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SAFETY DATA SHEET

Calsal

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

1.1 Product identifier

Product name : Calsal
Product code : PA368L
Product type : Liquid

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

Identified uses
Industrial distribution. Industrial USE to formulate fertilisers product mixtures. Professional formulation of fertiliser products. Professional USE as fertiliser in Greenhouse. Professional USE as liquid fertiliser in open field.

Uses advised against	: Other non-specified industry
Reason	: Due to lack of related experience or data, the supplier cannot approve this use.

1.3 Details of the supplier of the safety data sheet

Yara Vlaardingen B.V.
Address
Street : Zevenmanshaven Oost
Number : 67
Postal code : 3133 CA
City : Vlaardingen
Country : Netherlands
Telephone number : +31 10 445 2000
Fax no. : 31 10 445 2009
e-mail address of person responsible for this SDS : sdsfertde@yara.com

1.4 Emergency telephone number

National advisory body/Poison Center

Name : Antigifcentrum / Centre Antipoison
Telephone number : +32 (0) 70 245 245
Hours of operation : 24h

Supplier

Emergency telephone number : +44 1235239670
(with hours of operation) : 24 h

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture.

Product definition : Mixture

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

Classification : Acute Tox. 4, H302
 Eye Dam. 1, H318

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

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

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
 H318 Causes serious eye damage.

Precautionary statements

Prevention : P280 Wear protective gloves and eye protection.
 P270 Do not eat, drink or smoke when using this product.

Response : P264-a Wash hands thoroughly after handling.
 P305 IF IN EYES:
 P351 Rinse cautiously with water for several minutes.
 P338 Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor/physician.
 P301 IF SWALLOWED:
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P330 Rinse mouth.

Hazardous ingredients : Calcium nitrate tetrahydrate

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Applicable, Table 3.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.
Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.
Additional information : None.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Calcium nitrate tetrahydrate	REACH #: 01-2119495093-35 EC : 233-332-1 CAS : 13477-34-4	>= 70 - <= 80	Acute Tox. 4, H302 Eye Dam. 1, H318	ATE [Oral] = 500 mg/kg	[1]

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Check for and remove any

- contact lenses. Get medical attention immediately.
- Inhalation** : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention if you feel unwell.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following: pain, watering, redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : Adverse symptoms may include the following: stomach pains, May cause burns to mouth, throat and stomach.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None identified.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials: nitrogen oxides, ammonia, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms

may be delayed.

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

- 6.4 Reference to other** : See Section 1 for emergency contact information.

sections

See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Not for human or animal consumption.

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Bund storage facilities to prevent soil and water pollution in the event of spillage.

7.3 Specific end use(s)

- Recommendations** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters**Occupational exposure limits**

- Remark** : No exposure limit value known.
- Recommended monitoring** : If this product contains ingredients with exposure limits,

procedures

personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Reference should be made to monitoring standards, such as the following:

European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy)

European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)

European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)

Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Calcium nitrate tetrahydrate	DNEL	Long term Dermal	13,9 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	24,5 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
Calcium nitrate tetrahydrate	PNEC	Intermittent release	4,5 mg/l	Assessment Factors
	PNEC	Marine water	0,045 mg/l	Assessment Factors
	PNEC	Fresh water	0,45 mg/l	Assessment Factors
	PNEC	Sewage Treatment Plant	18 mg/l	Assessment Factors

8.2 Exposure controls**Appropriate engineering controls**

- : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures**Hygiene measures**

- : A washing facility or water for eye and skin cleaning purposes should be present. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists,

gases or dusts.

Recommended: Tightly-fitting goggles, Europe:, CEN: EN166,

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.
> 8 hours (breakthrough time): nitrile rubber, neoprene, natural rubber (latex)

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection

- : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

- : In case of inadequate ventilation wear respiratory protection.
Recommended
Filter P2
Europe:
EN 143

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment (Pictograms)



SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state

Color

Odor

Melting point/freezing point

- : Liquid (Liquid)
- : Colorless., Brown.,
- : Mild.
- : > -5 °C

Initial boiling point and boiling range	: > 116 °C
Flammability	: Non-flammable.
Lower and upper explosion limit	: Lower: Not applicable. Upper: Not applicable.
Flash point	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not applicable.
pH	: 6 [Conc. (% w/w): 100 g/l]
Viscosity	: Kinematic: Not applicable.
Miscibility with water	: Miscible in water.
Partition coefficient: n-octanol/water	: Not applicable.
Vapor pressure	: 15 hPa @ 20 °C
Relative density	: 1,50 @ 20 °C
Relative vapour density	: < 1 [Air = 1]
Explosive properties	: Non-explosive.
Oxidizing properties	: Non-oxidizer. On basis of test data Bridging principle "Substantially similar mixtures"

Particle characteristics

Median particle size	: Not applicable.
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9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

<u>10.1 Reactivity</u>	: No specific test data related to reactivity available for this product or its ingredients.
<u>10.2 Chemical stability</u>	: The product is stable.
<u>10.3 Possibility of hazardous reactions</u>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<u>10.4 Conditions to avoid</u>	: Avoid contamination by any source including metals, dust and organic materials.
<u>10.5 Incompatible materials</u>	: alkalis combustible materials, reducing materials, organic materials, Acids
<u>10.6 Hazardous decomposition products</u>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name	Method	Species	Result	Exposure
Calcium nitrate tetrahydrate				
	OECD 423 LD50 Oral	Rat	500 mg/kg	Not applicable.
	OECD 402 LD50 Dermal	Rat	2.000 mg/kg	Not applicable.

Conclusion/Summary : Harmful if swallowed.

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
Calsal	681,2 mg/kg	N/A	N/A	N/A	N/A
Calcium nitrate tetrahydrate	500 mg/kg	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Method	Species	Result	Exposure
Calcium nitrate tetrahydrate				
	OECD 405 Eyes	Rabbit	Corrosive.	72 h

Conclusion/Summary

Skin : No known significant effects or critical hazards.
Eyes : Causes serious eye damage.
Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards.
Respiratory : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Product/ingredient name	Method	Species	Result	Exposure
Calcium nitrate tetrahydrate				
	OECD 422	Rat	Fertility effects-	28 days

	Oral		Negative Developmental- Negative NOAEL > 1500 mg/kg bw/day	
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Conclusion/Summary : No known significant effects or critical hazards.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation : Vapor may be irritating to eyes and respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Skin contact : No known significant effects or critical hazards.

Eye contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : Adverse symptoms may include the following: stomach pains, May cause burns to mouth, throat and stomach.

Skin contact : No specific data.

Eye contact : Adverse symptoms may include the following: pain, watering, redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

Product/ingredient name	Method	Species	Result	Exposure
Calcium nitrate tetrahydrate				
	OECD 407 Sub-acute NOAEL Oral	Rat	> 1.000 mg/kg	28 days

Carcinogenicity : No known significant effects or critical hazards.

- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.
- Effects on or via lactation** : No known significant effects or critical hazards.
- Other effects** : No known significant effects or critical hazards.

11.2. Information on other hazards

11.2.1 Endocrine disrupting properties : Not available.

11.2.2 Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Method	Species	Result	Exposure
Calcium nitrate tetrahydrate				
	OECD 203 Acute LC50 Fresh water	Fish	1.378 mg/l	96 h
	Acute EC50 Fresh water	Daphnia	490 mg/l	48 h
	Acute EC50 Salt water	Algae	> 1.700 mg/l	10 d

Conclusion/Summary : No known significant effects or critical hazards.

12.2 Persistence and degradability

Conclusion/Summary : Readily biodegradable in plants and soils.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Calcium nitrate tetrahydrate	< 0	Not applicable.	low

Conclusion/Summary : No known significant effects or critical hazards.

12.4 Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Mobility : This product may move with surface or groundwater flows because its water solubility is: high

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties : Not available.

12.7 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
06 10 02*	wastes containing hazardous substances

Packaging

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way.
Care should be taken when handling emptied containers that have not been cleaned or rinsed out.
Empty containers or liners may retain some product residues.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.3 Transport hazard class(es)	Not applicable.	Not applicable.	Not applicable.	Not applicable.

14.4 Packing group	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.5. Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID

:

ADN

:

Danger code Not applicable.

