

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

Last version 0000 of 15 May 2015.

1.1 Product and Society identification

Denomination: **Acriflex pH4 (PART A)**

N° of registration Reach: free.

1.2 Relevant identified uses of product and recommended uses

Waterproofing liquid elastic fiber-reinforced concrete with high chemical resistance.

1.3 Details of the supplier of the safety data sheet:

Name of society: Diasen s.r.l.
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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.

2. Hazards identification

2.1 Classification of the substance or mixture

Skin Sens. 1 H 317

2.2 Label elements

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

Hazard pictograms



GHS07

Warning: Caution.

Hazard statement:

H 317 It may cause an allergic skin reaction.

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Safety advice:

P272

P280

P302+P352

P333+P313

P363

P501

Additional information on the dangers (EU): Contains: mixture of: 5-chloro-2-methyl-2H -isotiazol-3-one [EC no 247-500-7]; 2-methyl-2 H -isotiazol-3-one, and TETRACHLOROETHYLENE. It may cause an allergic skin reaction.

2.3 Other hazards

Data no available.

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

3. Composition/information on ingredients

3.1 Substances

Not applicable. The product is a mixture.

3.2 Mixture

Hazard substances:

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Registration number (CE)	CAS Number	CE Number	% [weight]	Name	Classification according to Regulation (CE) n.1272/2008 (CLP)	
					Hazard Class and Category Code	Hazard statement (Phases H)
55965-84-9	220-239-6	613-167-00-5	0-0.0019	mixture of: 5-chloro-2-methyl-2H -isotiazol-3-one [EC no 247-500-7]; 2-methyl-2 H -isotiazol-3-one	Skin Corr. 1B Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1 Oral Acute Tox. 3 Dermal Acute Tox. 3 Inhal. Acute Tox. 3	H 314 H 317 H 400 H 410 H 301 H 311 H331

Additional Information:

It contains quartz (SiO₂) in a non-threatening as dispersed and therefore not inhalable.

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

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Impunity:

It does not contain impurities relevant for classification and labelling.

4. First aid measures

4.1 Most important symptoms and effects, both acute and delayed

In case of inhalation

Ventilate the premises. Remove the patient from the contaminated premises to rest in the open air. If you feel unwell seek medical advice, showing this safety data sheet.

In case of contact with skin

Remove all traces of product and rinse with water the contaminated body surfaces. Continue to rinse for at least 10 minutes. Remove contaminated clothing. If necessary seek medical advice, showing this safety data sheet. Wash all clothing and shoes before reuse.

In case of contact with eyes

Do not rub. Rinse immediately with plenty of running water, with eyelids open, for at least 15 minutes. In case of presence of contact lenses, remove them. If irritation persists, seek medical advice, showing this safety data sheet.

If swallowed

Do not rub. Rinse immediately with plenty of running water, with eyelids open, for at least 15 minutes. In case of presence of contact lenses, remove them. If irritation persists, seek medical advice, showing this safety data sheet.

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4.2 Indication of any immediate medical attention or special treatment

No symptoms are observed both acute and delayed.

The negative symptoms associated with overexposure may include:

- Redness and irritation to the skin,
- Irritation, tearing and redness in the eyes.

4.3 Indication of any immediate medical attention or special treatment

No specific treatment. Treat symptomatically. Should have been ingested or inhaled large amounts, immediately contact a poison control centre.

Not to be no action taken involving any personal risk or without suitable training. Perform mouth-to-mouth can be dangerous to the person providing aid. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: water spray, powder, alcohol-resistant foam or water spray. Use extinguishing measures appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing agents: jet.

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5.2 Special hazards arising from the substance

Dangers of the substance or mixture: no known specific dangers.

5.3 Advice for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of a fire. Not to be no action taken involving any personal risk or without suitable training. Use the means of extinction appropriate to local circumstances and particular environment. Fire water contaminated with this material must be contained and must prevent access to any waterway, sewer or drain.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Remove those who do not have appropriate protection and ensure adequate ventilation.

