

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** CADMIUM, 1,000 µg/mL or 10,000 µg/mL

**Other means of identification**

**Product No.:** 6447, 5723, 5709

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor Information**

**Manufacturer**

**Company Name:** Avantor Performance Materials, Inc.  
**Address:** 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

**Telephone:** Customer Service: 855-282-6867

**Fax:**  
**Contact Person:** Environmental Health & Safety  
**e-mail:** info@avantormaterials.com

**Emergency telephone number:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2. Hazard(s) identification

**Hazard Classification**

**Health Hazards**

Skin Corrosion/Irritation	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1B
Specific Target Organ Toxicity - Repeated Exposure	Category 1

**Environmental Hazards**

Chronic hazards to the aquatic environment	Category 1
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**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Causes severe skin burns and eye damage.  
May cause cancer.  
Suspected of causing genetic defects.  
Causes damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life with long lasting effects.

**Precautionary Statement**

**Prevention:** Do not breathe dust/mist/vapors/spray. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment.

**Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect spillage.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

**3. Composition/information on ingredients**

**Mixtures**

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
NITRIC ACID		7697-37-2	1 - 5%
CADMIUM		7440-43-9	0.1 - 1.0%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Ingestion:** Do NOT induce vomiting. Drink a few glasses of water or milk. Call a physician or poison control center immediately. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Inhalation:** Move to fresh air. Get medical attention if symptoms persist.

**Skin Contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** May cause irritation to skin, eyes, and respiratory tract.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Treat symptomatically. Symptoms may be delayed.

**5. Fire-fighting measures**

**General Fire Hazards:** In case of fire and/or explosion do not breathe fumes.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Notification Procedures:** Inform authorities if large amounts are involved. Prevent runoff from entering drains, sewers, or streams.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling:** Use personal protective equipment as required. Avoid breathing mist or vapor. Wash hands thoroughly after handling. Avoid contact with eyes. Avoid contact with skin. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities:**

Store locked up. Store in a cool, dry place. Store in a well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
NITRIC ACID	STEL	4 ppm	US. ACGIH Threshold Limit Values (2011)
	TWA	2 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	4 ppm 10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	2 ppm 5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2 ppm 5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	4 ppm 10 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	2 ppm 5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

**Appropriate Engineering Controls**

No data available.

### Individual protection measures, such as personal protective equipment

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Eye/face protection:** Use eye protection.

#### Skin Protection

**Hand Protection:** Wear protective gloves.

**Other:** Wear suitable protective clothing.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator.

**Hygiene measures:** Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

## 9. Physical and chemical properties

### Appearance

**Physical state:** Liquid

**Form:** Liquid

**Color:** Colorless

**Odor:** Odorless

**Odor threshold:** No data available.

**pH:** No data available.

**Melting point/freezing point:** No data available.

**Initial boiling point and boiling range:** No data available.

**Flash Point:** Not applicable

<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Soluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of Hazardous Reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid:</b>	Heat, sparks, flames. Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizing agents. Acids. Bases. Powdered metal. Organic peroxides/hydroperoxides. Carbonates.
<b>Hazardous Decomposition Products:</b>	By heating and fire, toxic vapors/gases may be formed. Nitrogen Oxides

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion:</b>	May be harmful if swallowed.
<b>Inhalation:</b>	May be harmful if inhaled.
<b>Skin Contact:</b>	May cause burns.
<b>Eye contact:</b>	May cause chemical eye burns.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

<b>Oral Product:</b>	No data available.
<b>Dermal Product:</b>	No data available.
<b>Inhalation Product:</b>	No data available.

**Specified substance(s):**

NITRIC ACID  
LC 50 (Rat, 1 h): 7 mg/l  
LC 50 (Rat, 4 h): 65 ppm  
LC 50 (Mouse, 4 h): 67 ppm

**Repeated Dose Toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** Causes skin burns.

**Serious Eye Damage/Eye Irritation**

**Product:** May cause chemical eye burns.

**Respiratory or Skin Sensitization**

**Product:** Not a skin sensitizer.

**Carcinogenicity**

**Product:** May cause cancer.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** Suspected of causing genetic defects.

**In vivo**

**Product:** Suspected of causing genetic defects.

**Reproductive Toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** Causes damage to organs through prolonged or repeated exposure.

**Aspiration Hazard**

**Product:** Not classified

**Other Effects:** None known.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

NITRIC ACID  
LC 50 (Starfish (Asterias rubens), 48 h): 100 - 330 mg/l Mortality

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

NITRIC ACID LC 50 (Cockle (*Cerastoderma edule*), 48 h): 330 - 1,000 mg/l Mortality  
LC 50 (Green or European shore crab (*Carcinus maenas*), 48 h): 180 mg/l Mortality

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** There are no data on the degradability of this product.

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in Soil:**

The product is water soluble and may spread in water systems.

**Other Adverse Effects:**

Very toxic to aquatic life with long lasting effects.

**13. Disposal considerations**

**Disposal instructions:**

Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:**

Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**

UN Number:	UN 3264
UN Proper Shipping Name:	Corrosive liquid, acidic, inorganic, n.o.s.(NITRIC ACID)
Transport Hazard Class(es)	
Class(es):	8
Label(s):	8
Packing Group:	III
Marine Pollutant:	No

**IMDG**

UN Number: UN 3264  
 UN Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(NITRIC ACID)  
 Transport Hazard Class(es):  
   Class(es): 8  
   Label(s): 8  
   EmS No.: F-A, S-B  
 Packing Group: III  
 Marine Pollutant: No

**IATA**

UN Number: UN 3264  
 Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s.(NITRIC ACID)  
 Transport Hazard Class(es):  
   Class(es): 8  
   Label(s): 8  
 Marine Pollutant: No  
 Packing Group: III

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

NITRIC ACID Reportable quantity: 1000 lbs.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Acute (Immediate)  Chronic (Delayed)  Fire  Reactive  Pressure Generating

**SARA 302 Extremely Hazardous Substance**

Chemical Identity	RQ	Threshold Planning Quantity
NITRIC ACID	1000 lbs.	1000 lbs.

**SARA 304 Emergency Release Notification**

Chemical Identity	RQ
NITRIC ACID	1000 lbs.

**SARA 311/312 Hazardous Chemical**

Chemical Identity	Threshold Planning Quantity
NITRIC ACID	500lbs

**SARA 313 (TRI Reporting)**

Chemical Identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
NITRIC ACID	10000 lbs	25000 lbs.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

NITRIC ACID Reportable quantity: 1000 lbs.



**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**  
NITRIC ACID Threshold quantity: 15000 lbs

**US State Regulations**

**US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

**US. New Jersey Worker and Community Right-to-Know Act**

NITRIC ACID Listed

**US. Massachusetts RTK - Substance List**

NITRIC ACID Listed

**US. Pennsylvania RTK - Hazardous Substances**

NITRIC ACID Listed

**US. Rhode Island RTK**

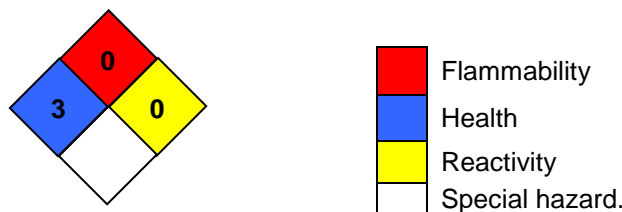
NITRIC ACID Listed

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

**Issue Date:** 12-16-2014  
**Revision Date:** No data available.  
**Version #:** 1.0  
**Further Information:** No data available.

**Disclaimer:**

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