Safety data sheet according Regulation (EC) n. 453/2010.

Last revision 0004 of 4th July 2016

SECTION 1: Product and Society identification

1.1 Product identification

Commercial name: **Diathonite Evolution**
N° of Reach Registration: free.

1.2 Relevant identified uses of product and recommended uses

Premixed plaster made of cork, clay, diatomaceous earth and natural hydraulic binder.

1.3 Details of the supplier of the safety data sheet

Name of the society: Diasen s.r.l.
Z.ind.le Berbentina, 5
60041 Sassoferrato An – Italy
Tel. +39 0732 9718
Fax +39 0732 971899
E-mail: reach@diasen.com

1.4 Emergency telephone number

Emergency telephone number of the company and / or official advisory body:
Diasen s.r.l. Tel. 0732/9718
Available outside working hours? No.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Irrit. 2	H315
Eye Dam. 1	H318
STOT SE 3	H335

2.2 Label elements

Label according the regulation (EC) n. 1272/2008 [CLP]

Hazard pictograms:

GHS05 GHS07

Warnings: none.

Hazard statements:

H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Precautionary statements:

P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/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.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P261 + P304 + P340	Avoid breathing dust/fumes/ vapours. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P501	Dispose of contents/container in accordance with national/international regulation.

Additional information on dangers (EU): none.

2.3 Other hazards

In presence of water, the mixture creates a strongly alkaline reaction (high pH due to the formation of calcium, sodium and potassium hydroxides). The mixture may irritate eyes, mucous membranes, throat and the respiratory tract and it may cause cough. Repeated inhalation of dusts for a long period of time increases the onset risk of pulmonary diseases. Repeated and prolonged contact of the mixture with moist skin can cause irritations and/or dermatitis. Both the powder mixture and its mixture, in case of prolonged skin contact, may cause sensitisation. In case of significant ingestion, the mixture can cause ulceration of the gastrointestinal tract.

Classification and labelling have been made on the basis of safety data sheets of raw materials that compose the product.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant. The product is a mixture.

3.2 Mixtures

Dangerous substances:

CAS Number	CE Number	INDEX	% [weight]	Name	Classification according to regulation (EC) n.1272/2008 (CLP)	
					Risk class and Code	Hazard statements
1305-62-0	215-137-3	-	15 – 23.5	**Calcium hydroxide**	STOT SE 3 Skin Irrit. 2 Eye Dam. 1	H335 H315 H318

10034-77-2	233-107-8	-	1.7 – 7.6	**Calcium silica**	STOT SE 3 Skin Irrit. 2 Eye Dam. 1	H335 H315 H318

Additional information: none

For the full text of the H advice: see SECTION 16.

Impurity:
It does not contain impurities relevant for classification and labelling.

SECTION 4: First aid measures
4.1 Description of first aid measures
In case of inhalation
Ventilate the premises. Remove the person from the contaminated area to an open air space, away from dusts. If you notice irritations, cough, sore throat or if you feel unwell seek medical advice, showing this safety data sheet or the label.

In case of skin contact
If the mixture is dry, remove it and abundantly rinse with water. If the product was mixed with water, immediately and abundantly wash the area of the body that have come in contact with the product with clean running water and neutral soap. Take contaminated clothes off and completely clean them before the use. In all cases of skin irritation seek medical advice, showing the label or this safety data sheet.

In case of eye contact
Do not rub. In presence of contact lenses, remove them. Immediately rinse with plenty of running water, with eyelids open, for at least 10 minutes until complete removal of all residues. If the irritation persists, seek medical advice, showing this safety data sheet or the label.

In case of ingestion
Never give anything by mouth to an unconscious person and do not induce vomit. Call a doctor, showing this safety data sheet or the label.

4.2 Main symptoms and effects, both acute and delayed
Eyes: the contact with the mixture, both in powder form or if mixed, may cause severe and potentially irreversible lesions.

Skin: being the mixture strongly alkaline, it may have an irritating effect on skin after a prolonged contact. Contact dermatitis may occur after repeated contact. Repeated or prolonged contact with the mixture may cause dermatitis, irritation or burns.

Inhalation: the inhalation of mixture powder may cause an irritation of respiratory tract. Long term inhalation increases the onset of pulmonary diseases.

Ingestion: in case of accidental ingestion, the mixture can cause ulceration of the gastrointestinal tract.