Avoid contact with skin, eyes and clothing - wear the appropriate personal protective equipment (see section 8).

Avoid inhalation of vapour - ensure adequate ventilation or wear protective equipment, wear 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 vapours - wear protective mask / protective device appropriate (see section 8).

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6.2 Environmental precautions

Contain the spillage. Avoid that the product reaches uncontrollably water course or sewage system. The product is water pollutant. 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 cleaning up

Small quantity:

Take up with absorbent material (sand, sawdust, universal absorbent, diatomaceous earth), pour the product in appropriate labelled containers and dispose of according to local, national and EU regulations. If the spill happened indoors ventilate the room. After collection, wash with water the area and materials involved recovering the water used and eventually send for disposal in approved facilities.

Big quantity:

mechanically remove the product, pour it into appropriate labelled containers, recover or dispose of according to local, national and EU regulations. If the spill occurred in an enclosed air the room. After collection, wash with water the area and materials involved recovering the water used and eventually send for disposal in approved facilities.

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6.4 Reference to other sections

Information regarding exposure controls / personal protection and disposal considerations can be found in sections 8 and 13.

7. Handling and storage

7.1 Precautions for safe handling

7.1.1 Protection measures

Avoid contact with skin, eyes and mucous membranes, do not swallow. Wear protective equipment for hands, eyes and skin (see item 8). Do not wear contact lenses when working with this product. Keep away from food and drink. Do not breathe vapors, mist or gas.

7.1.2 Advice on general occupational hygiene

Avoid inhalation, ingestion or contact with skin and eyes. They also require general measures of hygiene at work to ensure the safe handling of the substance. These measures include good personal practices, regular cleaning of workplaces, do not drink, eat or smoke in the workplace, wash hands after handling any, take a shower and change clothes at the end of each work shift. Do not wear contaminated clothing at home. Separate working clothes from others. Wash them separately.

7.2 Conditions for safe storage, including any incompatibilities

The product should be stored in a dry place, away from sunlight, water and frost, at temperatures between + 5 ° C and + 35 ° C in original packaging intact and airtight. Keep away from acids, open flame, sparks and heat sources. Keep out of the reach of children. If the product is stored on site, it must be adequately protected from the sun, frost and water and stored at temperatures between + 5 ° C and + 35 ° C.

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8. Exposure controls/personal protection

8.1 Control parameters

Exposure Limit Values

Substance	Specification	Value	Notes
mixture of: 5-chloro-2-methyl-2H -isotiazol-3-one [EC no 247-500-7]; 2-methyl-2 H -isotiazol-3-one	Québec - LTE	0.076 mg/m ³	CMI
	NOISH - LTE	0.23 mg/m ³	CMI
	Québec - LTE	1.5 mg/m ³	MI
	NOISH - LTE	4.5 mg/m ³	MI

Ingredient Name	Route of Exposure	Frequency of exposure	DNEL/ DMEL
mixture of: 5-chloro-2-methyl-2H -isotiazol-3-one [EC no 247-500-7]; 2-methyl-2 H -isotiazol-3-one	Not applicable	Not applicable	Not applicable

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Ingredient Name	Limit value type	PNEC
miscela di: 5-cloro-2-metil-2H -isotiazol-3-one [EC no 247-500-7]; 2-metil-2 H -isotiazol-3-one	Not applicable	Non applicable

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

The product contains quartz, and the United Kingdom is subject to a mandatory maximum exposure limit of 0.3 mg / m³ of respirable quartz in a time-weighted average of eight hours. If these limits are exceeded must use a system for the extraction of the powder.

The occupational exposure limit (LEP) for respirable crystalline silica dust is 0.025 mg / m³ measured in Italy as TWA (time-weighted average).

Such exposure limit is wrong taken into account in the normal conditions of use and storage as is present inside the product in a liquid dispersion and therefore not inhalable.

8.2 Exposure control

It is recommended to use only outdoors or in area provided with appropriate exhaust ventilation. Wear personal protective equipment (goggles and protective clothing, safety shoes).

