Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages

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P363 - Wash contaminated clothing before reuse
P370+P378 - In case of fire: Use dry chemical powder followed by sand or dolomite to extinguish
P402+P404 - Store in a dry place. Store in a closed container
P405 - Store locked up
P422 - Store contents under nitrogen
P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent
Name : ALANE-TRIMETHYLAMINE COMPLEX
CAS No : 16842-00-5
EC no : 240-866-9

Name	Product identifier	%	Classification (GHS-US)
Trihydro(trimethylamine)aluminium	(CAS No) 16842-00-5	> 95	Pyr. Sol. 1, H250 Water-react. 1, H260 Skin Corr. 1B, H314 Eye Dam. 1, H318

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : Direct respiratory contact is usually not possible, but will cause burns. Inhalation of combustion products can cause irritation.

Symptoms/injuries after skin contact : Causes (severe) skin burns.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : May be harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical powder followed by sand or dolomite.

Unsuitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Cover with dry chemical extinguishing powder, lime, sand or soda ash. Remove sources of ignition. Remove combustible materials in the vicinity of the spill. Allow time for decomposition or fire to burn out, then sweep material and transfer to a suitable container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust. Do not allow contact with air. Do not allow contact with water. Handle under inert gas. Protect from moisture.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Laboratory and production areas must be equipped with special fire-extinguishing media for pyrophorics.

Storage conditions : Keep container tightly closed. Flammable and combustible materials should not be stored in or near working areas for pyrophorics.

Incompatible materials : Alkalis. Bromine. Chlorine. Metal salts. Oxidizing agent. Precious metals.

Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Trihydro(trimethylamine)aluminium (16842-00-5)

USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (PEL and TLV for aluminium alkyls as Al)
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8.2. Exposure controls

Appropriate engineering controls : Glove box or sealed system under inert atmosphere is required. Provide local exhaust or general room ventilation.

Personal protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection : Neoprene or nitrile rubber gloves.

Eye protection : Full face shield with chemical workers goggles. Contact lenses should not be worn.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Solid.

Molecular mass : 89.01 g/mol

Color : Off-white.

Odor : No data available

Odor threshold : No data available

Refractive index : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

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Melting point	: 76 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: < 0 °C
Auto-ignition temperature	: < 0 °C (PYROPHORIC)
Decomposition temperature	: 80 °C
Flammability (solid, gas)	: No data available
Vapor pressure	: 2 mm Hg @ 25°C
Relative vapor density at 20 °C	: > 1
Relative density	: No data available
Solubility	: Reacts violently with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

10.3. Possibility of hazardous reactions

The product can generate small amounts of hydrogen when exposed to alkalis and protic materials such as water and alcohol.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Alkalis. Bromine. Chlorine. Metal salts. Oxidizing agent. Precious metals.

10.6. Hazardous decomposition products

Aluminum oxides. Carbon monoxide. Formaldehyde. Hydrogen. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Direct respiratory contact is usually not possible, but will cause burns. Inhalation of combustion products can cause irritation.
Symptoms/injuries after skin contact	: Causes (severe) skin burns.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed.
Reason for classification	: Expert judgment

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SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.
Effect on ozone layer : No additional information available
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. This is a RCRA hazardous waste: 40 CFR 261.21 (i.e. ignitable) 40 CFR 261.23 (i.e. reactive).
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

UN-No.(DOT) : 2846
DOT NA no. : UN2846

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Pyrophoric solids, organic, n.o.s.
(ALANE-TRIMETHYLAMINE COMPLEX)
Department of Transportation (DOT) Hazard Classes : 4.2 - Class 4.2 - Spontaneously combustible material 49 CFR 173.124
Hazard labels (DOT) : 4.2 - Spontaneously combustible



DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : I - Great Danger
DOT Packaging Exceptions (49 CFR 173.xxx) : None
DOT Packaging Non Bulk (49 CFR 173.xxx) : 187
DOT Packaging Bulk (49 CFR 173.xxx) : 242

14.3. Additional information

Other information : No supplementary information available.

Transport by sea

DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : Forbidden

SECTION 15: Regulatory information

15.1. US Federal regulations

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Trihydro(trimethylamine)aluminium (16842-00-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

Trihydro(trimethylamine)aluminium (16842-00-5)

Listed on the Canadian NDSL (Non-Domestic Substances List)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.3. US State regulations

ALANE-TRIMETHYLAMINE COMPLEX(16842-00-5)

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

Trihydro(trimethylamine)aluminium (16842-00-5)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	

SECTION 16: Other information

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

Full text of H-phrases::

Eye Dam. 1	Serious eye damage/eye irritation Category 1
Pyr. Sol. 1	Pyrophoric solids Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Water-react. 1	Substances and mixtures which in contact with water emit flammable gases Category 1
H250	Catches fire spontaneously if exposed to air
H260	In contact with water releases flammable gases which may ignite spontaneously
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

HMIS III Rating

Health : 4 Severe Hazard - Life-threatening, major or permanent damage may result from single or repeated overexposures
Flammability : 4 Severe Hazard
Physical : 2 Moderate Hazard

Prepared by safety and environmental affairs.

Date of issue: 01/26/2015 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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