Environment: under normal conditions of use the mixture is not dangerous for the environment.

4.3 Indication of any immediate medical attention or special treatments
No specific treatment. If you feel unwell immediately seek medical advice and show this safety data sheet.

SECTION 5: Fire fighting measures
The product is not combustible and nor a combustive agent.

5.1 Extinguishing media
Suitable extinguishing agents: anything.

Unsuitable extinguishing agents: none in particular.

5.2 Special hazards arising from the substance
Hazards of the substance or mixture: the product does not present fire risk.

5.3 Advice for fire-fighters
The product does not present risks connected to fire. It is anyway recommended to use suitable respiratory apparatus.
In case of fire promptly evacuate the area by removing people from the vicinity of a fire. Don't take any action involving personal risks without appropriate training. Fire fighters should wear self-breathing device and complete protective clothing. Use extinguishing measures appropriate to local circumstances and the surrounding environment. Fire water contaminated with this material must be contained and its access to any waterway, sewers or drains must be prevented.

SECTION 6: Measures in case of accidental release
6.1 Personal precautions, protective equipments and emergency procedures
6.1. For non-emergency responders
Avoid breathing dust or aerosol. Remove all those who do not have appropriate protection and ensure adequate ventilation.
Avoid contact with skin, eyes and clothing - wear appropriate personal protective equipment (see section 8).
Avoid inhalation of dusts or aerosol - ensure adequate ventilation or wear protective equipment, as well as appropriate protective clothing (see section 8).

6.1.2 For emergency responders
Remove people who do not wear any protective equipment and ensure adequate ventilation.
Avoid contact with skin, eyes and clothing - wear suitable protective equipment (see section 8).
Avoid inhalation of dusts or aerosol - wear appropriate protective mask / protective device (see section 8).

6.2 Environmental precautions

Contain the spillage. Avoid that the product uncontrollably reaches water course or sewage system. In the event of any spillage into waterways, alert the Environment Agency or other body in charge of environmental protection.

6.3 Methods and material for containment and recovery

Dry mixture: Use dry cleaning and collection method (aspirators or vacuum remover) which do not cause dispersion. Avoid compressed air. Avoid dust inhalation and skin contact. Collect the material in suitable containers the guarantee the correct storage aimed to the reuse. pour in suitable and labelled containers with lids and dispose of according local, national and EU regulations. Treat the washing water the same way as contaminated waste. If the spill happened inside, ventilate the room.

Moist mixture: Collect the wet mixture and transfer it in labelled containers to recover the product or dispose of according to applicable local, national and EU regulations. Wait for the drying or the eventual hardening of the mixture before starting the disposal.

6.4 Reference to other sections

For more information regarding exposure controls / personal protection and disposal considerations see sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.1.1 Protection measures

Avoid contact with skin, eyes and mucous membranes. Wear protective equipment for hands, eyes and skin (see section 8). Avoid the exposure to strong dust concentration. Do not sweep. Use dry cleaning methods (aspirators or vacuum cleaner) which do not cause dispersions. Do not eat, drink and smoke in work areas. Store away from flames, sparks or heat sources. Under determined concentrations, dusts dispersed in the air may create explosion, due to the presence of electrostatic charges. Wash hands after use and take off contaminated clothes and personal protective equipment before entering areas in which food is consumed.

7.1.2. Advice on general occupational hygiene

Avoid inhalation, ingestion or contact with skin and eyes. Wash hands after handling. It is necessary to apply general occupation hygiene measures to guarantee a safe handling of the substance. These measures include good personal practices, regular cleaning of workplaces, do not drink, eat or smoke in the workplace.

Take a shower and change clothes when you are not working. Do not wear contaminated clothing at home. Wash them separately.

7.2 Conditions for safe storage, including any incompatibilities

Store the product in its original and closed containers, in well ventilated areas, away from sunlight, water and frost, at temperatures between + 5 °C and + 35 °C.

Do not store near ignition sources, flames or excessive heat. Do not smoke. Once opened, containers must be carefully closed and placed vertically in order to prevent spread. Avoid the storage together with non compatible materials.

Recommendations: Use original container.

7.3 Specific end uses
Not applicable.

SECTION 8: Exposure controls/ personal protection
8.1 Control parameters
Exposure Limit Values:

Occupational exposure limit (OEL), 8 h: 1 mg/m³ of breathable calcium hydroxide dust.
Short term exposure limit (STEL), 15 min: 4 mg/m³ of breathable calcium hydroxide dust.