8.2.1 Appropriate engineering controls

Nobody.

8.2.2 Individual protection measures, such as personal protective equipment

Hygiene measures

8.2.2.1 Eye/face protection

Do not use contact lenses. Use tight fitting goggles with side shields conforming to EN 166 (goggles) or full mask EN 402.

Use an eye protection compatible with the system used for the protection of the respiratory tract.

8.2.2.2 Skin protection

Wear suitable protective gloves to chemical agents (protection index 6, corresponding to a permeation time > 480 minutes), waterproof and comply with UNI EN 374 parts 1 and 2. nitrilocauciù gloves (0.4 mm), chlorinated rubber (0.5 mm) PVC (0.7 mm) and other. It should be borne in mind that, because of several factors (for example temperature), the duration of a glove for protection against chemical agents may be considerably lower than the permeation time detected by the test. Change protective gloves used in the presence of signs of wear or contamination. Wear protective standards that cover the entire surface of the skin, long pants, long-sleeved suit, adhering to the end and safety footwear.

8.2.2.3 Respiratory protection

Use respiratory protection equipment with CE marking comply with the requirements of the current regulations (89/656 / EEC, 89/686 / EEC), when the risks to the respiratory tract can not be adequately reduced by measures, methods or procedures on work. Use filter type A-P2 or ABEK-P2 according to EN 141.

Keep the areas where the product is used or stored.

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8.2.2.4 Thermal hazards

No data available.

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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	white
Odour:	typical
Odour threshold:	no data available.
pH:	no data available.
Density:	1.11 kg / l.
Point / range:	0 ° C water.
Point / range:	100 ° C water.
Flash point:	non-combustible.
Flammability (solid, gas):	not applicable.
Evaporation rate:	data not available.
Vapour pressure:	not available.
Relative vapor density:	not available.
Explosion hazard:	not explosive.
Lower Explosive Limit:	not applicable.
Upper explosion limit:	not applicable.
Solubility in water:	partially soluble
Coefficient of n-octanol / water:	not applicable.
Ignition temperature:	not applicable.
Decomposition temperature:	no data available.
Dynamic viscosity:	no data available.
Oxidizing properties:	no data available.

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9.2 Other information

Percentage of volatile: No data available.

Solubility in other solvents: no data available.

Note: The values presented above with physico-chemical values are typical for the product and should not, therefore, be construed as a specification.

10. Stability and reactivity

10.1 Reactivity

Possibility of reaction with acids.

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10.2 Chemical stability

The product is stable if the requirements / guidelines for safe handling and storage.

10.3 Possibility of hazardous reaction

Possibility of reaction with acids.

10.4 Condition avoid

The product should be stored in a dry place, away from sunlight, water and frost, at temperatures between + 5 ° C and + 35 ° C in original packaging intact and airtight. Keep away from acids, open flame, sparks and heat sources. Keep out of the reach of children. If the product is stored on site, it must be adequately protected from the sun, frost and water and stored at temperatures between + 5 ° C and + 35 ° C.

10.5 Incompatible materials

Keep away from acids, open flame, sparks and heat sources.

10.6 Hazardous decomposition products

The reaction with acids liberates carbon dioxide.

When heated or in case of fire can release gases and vapors which are dangerous to health such as carbon dioxide and carbon monoxide.

10.7 Polymerization

Product will not undergo polymerization.

11. Toxicological information

11.1 Information on toxicological effects

In the absence of experimental toxicological data on the product itself, the potential risks of the product to health were evaluated based on the properties of substances, according to the criteria laid down by the relevant regulations for the classification. Consider, therefore, the concentration of each substance dangerous possibly mentioned in sect. 3, to assess the toxicological effects resulting from exposure to the product.

