

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** Aluminum Nickel Isopropoxide

**Product Code:** AL-NIIP-01

**CAS Number:** 70504-57-3

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H336 May cause drowsiness or dizziness.

Hazards not otherwise classified No data available

GHS label elements, including precautionary statements



Hazard pictograms

GHS02 GHS07 GHS08

Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H336 May cause drowsiness or dizziness.  
Precautionary statements  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
WHMIS classification  
B2 - Flammable liquid  
D2A - Very toxic material causing other toxic effects  
Classification system  
HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
HEALTH  
FIRE  
REACTIVITY  
1  
3  
1  
Health (acute effects) = 1  
Flammability = 3  
Physical Hazard = 1  
Other hazards  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A

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## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances  
CAS No. / Substance Name:  
70504-57-3 Aluminum nickel isopropoxide, 10% w/v in isopropanol

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## **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
If inhaled:  
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
In case of skin contact:  
Immediately wash with soap and water; rinse thoroughly.  
Seek immediate medical advice.  
In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Seek medical treatment.

Information for doctor

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

Suitable extinguishing agents CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Toxic metal oxide fume

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Environmental precautions: Do not allow material to be released to the environment without official permits.

Methods and materials for containment and cleanup:

Keep away from ignition sources.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards: Keep away from ignition sources.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.  
Keep ignition sources away.  
Conditions for safe storage, including any incompatibilities  
Requirements to be met by storerooms and receptacles: Store in a cool location.  
Information about storage in one common storage facility:  
Store away from oxidizing agents.  
Store away from water/moisture.  
Further information about storage conditions:  
Store under dry inert gas.  
This product is moisture sensitive.  
Keep container tightly sealed.  
Store in cool, dry conditions in well-sealed containers.  
Protect from humidity and water.  
Specific end use(s) No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:  
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.  
Control parameters  
Components with limit values that require monitoring at the workplace:  
Nickel and inorganic compounds, as Ni  
mg/m<sup>3</sup>  
ACGIH TLV 1.5, A5-inhalable particulate (metal)  
0.2, A1-inhalable particulate (insoluble compounds)  
0.1, A4-inhalable particulate (soluble compounds)  
Austria Carcinogen  
Denmark TWA 0.5  
Finland TWA 0.1 (skin) Carcinogen  
France VME 1; C3-Carcinogen  
Germany Carcinogen  
Hungary 0.005-STEL; Carcinogen (insoluble compounds)  
Japan 1; 2B-Carcinogen  
Korea TLV 1.5  
Netherlands MAC-TGG 1; Carcinogen  
1 (insoluble compounds)  
Norway TWA 0.05  
Poland TWA 0.25  
Russia 0.05-STEL  
Sweden NGV 0.5 (dust)  
Switzerland MAK-W 0.5; Carcinogen  
United Kingdom TWA 0.1  
USA PEL 1  
Isopropyl alcohol (2-Propanol)  
ppm  
ACGIH TLV 400; 500-STEL  
Austria MAK 400  
Belgium TWA 400; 500-STEL  
Denmark TWA 200  
France VLE 400  
Germany MAK 400

Ireland TWA 400; 500-STEL (skin)

Japan TWA 400-STEL

Korea TWA 400; 500-STEL

Netherlands MAC-TGG 400 (skin)

Norway TWA 100

Poland TWA 900; 1200-STEL

Russia TWA 400-STEL

Sweden NGV 150; 250-STEL

Switzerland MAK-W 400

United Kingdom TWA 400; 500-STEL

OSHA PEL 400

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Liquid

Color: Green

Odor: Alcohol-like

Odor threshold: No data available.

pH: No data available.

Melting point/Melting range: No data available

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flash point: 12 °C (54 °F) (i-PrOH)

Flammability (solid, gas) No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures is possible.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure: No data available

Density: No data available

Relative density No data available.  
Vapor density No data available.  
Evaporation rate No data available.  
Solubility in / Miscibility with  
Water: Decomposes  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: No data available.  
Kinematic: No data available.  
Other information No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity No data available  
Chemical stability Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions Reacts with strong oxidizing agents  
Conditions to avoid No data available  
Incompatible materials:  
Oxidizing agents  
Water/moisture  
Hazardous decomposition products:  
Carbon monoxide and carbon dioxide  
Toxic metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity: No effects known.  
LD/LC50 values that are relevant for classification: No data  
Skin irritation or corrosion: Causes skin irritation.  
Eye irritation or corrosion: Causes serious eye irritation.  
Sensitization: May cause an allergic skin reaction.  
Germ cell mutagenicity: No effects known.  
Carcinogenicity:  
Suspected of causing cancer.  
IARC-3: Not classifiable as to carcinogenicity to humans.  
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.  
NTP-K: Known to be carcinogenic: sufficient evidence from human studies.  
Reproductive toxicity: No effects known.  
Specific target organ system toxicity - repeated exposure: No effects known.  
Specific target organ system toxicity - single exposure:  
May cause drowsiness or dizziness.  
May cause respiratory irritation.  
Aspiration hazard: No effects known.  
Subacute to chronic toxicity:  
Nickel and nickel compounds may cause a form of dermatitis known as nickel itch. They may also cause intestinal disorders, convulsions and asphyxia. Airborne nickel contaminated dusts are regarded as carcinogenic to the respiratory tract.

2-Propanol (isopropyl alcohol) may act as a local irritant and in high concentrations as a narcotic with symptoms such as headache, nausea, dizziness, vomiting, mental depression, anesthesia, and coma. Similar symptoms may be caused by ingestion. It can cause corneal burns on contact with the eyes and has caused teratogenic, mutagenic and reproductive effects in laboratory animals.  
Subacute to chronic toxicity: No effects known.  
Subacute to chronic toxicity: Aluminum may be implicated in Alzheimers disease. Inhalation of aluminum containing dusts may cause pulmonary disease.  
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity: No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number

DOT, IMDG, IATA UN1219

UN proper shipping name

DOT Isopropanol (Isopropyl alcohol)

IMDG, IATA ISOPROPANOL (ISOPROPYL ALCOHOL)

Transport hazard class(es)

DOT

Class 3 Flammable liquids.

Label 3

Class 3 (F1) Flammable liquids

Label 3

IMDG, IATA

Class 3 Flammable liquids.

Label 3  
Packing group  
DOT, IMDG, IATA II  
Environmental hazards: N/A  
Special precautions for user Warning: Flammable liquids  
EMS Number: F-E,S-D  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": UN1219, Isopropanol (Isopropyl alcohol), 3, II

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## SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS label elements, including precautionary statements

Hazard pictograms

GHS02 GHS07 GHS08

Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H336 May cause drowsiness or dizziness.

Precautionary statements

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

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted

to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This

product must not be used for commercial purposes or in formulations for commercial purposes.

SARA Section 313 (specific toxic chemical listings)

70504-57-3 Aluminum nickel isopropoxide, 10% w/v in isopropanol

California Proposition 65

Prop 65 - Chemicals known to cause cancer

70504-57-3 Aluminum nickel isopropoxide, 10% w/v in isopropanol

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

This product contains nickel and is subject to the reporting requirements of section 313 of the



Emergency Planning and Community Right to Know act of 1986 and 40CFR372.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the

market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.