Components whose limit values must be kept under control in work environments:

Substance	Specifications	Value	Note
Calcium hydroxide	Italy	none	
	European Union	none	
	AGW Germany	none	
	United States TWA (OEL – Occupational Exposure Limit)	5 mg/m^3	OSHA (breathable fraction)

Environmental risk evaluation:
PNEC (water) 490 µg/l calcium hydroxide
PNEC (sediment): not applicable.
PNEC (soil): not applicable.
PNEC solid in aqueous solution = 1080 mg/l calcium hydroxide

For the equivalent limits in other countries, consult a competent occupational hygienist or the institution of field.

8.2 Exposure control
To contain potential exposure, avoid the creation of dusts or aerosol. Dust introduction in work environments are equal to DNEL = 1 mg/m^3. Furthermore, it is recommended to wear personal protective equipment. Wear protective equipment for eyes unless the potential eye contact can be excluded by the nature and the type of application.

8.2.1 Appropriate engineering controls
If the use of product creates vapours, use local ventilation or other technical means to maintain air exposure level under recommended exposure limits.

8.2.2 Individual protection measures, such as personal protective equipment

8.2.2.1 Eye/face protection

Use appropriate goggles or mask type according to the standard EN 166 to prevent eye contact. Use an eye protection compatible with the system used for the protection of the respiratory tract. It is also recommended to bring individual pocket eyewash.

8.2.2.2 Skin protection

Wear suitable protective gloves (waterproofing gloves, resistant to alkali and to abrasion, internally coated with cotton) in compliance with EN 374 parts 1, 2 and 3. It should be noticed that, because of several factors (for example temperature), the duration of a glove for protection against chemical agents may considerably be lower than the permeation time detected by the test. Change gloves in case of wear or internal contaminations.
Wear standard protective clothing covering the entire surface of the skin, long pants, long sleeves suit and safety shoes.

8.2.2.3 Respiratory protection

When a person is potentially exposed to dust levels above the exposure limits, use a protective equipment for respiratory tract in compliance with the requirements of National or European legislation (certified filtering face-piece according to EN 149) or anti-dust mask certified by EN 140. Under normal conditions of use, the mask is not necessary.

8.2.2.4 Thermal hazards

Not applicable.

8.2.3 Environmental exposure controls

Contain the spillage. In the event of any spillage into waterways, alert the Environment Agency or other body in charge of environmental protection.

SECTION 9: Physical And Chemical Properties

9.1 Information on basic physical and chemical properties

Aspect:	powder, inorganic
Colour:	white / grey
Odour:	odourless
Odour threshold:	none, odourless
pH:	>12
Apparent density:	0.36 kg/l
Relative density:	N.A.
Melting point:	> 450°C
Flashing point:	N.A. (not flammable)
Evaporation rate:	N.A
Flammability:	not flammable

Upper/lower explosive or flammability limit: N.A. (not flammable or explosive)

Vapour density:	N.A.
Solubility:	Partially soluble in water, not soluble in oil.

Subdivision coefficient of n-octane / water: not determined.

Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Explosive properties:	N.A. (not explosive)
Oxidizing properties:	not determined.

Note: the above values related to physic-chemical properties are typical values for this product and should not, therefore, be considered as a specification.

9.2 Other information
No available data.

SECTION 10: Stability and reactivity
10.1 Reactivity
When the product is mixed with water, the preparation hardens by forming a stable mass that does not react with the environment.

10.2 Chemical stability
The product is stable at room temperature and under normal conditions of use and storage.

10.3 Possibility of hazardous reactions
The mixture in powder/paste form or hardened, reacts with strong acids (hydrochloric acid, sulphuric acid) developing heat together with a powerful reaction. The uncontrolled use of aluminium powder in the wet mixture is to be avoided, as it develops hydrogen.

10.4 Conditions to avoid
Store the product in dry place in its original and well closed containers, away from sunlight, water and ice, at temperature between +5°C and +35°C.
Do not expose to heat. Store away from ignition sources, free flames or excessive heat.

10.5 Incompatible Materials
Strong acids, Ammonia salts, aluminium.

10.6 Hazardous decomposition products
None.

SECTION 11: Toxicological information
11.1 Information on toxicological effects
In absence of experimental toxicological data of the product itself, toxicological information for health have been evaluated based on properties of contained substances, according to criteria expected by the reference standard for the classification.

