


Titanium Aluminum Alloy		Pricing >
Linear Formula	Ti-Al	
MDL Number	N/A	
EC No.	N/A	
IUPAC Name	aluminum; titanium	
SMILES	[Al].[Ti]	
Inchl Identifier	InChI=1S/Al.Ti	
Inchl Key	KHEQKSIHRDRLMG-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H250-H261	
Hazard Codes	F	
Precautionary Statements	P210-P222-P231+P232-P370+P378-P422-P501	
Risk Codes	R15-17	
Safety Statements	N/A	
Transport Information	UN1396 4.3/PG II	
GHS Pictograms	GHS02 Flame 	

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SAFETY DATA SHEET

Date Accessed: 05/02/2024

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SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #66770-31-8

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:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
GHS02 Flame
Pyr. Sol. 1 H250 Catches fire spontaneously if exposed to air.
Water-react. 2 H261 In contact with water releases flammable gas.
Classification according to Directive 67/548/EEC or Directive 1999/45/EC
F; Highly flammable
R15-17: Contact with water liberates extremely flammable gases. Spontaneously flammable in air.
Information concerning particular hazards for human and environment:
Not applicable
Hazards not otherwise classified
No data available
Label elements
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labeled according to the CLP regulation.
Hazard pictograms



GHS02
Signal word: Danger
Hazard statements
H250 Catches fire spontaneously if exposed to air.
H261 In contact with water releases flammable gas.
Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P222 Do not allow contact with air.
P231+P232 Handle under inert gas. Protect from moisture.
P370+P378 In case of fire: Use for extinction: Special powder for metal fires.

P422 Store contents under inert gas.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification
B6 - Reactive flammable material
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 1
Flammability = 3
Physical Hazard = 2
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: Not applicable

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS No. / Substance Name:
7429-90-5 Aluminum
Identification number(s):
EC number: 231-072-3
Index number: 013-001-00-6

7440-32-6 Titanium
Identification number(s):
EC number:
231-142-3

SECTION 4. FIRST AID MEASURES

Description of first aid measures
If inhaled:
In case of unconsciousness place patient stably in side position for transportation.
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.
After eye contact
Rinse opened eye for several minutes under running water. Consult a physician.
After swallowing
Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed

No information available
Indication of any immediate medical attention and
special treatment needed
No information available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
Special powder for metal fires. Do not use water.
For safety reasons unsuitable extinguishing agents
Water
Special hazards arising from the substance or mixture
Spontaneously flammable in air.
If this product is involved in a fire, the following can be
released:
Metal oxide fume
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and
emergency procedures
Wear protective equipment. Keep unprotected
persons away.
Ensure adequate ventilation
Keep away from ignition sources
Environmental precautions:
No special measures required.
Do not allow product to reach sewage system or any
water course.
Do not allow to penetrate the ground/soil.
Methods and material for containment and cleaning
up:
Keep away from ignition sources.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
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.

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:

Substance/product is self ignitable.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Do not store together with acids.

Store away from oxidizing agents.

Store away from strong bases.

Store away from halogenated compounds.

Store away from air.

Store away from water/moisture.

Further information about storage conditions:

Store under dry inert gas.

This product is moisture sensitive.

This product is air sensitive.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Protect from humidity and water.

Specific end use(s)

No information available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

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.
Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.
Penetration time of glove material (in minutes): No data available
Eye protection:
Safety glasses
Full face protection
Body protection:
Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General Information

Appearance:

Form: Powder

Odor: Odorless

Odor threshold: No data available.

pH-value: N/A

Change in condition

Melting point/Melting range: No data available.

Boiling point/Boiling range: No data available.

Sublimation temperature / start: No data available

Flash point: Not applicable

Flammability (solid, gaseous)

Contact with water liberates extremely flammable gases.

Ignition temperature: No data available.

Decomposition temperature: No data available

Auto igniting: Spontaneously flammable in air.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure: N/A

Relative density

No data available.

Vapor density

N/A

Evaporation rate

N/A

Solubility in Water (H₂O): Contact with water releases flammable gases

Partition coefficient (n-octanol/water): No data available.

Viscosity:

dynamic: N/A

kinematic: N/A

Other information

No information available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

In contact with water releases flammable gases which may ignite spontaneously.

Catches fire spontaneously if exposed to air.

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

Spontaneously flammable in air.

Contact with water releases flammable gases

Conditions to avoid

No information available

Incompatible materials:

Acids

Air

Oxidizing agents

Bases

Halocarbons

Water/moisture

Hazardous decomposition products:

Metal oxide fume

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: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

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.

Reproductive toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.
Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity:
No information available
Persistence and degradability
No information available
Bioaccumulative potential
No information available
Mobility in soil
No information available
Additional ecological information:
General notes:
Do not allow material to be released to the environment without official permits.
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
Other adverse effects
No information available

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.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA
UN1396
UN proper shipping name

DOT
Aluminum powder, uncoated
IMDG, IATA
ALUMINIUM POWDER, UNCOATED
Transport hazard class(es)
DOT
Class
4.3 Substances which, in contact with water, emit flammable gases.
Label
4.3
Class
4.3 (W2) Substances which, in contact with water, emit flammable gases
Label
4.3
IMDG, IATA
Class
4.3 Substances which, in contact with water, emit flammable gases.
Label
4.3
Packing group
DOT, IMDG, IATA
II
Environmental hazards:
N/A
Special precautions for user
Warning: Substances which, in contact with water, emit flammable gases
EMS Number:
F-G,S-O
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":
UN1396, Aluminum powder, uncoated, 4.3, II

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the

Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings)
7429-90-5 Aluminum
California Proposition 65
Prop 65 - Chemicals known to cause cancer
Substance is not listed.
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 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
Authorization for use)
Substance is not listed.
REACH - Pre-registered substances
Substance is listed.
Chemical safety assessment:
A Chemical Safety Assessment has not been carried
out.

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

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