Safety Data Sheet

According to Regulation HCS 2012

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

860228 TD1091
NATURAL LIME DURAROME®
© Firmenich product

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

Ingredient for use in products that may be ingested.
Not for personal use in this form or concentration.
Intended to be used in the manufacture of products for consumers.

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

FOR INFORMATION OR IN AN EMERGENCY CALL CHEMTREC @ 1-800-424-9300 or 1-703-527-3887.

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to Regulation HCS 2012

Skin Sensitization - Cat. 1	H317
Environmental Hazard (chronic) - Cat. 2	H411

Additional information

Full text of listed statements : See section 16

2.2 Label elements

Hazard pictograms:

Signal Word:
Warning

Hazard Statements:

H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

2.3 Other hazards
No data available at this time.

3 COMPOSITION/INFORMATION ON INGREDIENTS

The exact percentage (concentration) of composition has been withheld as a trade secret.

3.2 Mixture
Mixture of aromatic substances.

Contains :

>=2.5 < 5.0%	Classification: Xn N - R38,R43,R50/53,R65,R10
Limonene	GHS Classification:
N° CAS : 0000138-86-3	Aspiration Hazard - Cat. 1 [H304]
N° EINECS: 205-341-0	Skin Sensitization - Cat. 1B [H317]
	Skin Irritation - Cat. 2 [H315]
	Environmental Hazard (acute) - Cat. 1 [H400]
	Environmental Hazard (chronic) - Cat. 1 [H410]
	Flammable Liquid - Cat. 3 [H226]
>= 0.1 < 0.5%	Classification: - Not Classified
Silica	GHS Classification:
N° CAS : 0007631-86-9	-
N° EINECS: 215-683-2	

4 FIRST-AID MEASURES

4.1 Description of first aid measures
General information:
As in all cases of potential poisoning, Obtain medical advice immediately.

In case of eye contact:

In the event of contact with the eyes, irrigate with water for at least 15 minutes; obtain medical advice if irritation persists.

In case of inhalation:
In the event of exposure to vapors, immediately remove from the area to a fresh air environment.

In case of skin contact:
Remove contaminated clothes. Wash skin with large volumes of water.
If irritation persists, or any sign of tissue damage is apparent, obtain medical advice immediately.

In case of ingestion:
In the event of accidental ingestion, rinse mouth with water. Give up to one tumbler (half pint) of milk or water.
Obtain medical advise immediately.
Do not induce vomiting, obtain medical advise immediately.

4.2 Most important symptoms and effects, both acute and delayed
No information available on the product itself.

4.3 Indication of immediate medical attention and special treatment needed
None known.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media
In the event of fire, adequate extinguishers should be used. Avoid inhalation of smoke and fumes. In case of insufficient ventilation, wear suitable respiratory equipment.
Use standard procedures and preferred extinguishing media as stated below.
Extinguishing media: Water, foam, carbon dioxide or dry chemical.

5.2 Special hazard arising from the substance or mixture
Product is a combustible powder. Like all combustible powders, it may form explosive mixtures if suspended in air.

5.3 Advice for fire-fighters
No specific advice.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel:
Adequate protective gloves should be worn when handling spillages. No smoking. Avoid naked flames or other potential sources of ignition (eg. electrical equipment).
Avoid skin contamination and inhalation of dust.
Individual washing routines should be followed after any potential contact.
Ensure adequate ventilation in working areas following accidental releases.

For emergency personnel:
Apply the same recommendations as section 6.1

6.2 Environmental precautions
Do not discharge directly into drains, air, into soil or into the aquatic environment.

6.3 Methods and material for containment and cleaning up

For containment:
Small Spills can be swept up and disposed of properly.
Do not allow powder to accumulate on horizontal surfaces, as an explosive dust/air mixture could occur if suddenly dispersed into the air.

For cleaning-up:
Spillages should be disposed of in accordance with Governmental Regulations.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep strict control of dust accumulation to a minimum.
Avoid contact with skin and eyes.
Wear adequate protective gloves protection and eye/face protection.
No smoking. Avoid any source of ignition. Use flameproof electrical equipment and spark-reduced tools.
Ensure that all equipments are properly bonding and earthing.
Avoid exposing to high temperature during processing.
Do not ingest or apply to the skin as such. Good personal washing routines should be followed.
Maintain adequate local and general ventilation where product is handled.

