

CALCIUM (CA) ICP STANDARD SOLUTION 10 GM/L IN DILUTE HNO₃ TRACEABLE TO NIST MSDS

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
:
Product code : I116N

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, H315
Category 2
Serious eye damage/eye H319
irritation, Category 2

Full text of 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) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Precautionary statements (CLP) :

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.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

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
CADMIUM NITRATE AR (TETRAHYDRATE) 99% substance listed as REACH Candidate (Cadmium nitrate)	(CAS-No.) 10022-68-1	5 - 10	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400
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-statements: see section 16

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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.
First-aid measures after skin contact	: Wash with plenty of water/.... 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/effects after skin contact	: Causes skin irritation.
Symptoms/effects 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 a heavy water stream.

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.
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Collect spillage. On land, sweep or shovel into suitable containers.
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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	: Provide good ventilation in process area to prevent formation of vapour. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes.
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

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	: Colourless.
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
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available

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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 under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Overheating. Direct sunlight.

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
STOT-single exposure	: Not classified
STOT-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

Component	
CADMIUM NITRATE AR (TETRAHYDRATE) 99% (10022-68-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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)

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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

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



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14.4. Packing group


Packing group (ADR)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III
Packing group (ADN)	: III
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 provisions (ADR)	: 274
Limited quantities (ADR)	: 5I
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 provisions (IMDG)	: 223, 274
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
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.
MFAG-No	: 154

- Air transport

PCA Excepted quantities (IATA)	: E1
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PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A803
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 provisions (RID)	: 274
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 REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Cadmium nitrate (CAS 10022-68-1)

Contains no REACH Annex XIV substances

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15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 3, severe hazard 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)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Recommendations Danish Regulation : 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

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Liq. 1	Oxidising Liquids, 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.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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H332	Harmful if inhaled.
H400	Very toxic to aquatic life.

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