Acute toxicity:

Substance	Specification	assumption	Specie	Value	Durata del test
mixture of: 5-chloro-2-methyl-2H -isotiazol-3-one [EC no 247-500-7]; 2-methyl-2 H -isotiazol-3-one	LD50	Dermal	Rubbit	660 mg/kg	
	LD50	Oral	Rat	75 ppm	
	LC50	Inhalation	Rat	0.33 mg/l	
	NOAEL	Oral	Rat	225 ppm	90 days
	NOAEL	Oral	Rat	75 ppm	28 days

Irritation / corrosion: If the product dries, it adheres to the skin may be an irritation.

Respiratory tract irritation: prolonged exposure to fumes and / or vapors can possibly cause

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irritation to the eyes or upper respiratory tract.

Respiratory sensitization and skin: The product may have sensitive people, cause minor health effects for inhalation and / or dermal absorption and / or contact with eyes and / or ingestion.

Germ cell mutagenicity: all the available information does not provide any indication of a possible mutagenic effect.

Carcinogenicity: all the available information does not provide any indication of a possible carcinogenic effect.

Reproductive toxicity: all the available information does not provide any indication of a possible toxic effect for playback.

Developmental Toxicity: All the available information does not provide any indication of a possible toxic effect for development.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure): all the available information does not provide any indication of the possible effect of repeated dose toxicity and Specific target organ toxicity (repeated exposure).

Other relevant toxicity information: all available information does not provide any indication of other signs of toxicity.

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 make up the product.

12. Ecological information

12.1 Toxicity

In the absence of experimental toxicological data on the product itself, the potential risks of the product to health were evaluated based on the properties of substances, according to the criteria laid down by the relevant regulations for the classification. Consider, therefore, the concentration of each substance dangerous possibly mentioned in sect. 3, to assess the toxicological effects resulting from exposure to product.

Toxicological information of the mixture: No data available.

Toxicological information of the main substances in the mixture:

Acute toxicity:

Substance	Specification	Specie	Value	Duration of test
mixture of: 5-chloro-2-methyl-2H -isotiazol-3-one [EC no 247-500-7]; 2-methyl-2 H -isotiazol-3-one	LC50	Fish	0.28 mg/l	
	EC50	Alga	0.16 mg/l	

General Effect

No data available.

12.2 Persistence and degradability

It is believed that it is not biodegradable.

Do not pour the product in the pipeline and water course, if the product has escaped into a water

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course, into the drainage system or has contaminated the ground or vegetation, notify the competent authorities.

12.3 Bioaccumulative potential

There is no foreseeable potential for bioaccumulation.

12.4 Mobility in soil

The product has potential for mobility.

Assessment transport between environmental compartments: No data available.

12.5 Results of PBT and vPvB assessment

According to information on substances, it was found that the mixture does not meet the criteria for PBT / vPvB.

12.6 Other adverse effects

No data available.

12.7 Additional indication

Absorbable organic halogen compounds (AOX): No data available.

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 make up the product.

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13. Disposal consideration

13.1 Waste treatment methods

For disposal, remove the product in a suitable incineration plant, in accordance with regulations at the local, national and EU level. The preparation is not suitable for disposal in water disposal public, canals, natural waterways or rivers.

The package used is intended exclusively for the packaging of this product, it must not be reused for other purposes. All containers, even when completely empty, must not be disposed of properly and must undergo a proper decontamination treatment before starting their disposal. If they contain residues must be classified, stored and sent to a suitable treatment facility in accordance with applicable local, national and Community.

14. Transport information

Product not classified as hazardous for transport (ADR for road, RID for rail, sea transport ADN internal IMDG / GGVSea by sea, IATA / ICAO aviation).

14.1 ONU Number

not Regulated.

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14.2 ONU proper shipping name

not Regulated.

14.3 Transport hazard classes

Product not classified as hazardous for transport.

14.4 Packaging group

not Regulated.

14.5 Environmental hazards

Product not classified as hazardous for transport.

14.6 Special precautions for user

Product not classified as hazardous for transport.

14.7 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Product not classified as hazardous for transport.

Transportation classifications may vary according to the different national laws.

15. Regulatory information

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

Permissions: not required.

Restrictions on use: None.