Protective measures

Keep strict control of dust accumulation to a minimum.Maintain adequate local and general ventilation where product is handled.Avoid any sources of ignition.

Advice on general occupational hygiene

Good personal washing routines should be followed.

7.2 Conditions for safe storage, including any incompatibilities

It is good general practice to store in closed, preferably full, containers away from heat sources, and protected from extremes of temperature. Do not re-use the empty container.
Respect generals rules for compatibility storage.

7.3 Specific end use(s)

Not available at this time.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

0007631-86-9 : Silicon dioxide (All forms)
National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL) (2013-APR)
TWA (1994-JUN) : 6 mg/m3 , 10 hours (All forms)

0000138-86-3 : d-Limonene (All forms)
American Industrial Hygiene Association (AIHA) - Workplace Environmental Exposure Levels (WEEL) (1999-JAN)
TWA (1999-JAN) : 30 ppm , 8 hours (All forms)

8.2 Exposure controls

Avoid exposing to high temperature during processing.
Maintain adequate local and general ventilation where product is handled.

Appropriate engineering controls

Maintain adequate local and general ventilation where product is handled and dispensed.

Environmental exposure controls

Not available at this time. Minimize release to the environment.

Personal protection

Respiratory protection: Breathing of the vapors or dust particles may be hazardous. In the absence of appropriate engineering controls such as spot ventilation, ventilated enclosures, etc., workers should avail themselves of the appropriate NIOSH approved respiratory protection. OSHA has established limits for Respirable dust (PEL of 5 mg/m3) TWA and Total dust (PEL of 15 mg/m3)TWA. It is recommended that when using powders that air monitoring of the workplace be conducted to ensure that these levels are not exceeded.
Hand protection: Adequate Protective Gloves should be worn.
Eye protection: Adequate safety glasses should be used.
Skin protection: Wear protective clothing, overall if necessary to limit the odour contamination of personal clothing. Individual washing routines should be followed after any potential contact.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance :	GRANULAR POWDER
Colour :	BEIGE TO TAN
Odour :	Characteristic strong odour according to the commercial description of the substance.
pH :	Not applicable
Melting point/range (°C) :	Not available
Initial boiling point/range (°C) :	Not available
Flash point (closed cup) :	> 212 Fahrenheit (> 100 Centigrade)
Evaporation rate :	Not available
Flammability (solid/gas) :	Not available
Upper/lower flammability or explosive limits :	
Vapor pressure (At 20°C in mm Hg) :	
Calculated vapor pressure (At 20°C in mm Hg):	< 0.1 mm
Vapour density :	Not available
Relative density (d 20/20) :	Not available
Water solubility (20°C) :	Not applicable
Partition coef. (n-octanol/water) :	Not applicable
Auto-ignition temperature (°C):	Not available
Decomposition temperature :	Not available

Viscosity :	Not available
Oxidizing properties :	Not available
VOC Content less than:	10%

9.2 Other safety information

9.2.1 Explosive properties (Measured)

No data available at this time.
Please refer to section 9.2.2.

9.2.2 Default Safety Data for Spray Dryer Dust Compounds
Using our experience in Powder operations and internal laboratory testing, we established the following Default Safety Data. This default data represents conservative worst-case values for the listed parameters. This data may be carefully used as guidance in the absence of measured data. Default data should not be used directly for production, storage, transportation or any other industrial purpose.
In all cases, actual testing is the best way to obtain specific data on our compounds.