IMDG

:

IATA

:

14.6 Special precautions for user

:

Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments

Proper shipping name : Noxious liquid, (11) n.o.s. (CN9 contains Less than 50% calcium nitrate, less than 10% ammonium nitrate), Cat Z

Remarks : **Liquid bulk cargoes**
Pollution category: Z

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorization****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII : Applicable, Table 3.

- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Other EU regulations**Ozone depleting substances (1005/2009/EU)**

None of the components are listed.

Prior Informed Consent (PIC) (649/2012/EU)

None of the components are listed.

Persistent Organic Pollutants

None of the components are listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

Other regulations : This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulations

Biocidal products regulation : Not applicable.

Notes : To our knowledge no other country or state specific regulations are applicable.

15.2 Chemical Safety Assessment : Complete.

SECTION 16: Other information

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- DMEL = Derived Minimal Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- PBT = Persistent, Bioaccumulative and Toxic
- vPvB = Very Persistent and Very Bioaccumulative
- bw = Body weight

Key data sources :

- EU REACH ECHA/IUCLID5 CSR.
- National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
- Sphera Solutions Inc., 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.
- Regulation (EC) No 1272/2008 Annex VI.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Acute Tox. 4, H302	Calculation method
Eye Dam. 1, H318	Calculation method

Full text of abbreviated H statements

H302	Harmful if swallowed.
H318	Causes serious eye damage.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
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Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
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Revision comments	: The safety data sheet has been revised according to Commission Regulation (EU) 2020/878.
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Prepared by	: Product Stewardship and Compliance (PSC).
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	Indicates information that has changed from previously issued version.
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Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.



**Annex to the extended Safety Data Sheet (eSDS) -
Exposure Scenario/Safe Use Information:**

Identification of the substance or mixture

Product definition : Mixture

Product name : Calsal

Exposure Scenario/Safe Use Information : Exposure Scenarios are not attached for corrosive or irritant hazards, relevant information on safe use is included in section 8. For each additional hazard resulting in classification relevant Exposure Scenarios are attached.



Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario:

Section 1 — Title

Short title of the exposure scenario : Yara - Calcium nitrate tetrahydrate - Industrial, Distribution, Formulation

Identified use name : Industrial distribution.
Industrial USE to formulate chemical product mixtures.
Industrial USE to formulate fertilisers product mixtures.

Substance supplied to that use in form of : As such, In a mixture

List of use descriptors

Process Category : PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC13, PROC14, PROC15

Environmental Release Category : ERC02, ERC03

Market sector by type of chemical product : PC01, PC04, PC09a, PC11, PC12, PC14, PC16, PC20, PC21, PC34, PC35, PC37, PC39, H15100, O40000, O05990, PC 0: Other: UCN P15100, PC 0: Other: K15000, PC 0: Other: UCN K35000

Sector of end use : SU10

Number of the ES : 008661-1/20190115

Section 2 — Exposure controls

Contributing scenario controlling environmental exposure for: All

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterization was performed.

Contributing scenario controlling worker exposure for:

Each PROC's represents work processes but are not used to estimate work exposure.

Product characteristics	: Inorganic salt.
Concentration of substance in mixture or article	: < 100 %
Physical state	: Aqueous solution Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): < 8
Area of use:	: Indoor or outdoor use
Ventilation control measures	: None required. However, use of adequate ventilation is good industrial practice.
Organizational measures to prevent/limit releases, dispersion and exposure	: Ensure operatives are trained to minimise exposures., Ascertain that personal protection equipment is available and used according to the instructions.
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Pay attention to good general hygiene and housekeeping., Wash hands and face before breaks and after work and take a shower if necessary., Do not eat, drink or smoke when using this product.
Personal protection	: Wear protective gloves/clothing and eye/face protection., Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training., Goggles, face shield or other full-face protection should be worn if there is a risk of direct exposure to aerosols or splashes., Type EN 166, Wear suitable coveralls to prevent exposure to the skin., See Section 8 of the safety data sheet (personal protective equipment).
Respiratory protection	: No personal respiratory protective equipment normally required.

Section 3 — Exposure estimation and reference to its source

Exposure estimation and reference to its source - Workers:

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation and reference to its source : Inhalation exposure is considered to be not relevant.

Section 4 — Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Health : Comply with the safety instructions.

