



ALUMINIUM AAS STANDARD SOLUTION 1000 mg/L Al IN DILUTED HNO₃ traceable to NIST

CAS No: MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form	: Mixture
Trade name	: ALUMINIUM AAS STANDARD SOLUTION 1000mg/L Al IN DILUTED HNO ₃
Product code	: RSN002A

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 : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Corrosive to metals,	H290
Category 1	
Skin corrosion/irritation,	H315
Category 2	
Serious eye damage/eye	H319
irritation, Category 2	

Full text of classification categories and H statements : see section 16

Adverse physicochemical, human health and environmental effects





No additional information available



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2.2. Label elements

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

Hazard pictograms (CLP)

:



GHS05

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H290 - May be corrosive to metals
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements (CLP)

: P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS No) 7732-18-5 (EC no) 231-791-2	75 - 99	Not classified
ALUMINIUM NITRATE (NONAHYDRATE) 98%	(CAS No) 7784-27-2	1 - 5	Ox. Sol. 1, H271 Eye Irrit. 2, H319 Skin Irrit. 2, H315
Nitric acid	(CAS No) 7697-37-2 (EC no) 231-714-2 (EC index no) 007-004-00-1	1 - 5	Ox. Liq. 1, H271 Skin Corr. 1A, H314

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation

: Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	: Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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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.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area. Stop release.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: On land, sweep or shovel into suitable containers. Collect spillage.
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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Do not breathe vapours.
Hygiene measures	: 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	: Store in a well-ventilated place. Keep container tightly closed.
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7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear Colorless.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.02 g/cm ³
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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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

May be corrosive to metals.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : 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

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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

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

No additional information available

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR)	: 3264
UN-No. (IMDG)	: 3264
UN-No.(IATA)	: 3264
UN-No.(ADN)	: 3264
UN-No. (RID)	: 3264

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (IATA)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (ADN)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (RID)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Transport document description (ADR)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, (E)
Transport document description (IMDG)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, MARINE POLLUTANT
Transport document description (IATA)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III
Transport document description (ADN)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III
Transport document description (RID)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III

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14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8
Danger labels (ADR) : 8



IMDG

Transport hazard class(es) (IMDG) : 8
Danger labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8



ADN

Transport hazard class(es) (ADN) : 8
Danger labels (ADN) : 8



RID

Transport hazard class(es) (RID) : 8
Danger labels (RID) : 8



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III

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Packing group (RID) : III

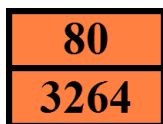
14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : Yes (IMDG only)
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : C1
Special provision (ADR) : 274
Limited quantities (ADR) : 5L
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP1, TP28
Tank code (ADR) : L4BN
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Hazard identification number (Kemler No.) : 80
Orange plates :



Tunnel restriction code (ADR) : E
EAC code : 2X
APP code : B

- Transport by sea

Special provision (IMDG) : 223, 274
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP28
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW2
MFAG-No : 154

- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y841
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 852

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PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3
ERG code (IATA)	: 8L

- Inland waterway transport

Classification code (ADN)	: C1
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

- Rail transport

Classification code (RID)	: C1
Special provision (RID)	: 274
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP28
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 80

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

Contains no substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

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AwSV/VwVwS Annex reference	: Water hazard class (WGK) 3, strongly hazardous to water (Classification according to AwSV, Annex 1)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-phrases:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 1	Oxidising Liquids, Category 1
Ox. Sol. 1	Oxidising Solids, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H271	May cause fire or explosion; strong oxidiser
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product