

MSDS# 04085

Section 1 - Chemical Product and Company Identification

MSDS Name: Calcium, reference standard solution 1000 ppm

Catalog Numbers: SC191-100, SC191-500

Synonyms: None.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases: 36/38

CAS#: 471-34-1
Chemical Name: Calcium carbonate
%: 0.24
EINECS#: 207-439-9
Hazard Symbols: XI

Risk Phrases: 35 8

CAS#: 7697-37-2
Chemical Name: Nitric acid
%: 2.25
EINECS#: 231-714-2
Hazard Symbols: O C

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: 97.51
EINECS#: 231-791-2
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: XI



Risk Phrases: 37/38 41

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! May cause central nervous system depression. May cause kidney damage. May cause severe eye irritation and possible injury. Corrosive to metal. Causes skin and respiratory tract irritation. Target Organs: Kidneys, central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: May cause irreversible eye injury.

Skin: Causes skin irritation.

Ingestion: May cause irritation of the digestive tract.

Inhalation: Causes respiratory tract irritation.

Chronic: Repeated inhalation may cause chronic bronchitis. Repeated exposure may cause erosion of teeth. May cause kidney injury. Chronic ingestion may cause neurological symptoms.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Neutralize spill with sodium bicarbonate. Use water spray to disperse the gas/vapor.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get on skin or in eyes. Do not ingest or inhale.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Calcium carbonate	none listed	10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable dust)	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction) (listed under

			Calcium carbonate).
Nitric acid	2 ppm; 4 ppm STEL	2 ppm TWA; 5 mg/m3 TWA 25 ppm IDLH	2 ppm TWA; 5 mg/m3 TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs: Calcium carbonate: 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) (listed under Calcium carbonate) Nitric acid: 2 ppm TWA; 5 mg/m3 TWA Water: None listed

Engineering Controls:

Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a

Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: colorless

Odor: none reported

pH: Acidic

Vapor Pressure: 14 mm Hg @20C

Vapor Density: 0.7

Evaporation Rate: >1 (ether=1)

Viscosity: Not available

Boiling Point: 100 deg C (212.00°F)

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: Completely soluble in water.

Specific Gravity/Density: >1.0

Molecular Formula: Mixture

Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials.

Incompatibilities with Other Materials: Not available

Hazardous Decomposition Products: Oxides of nitrogen, calcium oxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

CAS# 471-34-1: FF9335000

RTECS#: CAS# 7697-37-2: QU5775000 QU5900000

CAS# 7732-18-5: ZC0110000

RTECS:

CAS# 471-34-1: Draize test, rabbit, eye: 750 ug/24H Severe;

Draize test, rabbit, skin: 500 mg/24H Moderate;

Oral, rat: LD50 = 6450 mg/kg;

RTECS:

LD50/LC50: CAS# 7697-37-2: Inhalation, rat: LC50 = 260 mg/m³/30M;
Inhalation, rat: LC50 = 130 mg/m³/4H;
Inhalation, rat: LC50 = 67 ppm(NO₂)/4H;

RTECS:

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity: Calcium carbonate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Nitric acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

Hazard Class: 8

UN Number: UN3264

Packing Group: III

Canada TDG

Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC,

Hazard Class: 8

UN Number: UN3264

Packing Group: III

USA RQ: CAS# 7697-37-2: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 37/38 Irritating to respiratory system and skin.

R 41 Risk of serious damage to eyes.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 471-34-1: 0

CAS# 7697-37-2: 1

CAS# 7732-18-5: Not available

Canada

CAS# 471-34-1 is listed on Canada's DSL List

CAS# 7697-37-2 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: E, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations

and the MSDS contains all of the information required by those regulations.

CAS# 471-34-1 is not listed on Canada's Ingredient Disclosure List.

CAS# 7697-37-2 is listed on Canada's Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 471-34-1 is listed on the TSCA
Inventory.

CAS# 7697-37-2 is listed on the TSCA
Inventory.

CAS# 7732-18-5 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 9/30/1997

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
