



# ALUMINUM s-BUTOXIDE BIS(ETHYLACETOACETATE), tech-95

Safety Data Sheet AKA023

Date of issue: 02/26/2016

Version: 1.0

## SECTION 1: Identification

### 1.1. Identification

Product name	: ALUMINUM s-BUTOXIDE BIS(ETHYLACETOACETATE), tech-95
Product code	: AKA023
Product form	: Substance
Physical state	: Liquid
Formula	: C16H27AlO7
Synonyms	: ALUMINUM s-BUTYLATE CHELATE; ALUMINUM BIS(ETHYLACETOACETATE)-s-BUTOXIDE
Chemical family	: METAL ALCOHOLATE

### 1.2. Recommended use and restrictions on use

Recommended use	: Chemical intermediate
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### 1.3. Supplier

#### 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](mailto:info@gelest.com) - [www.gelest.com](http://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: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Flammable liquids Category 4	H227	Combustible liquid
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Full text of H statements : see section 16		

### 2.2. GHS Label elements, including precautionary statements

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: H227 - Combustible liquid H319 - Causes serious eye irritation
Precautionary statements (GHS-US)	: P280 - Wear protective gloves/protective clothing/eye protection/face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, open flames, sparks P264 - Wash hands thoroughly after handling. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337+P313 - If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use foam, carbon dioxide, dry chemical to extinguish. P403+P235 - Keep in a cool place P501 - Dispose of contents/container to licensed waste disposal facility.

### 2.3. Hazards not otherwise classified (HNOC)

Other hazards not contributing to the classification	: The US ACGIH (TWA) for s-butanol is 100 ppm. The US OSHA PEL (TWA) for s-butanol is 150 ppm.
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### 2.4. Unknown acute toxicity (GHS US)

Not applicable

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Substance type	: Mono-constituent
Name	: ALUMINUM s-BUTOXIDE BIS(ETHYLACETOACETATE), tech-95
CAS-No.	: 93918-06-0

Name	Product identifier	%	GHS-US classification
Aluminum bis(ethylacetoacetate)-s-butoxide	(CAS-No.) 93918-06-0	95 - 100	Flam. Liq. 4, H227 Eye Irrit. 2A, H319

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

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

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: No information available.

#### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	: Avoid water spray as s-butanol will be generated.

#### 5.2. Specific hazards arising from the chemical

Fire hazard	: Combustible liquid. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
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#### 5.3. Special protective equipment and precautions for fire-fighters

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 all eye and skin contact and do not breathe vapor and mist.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Protective equipment	: Wear protective equipment as described in Section 8.
Emergency procedures	: Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
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#### 6.2. Environmental precautions

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

#### 6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

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### 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

Additional hazards when processed : Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Do not allow vapors or dust to accumulate in work areas. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent accumulation of vapors. Use only non-sparking tools.

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

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep in a cool place.

Incompatible materials : Water.

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

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

### 8.3. Individual protection measures/Personal protective equipment

#### 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:

Chemical goggles. Contact lenses should not be worn

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Liquid. Viscous.

Molecular mass : 358.39 g/mol

Color : Pale yellow to amber.

Odor : Slight odor of s-butanol.

Odor threshold : No data available

Refractive index : No data available

pH : No data available

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

Melting point : < 0 °C

Freezing point : No data available

Boiling point : No data available

Flash point : 77 °C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : Combustible liquid

Vapor pressure : No data available

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Relative vapor density at 20 °C	: > 1
Relative density	: 1.1
Solubility	: Reacts with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 90 - 110 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion 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.

### 10.3. Possibility of hazardous reactions

Material decomposes slowly in contact with air by reaction with moisture, liberating s-butanol and aluminum hydroxide.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Water.

### 10.6. Hazardous decomposition products

Aluminum oxide fumes. s-Butanol. Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
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/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: No information available.
Reason for classification	: Expert judgment

## 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

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### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the ozone layer : No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number

DOT NA no. NA1993

### 14.2. UN proper shipping name

Transport document description : NA1993 Combustible liquid, n.o.s. (ALUMINUM s-BUTOXIDE BIS(ETHYLACETOACETATE)), 3, III  
Proper Shipping Name (DOT) : Combustible liquid, n.o.s. (ALUMINUM s-BUTOXIDE BIS(ETHYLACETOACETATE))  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Packing group (DOT) : III - Minor Danger  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 241  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada, G - Identifies PSN requiring a technical name

### 14.3. Additional information

Emergency Response Guide (ERG) Number : 128  
Other information : No supplementary information available.  
Special transport precautions : This product is Combustible as defined by the US Department of Transportation (DOT). It is regulated for transport in the US in container > 119 gallons or 450 liters. The product is not regulated for transport by the IATA, ADR/RID, ADNR or the IMDG regulations.

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Aluminum bis(ethylacetoacetate)-s-butoxide (93918-06-0)

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

### 15.2. International regulations

#### CANADA

#### Aluminum bis(ethylacetoacetate)-s-butoxide (93918-06-0)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

#### Aluminum bis(ethylacetoacetate)-s-butoxide (93918-06-0)

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

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### National regulations

#### Aluminum bis(ethylacetoacetate)-s-butoxide (93918-06-0)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on NZIoC (New Zealand Inventory of Chemicals)

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Full text of H-phrases::

H227	Combustible liquid
H319	Causes serious eye irritation

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; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

### Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

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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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