Other EU regulations: The product does not contain substances included in the Seveso Directive, nor substances that deplete the ozone layer and even persistent organic pollutants (POPs).

Directive 67/548 / EEC and subsequent amendments (Classification, labelling and packaging of hazardous substances);

Directive 2006/8 / EC (Ministerial Decree of 03/04/2007);

Regulation EC / 1907/2006 and subsequent amendments (Registration, Evaluation and Authorisation of Chemicals REACH);

Regulation EC / 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);

Legislative Decree n. 475/82 and subsequent amendments (Implementation of Directive 89/686 / EEC of 21.12.1989 on the approximation of the laws of the Member States relating to personal protective equipment);

Law no. 52 of 03/02/1997; D.M. 28/04/1997;

D.M. 04/04/1997;

D.M. 07/09/2002 (Attuazione delle direttiva 2001/58/CE);

D. Lgs. 65 del 14/03/2003 (Attuazione delle Direttive 1999/45/CE e 2001/60/CE);

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D. Lgs n. 152/2006 e s.m.i. (norme in materia ambientale);
D. Lgs. 81/2008 e s.m.i. (attuazione dell'art. 1 della Legge 03/08/2007 in materia di tutela della salute e della sicurezza nei luoghi di lavoro).

15.2 Chemical safety assessment (CSA)

Not required. Exempt from REACH registration.

16. Other information

Full text of H phrases – Hazard Statements

H 317 It may cause an allergic skin reaction

Full text of the safety advice

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves / protective clothing / eye protection / face.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If irritation or rash occurs: Get medical advice.
P363 Wash contaminated clothing before reuse.
P501 Dispose of the container in the containers for recycling.

Classification and procedure used to derive under Regulation (CE) 1272/2008 [CLP] in relation to the mixtures:

Classified according the regulation (CE) n. 1272/2008	Classification procedure
Skin Sens. 1 H 317	Minimum classification.

Abbreviations

ADR: Accord européen relative au transport international des marchandises dangereuses par route (Accordo europeo relativo al trasporto internazionale delle merci pericolose su strada).
ASTM: ASTM International, originariamente nota come American Society for Testing and Materials (ASTM).
EINECS: European Inventory of Existing Commercial Chemical Substances (Registro Europeo delle Sostanze chimiche in Commercio).
EC(0/50/100): Effective Concentration 0/50/100 (Concentrazione Effettiva Massima per 0/50100% degli Individui).
LC(0/50/100): Lethal Concentration 0/50/100 (Concentrazione Letale per 0/50100% degli Individui).
IC50: Inhibitor Concentration 50 (Concentrazione Inibente per il 50% degli Individui).
NOEL: No Observed Effect Level (Dose massima senza effetti).
NOEC: No Observed Effect Concentration (Concentrazione massima senza effetti).
LOEC: Lowest Observed Effect Concentration (Concentrazione massima alla quale è possibile evidenziare un effetto).
DNEL: Derived No Effect Level (Dose derivata di non effetto).
DMEL: Derived Minimum Effect Level (Dose derivata di minimo effetto).