Acute toxicity – dermal: based on available data, the mixture does not meet classification criteria.

Acute toxicity – inhalation: no acute toxicity for inhalation observed. Based on available data, the mixture does not meet classification criteria.

Corrosion/ skin irritation: the mixture, in contact with moist skin, can cause thickenings, fissures and skin cracks. The prolonged contact together with existing abrasion may cause severe burns.

Severe ocular lesion/irritation: direct contact with the mixture may cause severe ocular lesions due to mechanical rubbing or to irritation.

Skin sensitization: prolonged and repeated contact with the dust or the paste of the mixture may generate irritating contact dermatitis, caused by high pH. Such diseases occur as light rashes up to severe dermatitis.

Respiratory sensitization: no indications of respiratory tract sensitization. Based on available data, the mixture does not meet classification criteria.

Carcinogenicity: no casual association has been established between the mixture exposure and cancer.

Reproduction toxicity: Based on available data, the mixture does not meet classification criteria.

Target organs toxicity (STOT) –single exposure: not applicable.

Target organs toxicity (STOT) – repeated exposure: not applicable. Danger in case of aspiration: not applicable.

The product was not tested. The data reported in this paragraph are based on the information contained in safety data sheets of raw materials that composes the product.

SECTION 12: Ecological information

12.1 Toxicity

In absence of experimental toxicological data on the product itself, toxicological information for the environment have been evaluated based on properties of contained substances, according to criteria expected by the reference standard for the classification.

Dusts contained in the mixture, if dispersed in large amounts in water courses, may cause an increase of pH and they may result toxic for aquatic life under certain circumstances.
The mixture must be used according to good working practices, avoid the dispersion in the environment.

General effect
No available data.

12.2 Persistence and degradability

Not applicable.

Do not pour the product in the pipeline and water course, if the product has escaped into a water course into the drainage system or has contaminated the ground or vegetation, notify the competent authorities.

12.3 Bio-accumulative potential
Not applicable.

12.4 Mobility in soil
Not applicable.
Assessment transport between environmental compartments: no available data.

12.5 Results of evaluations on the PBT or vPvB
Based on the available data, the product does not contain PBT or vPvB substances.

12.6 Other adverse effects
No available data.

12.7 Additional information
Absorbable organic halogen compounds (AOX): No available data.
The product was not tested. The data reported in this paragraph are based on the information contained in safety data sheets of raw materials that compose the product.

SECTION 13: Disposal considerations
13.1 Waste treatment methods

Re-use, if possible. Dispose of according to National or local regulation.

Packaging: The package used is exclusively intended for the packaging of this product. All containers, even if completely empty, must not be dispersed in the environment and they must be subjected to a proper decontamination treatment before starting the disposal. If they contain residues, they must be classified, stored and sent to a suitable treatment facility in accordance with applicable local, national and Community rules.

Disposal of expired product (code CER): 08 01 01
Disposal of clean paper packaging (code CER): 15 01 06

SECTION 14: Transport information
Product classified as not dangerous substance for transport (ADR for road, RID for rail, sea transport ADN internal IMDG / GGV Sea by sea, IATA / ICAO aviation).

14.1 ONU Number
Not regulated.

14.2 Proper ONU Shipping Name
Not regulated.

14.3 Hazard class for transport
Product classified as not dangerous for transport.

14.4 Packaging group
Not regulated.

14.5 Environmental hazards
Product classified as not dangerous for transport.

14.6 Special precautions for users
No available data.

14.7 Transport of the product in accordance with the MARPOL73 / 78 and the IBC Code
No available data.

Transportation classifications may vary according to different national laws.

SECTION 15: Information on regulation
15.1 Safety, health and environmental regulations/legislation specific for the product

Community regulations:	67/548/CEE Directive and subsequent amendments (classification, packaging and labelling of dangerous substances). Regulation EC / 1907/2006 and subsequent amendments (Registration, Evaluation, Authorization, and Restriction of REACh Chemicals) Regulation CE/1272/2008 (classification, Labelling and Packaging of substances and mixtures).
National regulations:	Presidential Decree 1124/65 (consolidated law for compulsory insurance against accidents at work and occupational diseases: Leg. 152/06 and subsequent amendments (environmental standards) Leg. 475/82 and subsequent amendments (Implementation of Directive 89/686 / EEC of 21st December 1989 on the approximation of the laws of the Member States relating to personal protective equipment) Legislative Decree 81/08 and subsequent amendments (implementation of art. 1 of the Law 3/8/2007, concerning the protection of health and safety in the workplace).

