1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Calcium nitrate tetrahydrate
Product Number: D9003
Brand: Dando
Supplier: Dando Chemicals US LLC
Address: 551 E 11 Mile Rd Suite 3B, Madison Heights, MI 48071 USA.
Telephone: 248-629-9434
Emergency Phone # (For both supplier and manufacturer): +1 (313) 520 1328
Email: info@dandochem.us
Preparation Information: Dando Chemicals US LLC

2. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Oxidizer, Carcinogen

Target Organs
Blood, Central nervous system

GHS Classification
Oxidizing solids (Category 3)
Acute toxicity, Oral (Category 5)
Skin irritation (Category 3)
Eye irritation (Category 2B)

GHS Label elements, including precautionary statements

Pictogram
Signal word Warning
Hazard statement(s)

H272  May intensify fire; oxidiser.
H303  May be harmful if swallowed.
H316  Causes mild skin irritation.
H320  Causes eye irritation.

Precautionary statement(s)

P220  Keep/Store away from clothing/ combustible materials.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard:  1
Chronic Health Hazard:  *
Flammability:  0
Physical hazards:  1

NFPA Rating

Health hazard:  0
Fire:  0
 Reactivity Hazard:  1
Special hazard.:  OX

Potential Health Effects

Inhalation  May be harmful if inhaled. May cause respiratory tract irritation.

Skin  May be harmful if absorbed through skin. May cause skin irritation.

Eyes  May cause eye irritation.

Ingestion  May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula:  CaN₂O₆·4H₂O
Molecular Weight:  236.15 g/mol
Component Concentration
Calcium nitrate tetrahydrate
CAS-No.
EC-No.
4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Calcium oxide

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Immersion protection

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min

Splash protection

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 30 min

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method:
EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

Form crystalline

Colour colourless

**Safety data**

pH 5.5 - 7.0

Melting

Point/freezing point

Melting point/range: 44 °C (111 °F) - dec.

Boiling point no data available

Flash point no data available

Ignition temperature no data available

Autoignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Vapour pressure no data available

Density 1.82 g/cm3

Water solubility 1,293 g/l at 20 °C (68 °F)

Partition coefficient:
n-octanol/water
no data available
Relative vapour density
no data available
Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
Avoid contact with combustible material (paper, wool, oil).

Materials to avoid
Strong reducing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Calcium oxide
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - rat - 3,900 mg/kg

Inhalation LC50
no data available

Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
Skin - rabbit - Mild skin irritation - 24 h

**Serious eye damage/eye irritation**

Eyes - rabbit - Mild eye irritation - 24 h

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC: 2A - Group 2A: Probably carcinogenic to humans (Calcium nitrate tetrahydrate)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

no data available

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation.

**Synergistic effects**

no data available
Additional Information

RTECS: EW3000000

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1454  Class: 5.1  Packing group: III

Proper shipping name: Calcium nitrate

Reportable Quantity (RQ):

Marine pollutant: No

Poison Inhalation Hazard: No
UN number: 1454  Class: 5.1  Packing group: III  EMS-No: F-A, S-Q
Proper shipping name: CALCIUM NITRATE
Marine pollutant: No

IATA
UN number: 1454  Class: 5.1  Packing group: III
Proper shipping name: Calcium nitrate

15. REGULATORY INFORMATION

OSHA Hazards
Oxidizer, Carcinogen

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold
(De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Reactivity Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Calcium nitrate tetrahydrate
CAS-No.
13477-34-4
Revision Date
2007-03-01

New Jersey Right To Know Components
Calcium nitrate tetrahydrate
CAS-No.
13477-34-4
Revision Date
2007-03-01

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Dando Chemicals and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.