

## Chemical Safety Data Sheet MSDS / SDS

## Aluminium isopropoxide

Revision Date:2025-05-03 Revision Number:1

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

## Product identifier

Product name : Aluminium isopropoxide  
CBnumber : CB3355624  
CAS : 555-31-7  
EINECS Number : 209-090-8  
Synonyms : ALUMINUM ISOPROPOXIDE,Aluminium Isopropoxide

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

## Classification of the substance or mixture

Flammable solids, Category 1

## Label elements

## Pictogram(s)



Signal word Danger

## Hazard statement(s)

H228 Flammable solid

H314 Causes severe skin burns and eye damage

## Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P405 Store locked up.

P501 Dispose of contents/container to....

#### Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

#### Response

P370+P378 In case of fire: Use ... to extinguish.

#### Storage

none

#### Disposal

none

#### Other hazards

no data available

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: Aluminium isopropoxide
Synonyms	: ALUMINUM ISOPROPOXIDE,Aluminium Isopropoxide
CAS	: 555-31-7
EC number	: 209-090-8
MF	: C <sub>9</sub> H <sub>21</sub> AlO <sub>3</sub>
MW	: 204.24

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## SECTION 4: First aid measures

### Description of first aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately.

Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control

Center immediately.

### Most important symptoms and effects, both acute and delayed

no data available

### Indication of any immediate medical attention and special treatment needed

no data available

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## SECTION 5: Firefighting measures

### Extinguishing media

Stop flow of liquid before extinguishing fire. Use dry chemical or carbon dioxide. DO NOT use water as straight stream directly on spilled material. Water fog can be used to control fire. DO NOT use halogenated extinguishing agents on spilled material. Violent reaction may result. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance. Aluminum Alkyls

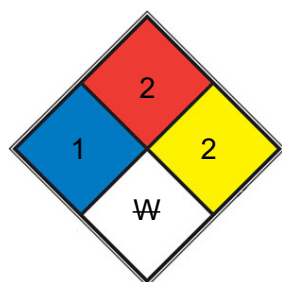
### Specific Hazards Arising from the Chemical

no data available

### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### NFPA 704



■ HEALTH 1 Exposure would cause irritation with only minor residual injury (e.g. [acetone](#), sodium bromate, potassium chloride)

Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely

■ FIRE 2 divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

■ REACT 2 Undergoes violent chemical change at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water (e.g. white phosphorus, [potassium](#), [sodium](#))

□ SPEC. HAZ. W

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear

chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Extremely reactive with air, moisture and compounds containing active hydrogen and therefore must be kept under a blanket of inert gas.  
Aluminum alkyls

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

<b>Component</b>	Aluminium triisopropanolate
<b>CAS No.</b>	555-31-7
	Recommended Exposure Limit: 10-Hr Time-Weighted Avg: 10 mg/cu m (total). /Aluminum/ Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 5 mg/cu m (resp). /Aluminum/ Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 2 mg/cu m. /Aluminum (soluble salts and alkyls, as Al)/ Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 5 mg/cu m. /Aluminum (pyro powders and welding fumes, as Al)/

#### Biological limit values

no data available

### Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/ flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Crystalline Powder (May Contain Chunks)
Colour	White
Odour	no data available
Melting point/freezing point	119 °C. Atm. press.:1 atm.
Boiling point or initial boiling point and boiling range	135 °C. Atm. press.:10 mm Hg.
Flammability	no data available
Lower and upper explosion limit/flammability limit	2%(V)
Flash point	11.7 °C.
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	8.5. Remarks:Temperature reported is temperature after 2 hours.
Kinematic viscosity	no data available
Solubility	REACTS
Partition coefficient n-octanol/water	log Pow = 0.05. Temperature:25 °C.
Vapour pressure	0.13 hPa (21 °C)
Density and/or relative density	1.035
Relative vapour density	1.035
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

Low melting solids or colorless, volatile liquids. Alkylaluminum halides

### Possibility of hazardous reactions

Certain polymerization catalysts, such as aluminum alkyls, react & burn violently on contact with water. Aluminum alkyls

### Conditions to avoid

no data available

### Incompatible materials

Extremely reactive with air, moisture, and compounds containing active hydrogen... Alkyl aluminum compounds

### Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 11300 mg/kg
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

A4; Not classifiable as a human carcinogen. Aluminum metal and insoluble compounds

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

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## SECTION 12: Ecological information

## Toxicity

Toxicity to fish: LC50 - Pimephales promelas - > 218.64 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna - > 10 000 mg/L - 24 h.

Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 100 mg/L - 72 h.

Toxicity to microorganisms: Toxicity threshold - Pseudomonas putida - 1 050 mg/L - 16 h.

## Persistence and degradability

no data available

## Bioaccumulative potential

no data available

## Mobility in soil

no data available

## Other adverse effects

no data available

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# SECTION 13: Disposal considerations

## Disposal methods

### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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# SECTION 14: Transport information

## UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

## UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

## Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

#### **Packing group, if applicable**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

#### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

#### **Special precautions for user**

no data available

#### **Transport in bulk according to IMO instruments**

no data available

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## SECTION 15: Regulatory information

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Not Listed.

#### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.