

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Cadmium AA Standard, 1000ppm
Product code : LC12600

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

Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Corrosive to metals Category 1	H290
Skin corrosion/irritation Category 1B	H314
Serious eye damage/eye irritation Category 1	H318
Carcinogenicity Category 1B	H350
Reproductive toxicity Category 2	H361
Hazardous to the aquatic environment - Acute Hazard Category 1	H400

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

GHS08

GHS09

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H350 - May cause cancer
H361 - Suspected of damaging fertility or the unborn child
H400 - Very toxic to aquatic life

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P234 - Keep only in original container
P260 - Do not breathe mist, vapors, spray
P264 - Wash exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/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
P310 - Immediately call a poison center or doctor/physician
P363 - Wash contaminated clothing before reuse
P390 - Absorb spillage to prevent material damage

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P405 - Store locked up
P406 - Store in corrosive resistant container with a resistant inner liner
P501 - Dispose of contents/container to comply with local, state and federal regulations
If inhaled: Remove person to fresh air and keep comfortable for breathing

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	95.3	Not classified
Nitric Acid, 70% w/w	(CAS No) 7697-37-2	4.6	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
Cadmium (non-pyrophoric)	(CAS No) 7440-43-9	0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation), H330 Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

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

Symptoms/injuries : Causes severe skin burns and eye damage. May cause cancer. Suspected of damaging fertility or the unborn child.

Symptoms/injuries after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing).

Symptoms/injuries after skin contact : Burns.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic symptoms : May cause cancer. May damage the unborn child.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity : Thermal decomposition generates : Corrosive vapors.

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Dike and contain spill.

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves. Protective clothing.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Absorb spillage to prevent material damage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : May be corrosive to metals.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong reducing agents.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Packaging materials : Store in a corrosion resistant container with a resistant inner liner.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cadmium (non-pyrophoric) (7440-43-9)		
ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³
OSHA	OSHA PEL (TWA) (mg/m ³)	0.005 mg/m ³
Nitric Acid, 70% w/w (7697-37-2)		
ACGIH	ACGIH TWA (ppm)	2 ppm (Nitric acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	4 ppm (Nitric acid; USA; Short time value; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	2 ppm
IDLH	US IDLH (ppm)	25 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Nitric Acid, 70% w/w (7697-37-2)		
NIOSH	NIOSH REL (TWA) (ppm)	2 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	4 ppm
Water (7732-18-5)		
Not applicable		

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

Personal protective equipment : Safety glasses. Gloves. Protective clothing. Face shield.



Materials for protective clothing : GIVE EXCELLENT RESISTANCE: nitrile rubber. neoprene. neoprene/natural rubber. GIVE GOOD RESISTANCE: PVC. natural rubber.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Respiratory protection not required in normal conditions.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless
Odor	: odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1 g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: Not applicable.
Oxidizing properties	: No data available

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May react violently with reducing agents.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong reducing agents. Strong bases. metals. May be corrosive to metals.

10.6. Hazardous decomposition products

Hydrogen chloride. cadmium.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact

Acute toxicity : Not classified

Cadmium (non-pyrophoric) (7440-43-9)	
LD50 oral rat	890 mg/kg
ATE US (oral)	890.000 mg/kg body weight
ATE US (dust, mist)	0.050 mg/l/4h

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

Cadmium (non-pyrophoric) (7440-43-9)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing).

Symptoms/injuries after skin contact : Burns.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic symptoms : May cause cancer. May damage the unborn child.

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

Cadmium (non-pyrophoric) (7440-43-9)	
LC50 fish 1	0.001 mg/l
EC50 Daphnia 1	0.024 mg/l
Nitric Acid, 70% w/w (7697-37-2)	
EC50 Daphnia 1	180 mg/l (EC50; 48 h)
LC50 fish 2	72 ppm (LC50; 96 h)
Threshold limit algae 1	> 19 mg/l (EC0)

12.2. Persistence and degradability

Cadmium AA Standard, 1000ppm	
Persistence and degradability	Not established.
Nitric Acid, 70% w/w (7697-37-2)	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Cadmium AA Standard, 1000ppm	
Bioaccumulative potential	Not established.
Nitric Acid, 70% w/w (7697-37-2)	
BCF fish 1	<= 1 (BCF)
Log Pow	-2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Bioaccumulation: not applicable.
Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.
GWPmix comment : No known effects from this product.
Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Transport document description : UN3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid), 8, II
UN-No.(DOT) : UN3264

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Proper Shipping Name (DOT) : Corrosive liquid, acidic, inorganic, n.o.s.
 Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
 Packing group (DOT) : II - Medium Danger
 Hazard labels (DOT) : 8 - Corrosive



Dangerous for the environment : Yes
 Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
 DOT Packaging Bulk (49 CFR 173.xxx) : 242
 DOT Symbols : G - Identifies PSN requiring a technical name
 DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.
 IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
 T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)
 TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: t_r is the maximum mean bulk temperature during transport, t_f is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during transportation (t_r) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d_{15} and d_{50} are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
 TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
 DOT Packaging Exceptions (49 CFR 173.xxx) : 154
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
 DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
 DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"
 Other information : No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Cadmium AA Standard, 1000ppm

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Cadmium (non-pyrophoric)	CAS No 7440-43-9	0.1%
Nitric Acid, 70% w/w	CAS No 7697-37-2	4.6%

Cadmium (non-pyrophoric) (7440-43-9)

RQ (Reportable quantity, section 304 of EPA's List of Lists) 10 lb

Nitric Acid, 70% w/w (7697-37-2)

RQ (Reportable quantity, section 304 of EPA's List of Lists) 1000 lb

SARA Section 302 Threshold Planning Quantity (TPQ) 1000 lb

SARA Section 311/312 Hazard Classes Immediate (acute) health hazard

15.2. International regulations

CANADA

Cadmium AA Standard, 1000ppm

WHMIS Classification Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
Class E - Corrosive Material

Cadmium (non-pyrophoric) (7440-43-9)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects
Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Nitric Acid, 70% w/w (7697-37-2)

WHMIS Classification Class E - Corrosive Material
Class C - Oxidizing Material

Water (7732-18-5)

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

EU-Regulations

No additional information available

National regulations

Cadmium (non-pyrophoric) (7440-43-9)

Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

Cadmium (non-pyrophoric) (7440-43-9)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	Yes	No	Yes	

SECTION 16: Other information

Revision date : 12/28/2016

Other information : None.

Cadmium AA Standard, 1000ppm

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases: see section 16:

H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard

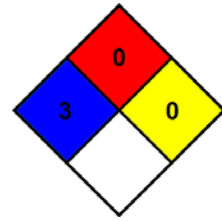
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: J
J - Splash goggles, Gloves, Synthetic apron, Dust & vapor respirator

SDS US LabChem

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