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CLP:	Classification, Labelling and Packaging (Classificazione, Etichettatura e Imballaggio).
CSR:	Rapporto sulla Sicurezza Chimica (Chemical Safety Report).
LD(0/50/100):	Lethal Dose 0/50/100 (Dose Letale per 0/50/100% degli Individui).
IATA:	International Air Transport Association (Associazione Internazionale del Trasporto Aereo).
ICAO:	International Civil Aviation Organization (Organizzazione Internazionale dell'Aviazione Civile).
Codice IMDG:	International Maritime Dangerous Goods code (Codice sul Regolamento del Trasporto Marittimo).
PBT:	Persistent, bioaccumulative and toxic (sostanze persistenti bioaccumulabili e tossiche).
RID:	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regolamento concernente il trasporto Internazionale ferroviario delle merci Pericolose).
STEL:	Short term exposure limit (limite di esposizione a breve termine).
TLV:	Threshold limit value (soglia di valore limite).
TWA:	Time Weighted Average (media ponderata nel tempo).
vPvB:	Very persistent very bioaccumulative (sostanze molto persistenti e molto bioaccumulabili).
VwVwS.:	Text of Administrative Regulation on the Classification of Substances hazardous to waters into Water Hazard Classes (Verwaltungsvorschrift wassergefährdende Stoffe – VwVwS).
PNEC:	Predicted No Effect Concentration.
PNOS:	Particulates not Otherwise Specified.
BOD:	Biochemical Oxygen Demand.
COD:	Chemical Oxygen Demand.
BCF:	BioConcentration Factor.
TRGS :	Technische Regeln für Gefahrstoffe -Technical Rules for Hazardous Substances, defined by The Federal Institute for Occupational Safety and Health, Germany.
LCLo:	Lethal Concentration Low (La minima concentrazione letale).
ThOD:	Theoretical Oxygen Demand.

Biography

The Merck Index Ed. 10;

Handling Chemical Safety;

Anonimo, 2006: Tolerable upper intake levels for vitamins and minerals Scientific Committee on Food, European Food Safety Authority, ISBN: 92-9199-014-0 [documento SCF].

Anonimo, 2007: HERAG fact sheet - assessment of occupational dermal exposure and dermal absorption for metals and inorganic metal compounds; EBRC Consulting GmbH, Hannover, Germania; agosto 2007.

Anonimo, 2008: Recommendation from the Scientific Committee on Occupational Exposure Limits for calcium oxide (CaO) and calcium dihydroxide (Ca(OH)₂), Direzione Generale per

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l'Occupazione, gli Affari Sociali e le Pari Opportunità della Commissione Europea, SCOEL/SUM/137 febbraio 2008.

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) (Ufficio europeo delle sostanze chimiche)

CIRC (Centre International de Recherche sur le Cancer) (Centro internazionale di ricerca sul cancro).

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).

Istituto Superiore di Sanità – Schede tossicologiche di solventi organici utilizzati in cicli tecnologici industriali (1985).

Istituto Superiore di Sanità – Inventario nazionale sostanze chimiche.

ECDIN – Environmental chemicals data and information network – Joint research centre, Commission of the European Communities.

ACGIH – Treashold limit values (2000).

SAX'S – Dangerous properties of industrial materials – tenth edition

Release:

This safety data sheet (SDS) is based on the legal provisions contained in the REACH Regulation (CE / 1907/2006), as amended and supplemented. The information contained herein is based on information in the MSDS of the raw materials that make up the product and our knowledge of the date indicated. They refer solely to the product indicated and constitutes no guarantee of particular quality.

Is not, no representation or warranty as to the accuracy, reliability and completeness of the data contained in this MSDS. The company assumes no liability for damage to persons or property that may result from use of the product other than that for which it was intended. The SDS does not replace but complements the lyrics or the rules governing the activities of the use. The user has full responsibility for the precautions that are necessary for the use you make of the preparation. This SDS cancels and replaces any preceding release.

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

This SDS is available electronically on the website: www.diasen.com.

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

Last version 0009 of 15 May 2015.

1.1 Product and Society identification

Denomination: **Acriflex pH4 (PART B)**

N° di registrazione Reach: free.

1.5 Relevant identified uses of product and recommended uses

Cement fiber-reinforced liquid waterproofing membrane with high chemical resistance.

This Security Data Security reports and attached exposure scenarios of raw materials that make up the product.

