# Safety Data Sheet

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product Identifier

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Substance name</td>
<td>ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE</td>
</tr>
<tr>
<td>Product code</td>
<td>AKA076</td>
</tr>
<tr>
<td>Formula</td>
<td>C18H15AlN6O6</td>
</tr>
<tr>
<td>Synonyms</td>
<td>ALUMINUM CUPFERRONATE; TRIS(N-HYDROXY-N-NITROSOPHENYLAMINATO-O,O,O')ALUMINIUM; N-NITROSO-N-PHENYLHYDROXYLAMINE ALUMINUM SALT</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ALUMINUM COMPOUND</td>
</tr>
</tbody>
</table>

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

#### 1.2.1. Relevant identified uses

- Use of the substance/mixture: Chemical intermediate

#### 1.2.2. Uses advised against

- No additional information available

### 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

**GELEST INC.**

Fritz-Klatte-Strasse 8  
65933 Frankfurt  
Germany  
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM  
info@gelestde.com - www.gelestde.com

### 1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

## Section 2: Hazards Identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

- Serious eye damage/eye irritation, Category 2: H319
- Germ cell mutagenicity, Category 2: H341
- Carcinogenicity, Category 2: H351

Full text of H statements: see section 16

**Adverse physicochemical, human health and environmental effects**

- No additional information available

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

- Hazard pictograms (CLP): ![GHS07](#) ![GHS08](#)

- Signal word (CLP): Warning

- Hazard statements (CLP):
  - H319 - Causes serious eye irritation.
  - H341 - Suspected of causing genetic defects.
ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE
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Precautionary statements (CLP)

P202 - Do not handle until all safety precautions have been read and understood.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
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.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type: Mono-constituent
Name: ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE
CAS-No.: 15305-07-4
EC-No.: 239-341-7

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum N-nitrosophenylhydroxylamine</td>
<td>(CAS-No.) 15305-07-4</td>
<td>&gt; 95</td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 239-341-7</td>
<td></td>
<td>Mut. 2, H341</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc. 2, H351</td>
</tr>
</tbody>
</table>

Full text of 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 person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of water/….

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, both acute and delayed

Symptoms/effects: May cause cancer. May cause genetic defects.
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: 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

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.

Print date: 09/04/2019 EN (English) SDS ID: AKA076 2/7
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
Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Sweep or shovel spills into appropriate 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 dust to accumulate in work areas.

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
Storage conditions: Keep container tightly closed. Store < 5°C.
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

<table>
<thead>
<tr>
<th>Aluminum N-nitrosophenylhydroxylamine (15305-07-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH ACGIH TWA (mg/m³)</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
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:
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 dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>438.3 g/mol</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight</td>
</tr>
</tbody>
</table>
ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE
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Odour threshold: No data available
Refractive index: No additional information available
pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: 168 - 170 °C decomposes
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: 373 °C
Decomposition temperature: No data available
Flamability (solid, gas): No data available
Vapour pressure: < 1 mm Hg @ 25°C
Relative vapour density at 20 °C: No data available
Relative density: No data available
% Volatiles: < 1 %
Solubility: Insoluble in water. Reacts 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
Oxidising 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.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified

Aluminum N-nitrosophenylhydroxylamine (15305-07-4)
LD50 oral rat 2330 - 2560 mg/kg
ATE CLP (oral) 2330 mg/kg bodyweight

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Causes serious eye irritation.
rabbit eye- non-irritating
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Suspected of causing genetic defects.
Reversal mutation data in S. typhimurium and E. coli: weak positive.
Carcinogenicity: Suspected of causing cancer.
The organic ligand NNitrosophenylhydroxylamine has been classified as tumorogenic (NCITR*NCI-CG-TR-100, 78)

Reproductive toxicity: Not classified
ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE
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<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Classification/Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT-single exposure</td>
<td>: Not classified</td>
<td></td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>: Not classified</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>: Not classified</td>
<td></td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>: May cause irritation to the respiratory tract.</td>
<td></td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>: May cause skin irritation.</td>
<td></td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>: Causes serious eye irritation.</td>
<td></td>
</tr>
<tr>
<td>Symptoms/effects after ingestion</td>
<td>: May be harmful if swallowed.</td>
<td></td>
</tr>
<tr>
<td>Reason for classification</td>
<td>: Expert judgment</td>
<td></td>
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</tbody>
</table>

**SECTION 12: Ecological information**

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Classification/Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute aquatic toxicity</td>
<td>: Not classified</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>: Not classified</td>
</tr>
</tbody>
</table>

**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. Results of PBT and vPvB assessment**

No additional information available.

**12.6. Other adverse effects**

No additional information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Product/Packaging disposal recommendations: Dispose of solid materials or residues at a licensed site. 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**

In accordance with ADR / RID / IMDG / IATA / ADN.

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Classification/Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (ADR)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>UN-No. (IMDG)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>UN-No. (IATA)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>UN-No. (ADN)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>UN-No. (RID)</td>
<td>: Not applicable</td>
</tr>
</tbody>
</table>

**14.2. UN proper shipping name**

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Classification/Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (ADR)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (IMDG)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (IATA)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (ADN)</td>
<td>: Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (RID)</td>
<td>: Not applicable</td>
</tr>
</tbody>
</table>

**14.3. Transport hazard class(es)**

**ADR**

Transport hazard class(es) (ADR): Not applicable

**IMDG**

Transport hazard class(es) (IMDG): Not applicable

**IATA**

Transport hazard class(es) (IATA): Not applicable
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ADN
Transport hazard class(es) (ADN) : Not applicable

RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group
Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user
- Overland transport
No data available
- Transport by sea
No data available
- Air transport
No data available
- Inland waterway transport
No data available
- Rail transport
No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE is not on the REACH Candidate List
ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE is not on the REACH Annex XIV List
ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles : < 1 %

15.1.2. National regulations

Germany
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
ALUMINUM N-NITROSOPHENYLHYDROXYLAMINE
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NIET-limitatieve lijst van voor de voortplanting gifte stoffen – Vruchtbaarheid

The substance is not listed

NIET-limitatieve lijst van voor de voortplanting gifte stoffen – Ontwikkeling

The substance is not listed

Denmark

Danish National Regulations

: Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

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

Other information:

: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Carc. 2 Carcinogenicity, Category 2
Eye Irrit. 2 Serious eye damage/eye irritation, Category 2
Muta. 2 Germ cell mutagenicity, Category 2
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.

SDS EU (REACH Annex II) - Custom

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