Abbreviations and acronyms

Process Category :

- PROC02 - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC03 - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC04 - Chemical production where opportunity for exposure arises
- PROC05 - Mixing or blending in batch processes
- PROC08a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC08b - Transfer of substance or mixture (charging and discharging) at dedicated facilities
- PROC09 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC13 - Treatment of articles by dipping and pouring
- PROC14 - Tableting, compression, extrusion, pelletization, granulation
- PROC15 - Use as laboratory reagent

Environmental Release Category :

- ERC02 - Formulation into mixture
- ERC03 - Formulation into solid matrix

Market sector by type of chemical product	: PC01 - Adhesives, sealants PC04 - Anti-freeze and de-icing products PC09a - Coatings and paints, thinners, paint removers PC11 - Explosives PC12 - Fertilizers PC14 - Metal surface treatment products PC16 - Heat transfer fluids PC20 - Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents PC21 - Laboratory chemicals PC34 - Textile dyes and impregnating products PC35 - Washing and cleaning products PC37 - Water treatment chemicals PC39 - Cosmetics, personal care products H15100 - Curing Agents - Concrete hardeners O40000 - Oxidizing agent. O05990 - Drilling chemicals - Other drilling chemicals PC 0: Other: UCN P15100 - Accelerators PC 0: Other: K15000 - Coagulation agents PC 0: Other: UCN K35000 - Construction materials (building materials)
Sector of end use	: SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)



Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario:

Section 1 — Title

Short title of the exposure scenario : Yara - Calcium nitrate tetrahydrate - Professional, Fertilizer.

Identified use name : Professional formulation of fertiliser products.
Professional USE as fertiliser in Greenhouse.
Professional USE as liquid fertiliser in open field.
Professional USE as fertiliser - maintenance of equipment.

Substance supplied to that use in form of : As such, In a mixture

List of use descriptors

Process Category	: PROC02, PROC05, PROC08a, PROC08b, PROC09, PROC15
Environmental Release Category	: ERC08b, ERC08e
Market sector by type of chemical product	: PC12
Sector of end use	: SU01, SU10
Subsequent service life relevant for that use	: No.
Subsequent service life relevant for that use	: No.
Subsequent service life relevant for that use	: No.
Subsequent service life relevant for that use	: No.

Number of the ES	: 008669-1/20190117
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Section 2 — Exposure controls**Contributing scenario controlling environmental exposure for: All**

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterization was performed.

Contributing scenario controlling worker exposure for:

Each PROC's represents work processes but are not used to estimate work exposure.

Product characteristics	: Inorganic salt.
Concentration of substance in mixture or article	: < 100 %
Physical state	: Aqueous solution Solid
Dust	: Solid, low dustiness

Frequency and duration of use	: Use duration (h/d): < 8
Area of use:	: Indoor or outdoor use
Ventilation control measures	: None required. However, use of adequate ventilation is good industrial practice.
Organizational measures to prevent/limit releases, dispersion and exposure	: Ensure operatives are trained to minimise exposures., Ascertain that personal protection equipment is available and used according to the instructions.
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Pay attention to good general hygiene and housekeeping., Wash hands and face before breaks and after work and take a shower if necessary., Do not eat, drink or smoke when using this product.
Personal protection	: Wear protective gloves/clothing and eye/face protection., Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training., Goggles, face shield or other full-face protection should be worn if there is a risk of direct exposure to aerosols or splashes., Type EN 166, Wear suitable coveralls to prevent exposure to the skin., See Section 8 of the safety data sheet (personal protective equipment).
Respiratory protection	: No personal respiratory protective equipment normally required.

Section 3 — Exposure estimation and reference to its source

Exposure estimation and reference to its source - Workers:

Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation and reference to its source	: Inhalation exposure is considered to be not relevant.

Section 4 — Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Health : Comply with the safety instructions.

Abbreviations and acronyms

Process Category	: PROC02 - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC05 - Mixing or blending in batch processes PROC08a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC08b - Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC09 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Environmental Release Category	: ERC08b - Widespread use of reactive processing aid (no inclusion into or onto article, indoor) ERC08e - Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
Market sector by type of chemical product	: PC12 - Fertilizers
Sector of end use	: SU01 - Agriculture, forestry, fishery SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

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