

Calcium chloride dihydrate

31307-1KG

Version 2.0

Revision Date 12.07.2021

Supersedes 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Calcium chloride dihydrate
SDS-number : 000000020690
Type of product : Substance
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.
Chemical name : Calcium chloride-2-hydrate
Index-No. : 017-013-00-2
REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals
Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :
For further information, please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
Country based Poison Control Center : see chapter 15.1

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SECTION 2: Hazards identification


2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Eye irritation Category 2
H319 Causes serious eye irritation.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms : 

Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements : P280 Wear protective gloves/ 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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

2.3. Other hazards

None known. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Calcium chloride-2-	10035-04-8	Eye Irrit. 2; H319	100 %	

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hydrate	017-013-00-2 233-140-8			
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3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area.

Inhalation:

If inhaled, remove to fresh air. Call a physician if irritation develops or persists.

Skin contact:

After contact with skin, wash immediately with plenty of water. Call a physician if irritation develops or persists.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Remove contact lenses. Call a physician immediately.

Ingestion:

Clean mouth with water and drink afterwards plenty of water. Call a physician immediately.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Some risk may be expected of corrosive and toxic decomposition products.
In case of fire hazardous decomposition products may be produced such as:
Calcium oxide
Gaseous hydrogen chloride (HCl).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.
No unprotected exposed skin areas.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not use a solid water stream as it may scatter and spread fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Provide adequate ventilation.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Use mechanical handling equipment.
Pick for disposal in tightly closed containers
Avoid dust formation.

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6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Wear personal protective equipment. Use only in well-ventilated areas. Avoid breathing dust. Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection. The product itself does not burn. The product is not liable to cause dust explosions.

Hygiene measures:

General industrial hygiene practice.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Store in original container. Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: room temperature. (Ambient temperature: > 0 < 35°C)

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
Calcium chloride-2-hydrate	Workers / Long-term local effects		5 mg/m3	Inhalation	

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Calcium chloride-2-hydrate	Workers / Acute local effects		10 mg/m ³	Inhalation	
Calcium chloride-2-hydrate	Consumers / Long-term local effects		2,5 mg/m ³	Inhalation	
Calcium chloride-2-hydrate	Consumers / Acute local effects		5 mg/m ³	Inhalation	

No PNEC data available.

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards: respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures

Local exhaust

Personal protective equipment

Respiratory protection:

In the case of dust or aerosol formation use respirator with an approved filter.

Recommended Filter type:

Half mask with a particle filter P2 (EN 143)

Hand protection:

Glove material: Natural Latex

Break through time: > 480 min

Glove thickness: 0,6 mm

Lapren®706

Gloves must be inspected prior to use.

Replace when worn.

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Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.
Manufacturer's directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: solid
Colour	: colourless
Odour	: odourless
molecular weight	: 147,01 g/mol
Melting point/range	: 765 °C
Boiling point/boiling range	: ca. 1.900 °C at 1.013 hPa
Flammability	: The product is not flammable.
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable

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Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
pH	:	4,5 - 8 Concentration: 5 % w/w at 20 °C
Auto-ignition temperature	:	not auto-flammable
Viscosity, kinematic	:	No data available
Water solubility	:	830 g/l at 20 °C
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Density	:	No data available
Bulk density	:	ca. 700 kg/m ³
Relative vapour density	:	No data available

9.2 Other Information

The product is hygroscopic.

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

Viscosity, dynamic : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

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10.2. Chemical stability

No decomposition if used as directed.
Loss of water of crystallization on heating.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Protect from atmospheric moisture and water.
Temperatures greater than recommended storage temperature.
Keep away from direct sunlight.

10.5. Incompatible materials

On dilution or dissolving in water, considerable heating always occurs.
Humid air

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

LD50

Species: Rat

Value: 2.120 mg/kg

Method: OECD Test Guideline 401

Test substance: anhydrous substance

Acute dermal toxicity:

LD50

Species: Rat

Value: > 5.000 mg/kg

Acute inhalation toxicity:

No data available

Skin irritation:

Species: Rabbit

Result: non-irritant

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Method: OECD Test Guideline 404

Eye irritation:

Species: Rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline 405

Respiratory or skin sensitisation:

No data available

Repeated dose toxicity:

Note: No data available

Carcinogenicity:

Note: No data available

Germ cell mutagenicity:

Test Method: Ames test

Metabolic activation: with metabolic activation

Result: negative

Method: OECD Test Guideline 471

Test Method: Chromosome aberration test in vitro

Cell type: Chinese Hamster Lung Cells

Metabolic activation: without metabolic activation

Result: negative

Method: OECD Test Guideline 473

Reproductive toxicity:

Method: OECD Test Guideline 414

Species: Rat

General Toxicity Maternal: NOAEL: > 176 mg/kg bw/d

Teratogenicity: NOAEL: > 176 mg/kg bw/d

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

No data available

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SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

LC50

Species: Pimephales promelas (fathead minnow)

Value: 4.630 mg/l

Exposure time: 96 h

Test substance: anhydrous substance

Toxicity to aquatic plants:

EC50

Biomass

Species: Selenastrum capricornutum (green algae)

Value: 2.900 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Test substance: anhydrous substance

EC50

Growth rate

Species: Selenastrum capricornutum (green algae)

Value: > 4.000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Test substance: anhydrous substance

Toxicity to aquatic invertebrates:

LC50

Species: Daphnia magna (Water flea)

Value: 2.400 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

12.2. Persistence and degradability

Biodegradability:

The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

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No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:Not dangerous goods IMDG:Not dangerous goods IATA:Not dangerous goods

14.2 UN proper shipping name

ADR/RID:Not dangerous goods
IMDG:Not dangerous goods
IATA:Not dangerous goods

14.3 Transport hazard class(es)

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14.4 Packaging group

14.5 Environmental hazards

ADR/RID: no

Marine pollutant: no

14.6 Special precautions for user

No data available

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Basis	Value	Remarks
Directive 2012/18/EC SEVESO III		Not applicable
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	808250250
Romania	+40 21 318 3606

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France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

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New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

Calcium chloride-2-hydrate : H319 Causes serious eye irritation.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

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