

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

1.1. Product identifier

Product name : Denka SC-1

Product code : D01

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Accelerator for cement based products.

1.2.2. Uses advised against

No additional information available.

1.3. Details of the supplier of the safety data sheet

DENKA Co., Ltd.

Special cement additives Dept.

Nihonbashi Mitsui Tower, 1-1, Nihonbashi-Muromachi 2-Chome, Chuo-Ku Tokyo 103-8338, JAPAN

Tel : + 81-3-5290-5365

Fax : + 81-3-5290-5085

OMI PLANT, Niigata Pref. JAPAN

Tel : + 81-255-62-6324

1.4. Emergency telephone number

Emergency number : + 81-80-5260-1965

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315

Eye Dam. 1 H318

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R38

Xi; R41

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger.

Hazardous ingredients : Calcium aluminat.

Hazard statements (CLP) : H315 - Causes skin irritation.
H318 - Causes serious eye damage.

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352+P332+P313 - IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Unknown hazards to the aquatic environment (CLP) : Contains 30% of components with unknown hazards to the aquatic environment.

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2.3. Other hazards

No additional information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Calcium aluminate	(CAS No) 65997-17-3 (EC no) 266-046-0 (CAS No) 65997-16-2 (EC no) 266-045-5	30 - 70	Skin Irrit. 2, H315 Eye Dam. 1, H318
Calcium sulfate	(CAS No) 7778-18-9 (EC no) 231-900-3	30 - 70	Not classified.

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Calcium aluminate	(CAS No) 65997-17-3 (EC no) 266-046-0 (CAS No) 65997-16-2 (EC no) 266-045-5	30 - 70	Xi; R38 Xi; R41
Calcium sulfate	(CAS No) 7778-18-9 (EC no) 231-900-3	30 - 70	Not classified.

Calcium aluminate (CAS# 65997-17-3, CAS# 65997-16-2) is exempt from registration.

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
First-aid measures after eye contact	: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
First-aid measures after ingestion	: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

Symptoms/injuries after inhalation	: May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause burns in the presence of moisture.
Symptoms/injuries after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns in the presence of moisture.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry chemical, foam, CO ₂ .
Unsuitable extinguishing media	: Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Products of combustion may include, and are not limited to: oxides of carbon, oxides of sulphur, oxides of metal, poisonous and corrosive fumes. Reacts with water, generates heat.
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5.3. Advice for firefighters

Protection during firefighting	: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Environmental precautions

No additional information available.

6.3. Methods and material for containment and cleaning up

For containment : Pick up large pieces, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Minimize generation of dust. Keep dry.

Methods for cleaning up : Vacuum or sweep material and place in a disposal container. Provide ventilation.

6.4. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid generating and breathing dust. Do not swallow. The use of compressed air for cleaning clothing, equipment, etc. is not recommended. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Good housekeeping is important to prevent accumulation of dust.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Store in original container. Keep container closed when not in use. Store in a cool, dry, place away from incompatible materials. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers.

7.3. Specific end use(s)

Accelerator additive for concrete.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield). Contact lenses should not be worn.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid.

Appearance : Powder.

Colour : White to off-white.

Odour : No data available.

Odour threshold : No data available.

pH : 11 - 13 saturated solution at 20 °C (68 °F)

Relative evaporation rate (butylacetate=1) : No data available.

Melting point : No data available.

Freezing point : No data available.

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Boiling point	: No data available.
Flash point	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available.
Relative vapour density at 20 °C	: No data available.
Relative density	: 2.70 – 3.10 g/cm ³ at 20 °C (68 °F)
Solubility	: No data available.
Partition coefficient: n-octanol/water	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosive properties	: Non explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: No data available.

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Keep dry in storage.

10.3. Possibility of hazardous reactions

In the presence of chlorine trifluoride may react violently and ignite. May initiate explosive polymerisation of olefin oxides including ethylene oxide. Produces exothermic reaction above 200 °C with halocarbons and an exothermic reaction at ambient temperatures with halocarbons in the presence of other metals. Produces exothermic reaction with oxygen difluoride. May form explosive mixtures with oxygen difluoride. Forms explosive mixtures with sodium nitrate. Reacts vigorously with vinyl acetate. Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride. These trifluorides are hypergolic oxidisers. They ignite on contact (without external source of heat or ignition) with recognised fuels – contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition. This material will react exothermically with water. The contaminated water will be strongly alkaline and may cause skin burns.

10.4. Conditions to avoid

Heat. Incompatible materials. Moisture.

10.5. Incompatible materials

Hot chlorinated rubber. Chlorine trifluoride. Olefin oxides. Halocarbons. Oxygen difluoride. Sodium nitrate. Vinyl acetate. Bromine trifluoride. Fuels. Strong acids. Acid chlorides. Acid anhydrides. Chloroformates. Copper and its alloys. Aluminium and its alloys. Water.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, oxides of sulphur, oxides of metal, poisonous and corrosive fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

Denka SC-1	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	No data available.
LC50 inhalation rat	No data available.

Calcium aluminate (65997-17-3)	
LD50 oral rat	> 2000 mg/kg

Calcium sulfate (7778-18-9)	
LD50 oral rat	> 3000 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.

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Reproductive toxicity	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Calcium sulfate (7778-18-9)

LC50 fishes 1	2980 mg/l (96 h - <i>Lepomis macrochirus</i> [static])
LC50 fish 2	> 1970 mg/l (96 h - <i>Pimephales promelas</i> [static])

12.2. Persistence and degradability

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Persistence and degradability : Not established.

12.3. Bioaccumulative potential

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Bioaccumulative potential : Not established.

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

In accordance with ADR.

14.1. UN number

Not regulated for transport.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Danger labels (ADR) : Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Dangerous for the environment : No.
Marine pollutant : No.
Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

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Contains no substances with Annex XVII restrictions.
Contains no REACH candidate substance.
Contains no REACH Annex XIV substances.

15.1.2. National regulations

No additional information available.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Indication of changes:

None.

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of R-, H- and EUH-phrases:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation
H318	Causes serious eye damage
R38	Irritating to skin
R41	Risk of serious damage to eyes
Xi	Irritant

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Irrit. 2	H315	Concentration limits
Eye Dam. 1	H318	Concentration limits

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