15.2 Chemical Safety Assessment (CSA)
No available data.

SECTION 16: Other Information
Full text of abbreviated H statements

H315	Causes skin irritation.
H318	Causes serious eye damage.

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H335	May cause respiratory irritation.

Full text of precautionary statements P

P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/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.
P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
P261 + P304 + P340	Avoid breathing dust and aerosol. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P501	Dispose of contents/container in accordance with applicable National and international regulations.

Classification and procedure used to derive it in compliance with Regulation (EC) 1272/2008 [CLP] in relation to the mixtures:

Classification in accordance with Regulation (EC) No 1272/2008		Classification procedure
Skin Irrit. 2	H315	Minimum classification.
Eye Dam. 1	H318	
STOT SE 3	H335	

Abbreviations and acronyms

EC_{50}:	median effective concentration.
LC_{50}:	median lethal concentration.
LD_{50}:	median lethal dose.
NOEC:	no observable effect concentration.
PNEC:	predicted no-effect concentration.
OEL:	occupational exposure limit.
PBT:	persistent, bio-accumulative, toxic chemical.
vPvB:	very persistent, very bio-accumulative chemical.
STEL:	short-term exposure limit.
TWA:	time weighted average.
OIM:	International Maritime Organization
IMDG:	International Maritime Dangerous Goods
IATA:	International Air Transport Association
ADR/RID:	Agreement on road transport of dangerous good / regulations of the international transport of dangerous goods by rail.
SCOEL:	Scientific Committee on Occupational Exposure Limits.
CSAH:	Comité Scientifique en matière d'Alimentation Humaine.

Key literature references and data sources

The Merck Index Ed. 10;
Handling Chemical Safety;
Anonymous, 2006: Tolerable upper intake levels for vitamins and minerals Scientific Committee on Food, European Food Safety Authority, ISBN: 92-9199-014-0 [SCF document].

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Anonymous, 2007: HERAG fact sheet - assessment of occupational dermal exposure and dermal absorption for metals and inorganic metal compounds; EBRC Consulting GmbH, Hannover, Germany; August 2007.
Anonymous, 2008: Recommendation from the Scientific Committee on Occupational Exposure Limits for calcium oxide (CaO) and calcium dihydroxide ($Ca(OH_2)$), Direzione Generale per l'Occupazione, gli Affari Sociali e le Pari Opportunità della Commissione Europea, SCOEL/SUM/137 February2008.
MEASE: Metals estimation and assessment substance exposure, EBRC Consulting GMBH for Eurometaux, http://www.ebrc.de/ebrc/ebrc-mease.php
Bureau Européen des substances Chimiques (ECB) (European offices of chemicals)
CIRC (Centre International de Recherche sur le Cancer).
HSDB (Hazardous Substances Data Bank) (National Library of Medicine).
INRS (Institut National de Recherche et de Sécurité).
IUCLID (International Uniform Chemical Information data Base).
RTECS (Registry of Toxic effects of Chemical Substances).
NIOSH – Registry of toxic effects of chemical substances (1983).
National Institute of Health – Safety data sheets of organic solvents used in industrial technological processes (1985).
National Institute of Health – National chemicals inventory.
ECDIN – Environmental chemicals data and information network – Joint research centre, Commission of the European Communities.
ACGIH – Threshold limit values (2000).
SAX'S – Dangerous properties of industrial materials – tenth edition.

Release:
This safety data sheet (SDS) is based on legal provisions contained in the REACH Regulation (EC / 1907/2006), as amended and supplemented. The information contained herein is based on information described in SDS of raw materials that compose the product and on our knowledge at the indicated date. It only refers to the specified product and it does not constitute a guarantee of particular quality.
No statement or guarantee concerning accuracy, reliability, and completeness of the data contained in this SDS is released. The company does not take any liability for damages to people or things that may result from a product usage different from the intended one. The SDS does not replace but completes tests or rules that regulate the activity of employment. The user has full responsibility for the necessary precautions concerning how the product will be used. This safety data sheet revokes and replaces any previous edition.

Indications of changes to the previous version of the SDS: review of the entire document.

This SDS is available in digital form on the website: www.diasen.com.