Type	Value	Units
- Particle size distribution	> 150	microns
- Moisture content	< 8	%
- Minimum explosible concentration	Not applicable	g/m3
- Minimum ignition energy of cloud (MIE)	> 1000	mJ
- Minimum ignition energy in layer (MIE)	> 1000	mJ
- Cloud ignition temperature [1]	> 100	°C
- Layer ignition temperature (5 mm layer according to the applicable norm) [2]	MELT	°C
- KST	< 300	bars.m/s
- Pmax (abs)	< 11	Bars
- St	2	-
- Resistivity	> 1.E10	Ohm.m

[1] The minimum ignition temperature of a dust cloud is the lowest temperature at which an explosible dust air mixture ignites on contact with a hot surface. Normally the temperature for this powder is not below 120°C and we have to heat up to 200-300°C or higher for possible gas decomposition ignition.
[2] The smoldering /glow temperature can only be determined for substances that do not decompose, melt or evaporate before smoldering. In this case the MSDS indicates “MELT” .This powder melts around 120-130°C, before burning can begin.

10 STABILITY AND REACTIVITY

10.1 Reactivity
No reaction known with water.

10.2 Chemical stability
Presents no significant reactivity hazard. Normally stable even at elevated temperatures and pressures. Avoid temperatures above or near to the flash point. Not pyrophoric nor reactive with water. Does not undergo explosive decomposition, is shock stable, and is not an oxygen donor. Does not form explosive mixtures with other organic materials. Will not undergo hazardous exothermic polymerization.

10.3 Possibility of hazardous reactions
Not known.

10.4 Conditions to avoid
Avoid temperatures above or at least 5 °C below flash point for any flammable liquids.
Do not heat closed containers.
Avoid contact with oxidizing agents.

10.5 Incompatible materials
Avoid strong oxidizing agents.

10.6 Hazardous decomposition products
Contact with water or storage under recommended conditions for one year should not produce dangerous decomposition products.

11 TOXICOLOGICAL INFORMATION

This mixture has not been subjected to toxicological testing as an entity. According to available data on the constituents the health classification criteria are met.

12 ECOLOGICAL INFORMATION

This mixture has not been subjected to ecotoxicological testing as an entity. According to available data on the constituents the environmental classification criteria are met.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product: The product should be handled according to the instructions given under sections 6, 7 and 8. Dispose of according to local or national regulations. The product should not be allowed to enter drains or the environment.
Contaminated packaging: Empty packaging should be disposed according to local or national regulations by an approved waste handling

14 TRANSPORT INFORMATION

In case of accidental spillage or fire during transport, refer to instructions given under points 5, 6, 7 and 8 above.

UNO

UN-No:	3077
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (LIMONENE)
Class:	9
Packing Group:	III
	Hazardous to the Environment

Land transport (ADR/RID)

UN-No:	3077
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (LIMONENE)
Class:	9
Packing group:	III

Sea transport (IMDG-Code)

UN-No:	3077
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (LIMONENE)
Class:	9
Packing group:	III
	Marine pollutant

Air transport (ICAO-IATA)

UN-No:	3077
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (LIMONENE)
Class:	9
Packing group:	III

15 REGULATORY INFORMATION

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

NFPA Hazard Classification

Health:	2
Flammability:	1
Reactivity:	0

This mixture contains no toxic chemical or chemicals subject to reporting requirements of Section 313 of Title III of the Superfund Amendements and Reauthorization Act of 1986 and 29 CFR Part 1910.1200.

15.2 Chemical Safety Assessment

No data available at this time.

16 OTHER INFORMATION

Revisions

01-Dec-2010: Version 6.1 - First version validated for publication
04-May-2012: Version 6.2 - Updates to sections 1, 2, 3, 8.3, 11, 12, 16.
20-Apr-2013: Version 6.3 - Updates to sections 1, 2, 3, 8.1, 14, 16.
07-July-2014: Version 6.4- Updates to section 2, 3, 14, 16.
30-May-2015: Version 6.5- Updates to section 2, 3, 7, 8, 9,13,14,16

Key literature references

RIFM database

OECD SIDS
EU IUCLID
Supplier information

Full text of phrases used under section 2

S24	Avoid contact with skin.
S37	Wear suitable gloves.
S57	Use appropriate container to avoid environmental contamination.
S61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P363	Wash contaminated clothing before reuse.

Full text of phrases used under section 3

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

R10	Flammable.
R38	Irritating to skin.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Firmenich, it is the user's obligation to determine conditions of safe use of the product.