PROC	Identified uses - Description of the use	Production /Formulation of	Professional /use industrial of
		Material for building and the construction	
2	Use in closed, continuous process with occasional controlled exposure	X	X
3	Use in closed batch process (synthesis or formulation)	X	X
5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and / or significant contact)	X	X
7	Application industrial spray		X
8a	Transfer of substance or preparation containers at dedicated facilities (charging/discharging) from / to vessels / large containers at non-dedicated		X
8b	Transfer of substance or preparation (charging / discharging) from / to vessels / large containers at dedicated facilities.	X	X
9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	X	X
10	Application with rollers and brushes		X
11	Application no industrial spray		X
13	Treatment of articles by dipping and pouring		X
14	Production of preparations or articles by tableting, compression, extrusion, pelletization	X	X
19	Mixing with intimate contact, with only the use of personal		X

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	protective equipment (PPE)		
22	Machining operation in the processes potentially closed with minerals / metals at elevated temperature. Industrial environment.		X
26	Handling of solid inorganic substances at ambient temperature		X

1.2 Details of the supplier of the safety data sheet:

Name of society: Diasen s.r.l.
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 Tel. +39 0732 9718
 Fax +39 0732 971899
 E-mail: reach@diasen.com

1.4 Number of emergency

Emergency telephone number of the company and / or official advisory body:
 DiaSen LTD Tel. 0732/9718
 Available outside working hours? No.

2 Hazards identification

2.1 Classification of the substance or mixture

STOT SE 3 H335
 Skin Irrit. 2 H315
 Eye Dam. 1 H318
 Skin Sens. 1 H317

2.2 Label Elements

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

Hazard pictograms



GHS07



GHS05

Warning:
 Caution.

Hazard statement:

H335 It can cause respiratory irritation
 H315 Causes eye irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.

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Precautionary :

P271

P405

P501

P280

P305 + P351 + P338

P310

Additional information on the dangers (EU):

The product, if necessary, is admixed with a specific reducing agent to keep the content of soluble chromium VI to concentrations less than 0.0002% (2 ppm) on the total dry weight of the same cement, which is preserved in normal storage conditions for a period of six months, after which the agent has no effect, in accordance with the legislation set out in paragraph 15.

The packaging date and the production batch are printed on the packaging.

2.3 Others Hazards

Data no available.

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

3 Composition / information on ingredients

3.1 Substances

Not applicable. The product is a mixture.

3.2 Mixture

Hazard substances:

Number of registration (CE)	CAS Number	CE Number	% [weight]	Name	Classification according to Regulation (CE) n.1272/2008 (CLP)	
					Class of risk e Code Category	Hazard (Phase H)
	65997-15-1	266-043-4	< 90%	Clinker for cement portland	STOT SE 3 Skin Irrit. 2 Eye Dam. 1 Skin Sens. 1	H 335 H 315 H 318 H 317
01-211948676 7-17-0xxx	68475-76-3	270-659-9	-	Flue Dust	STOT SE 3 Skin Irrit. 2 Eye Dam. 1 Skin Sens. 1	H 335 H 315 H 318 H 317

TECHNICAL DEPARTMENT

Additional Information:

The content of clinker in various types of cements is reported in the Table of point 3.2. The flue dust, if present in the formulation of cement, are measured as minor constituent. The other components of the cement in Table 3.2 point, the setting regulators, ventuali other materials used as a minor constituent, the grinding aids and any reducing agents present toxicological and risk levels equal to or lower than those of clinker.

For the full text of the advice H: cfr. SETION 16.

Impurity:

It does not contain impurities relevant for classification and labeling.

4. First aid

General information:	not known delayed effects. Consult a physician for all routes of exposure except in minor cases, showing this safety data sheet or label.
Inhalation of vapours:	air the room. Immediately remove the patient from the contaminated premises to rest in a well ventilated area. Dust in throat and nostrils should cleanse itself spontaneously. If you feel unwell seek medical advice, showing this safety data sheet or label.
Contact with skin:	For the product dry, remove and rinse with water. For the product wet / wet, wash the skin with soap and water at neutral pH or suitable mild detergent. Remove contaminated clothing, shoes, glasses and clean them completely efore reuse. If you see redness, irritation or burns continues, consult a doctor, showing this safety data sheet or label.
Contact with eyes:	Do not rub your eyes to prevent corneal damage caused by the rubbing. If present, remove contact lenses. Tilt your head in the direction of the affected eye, open the eyelids and rinse with plenty of water for at least 20 minutes to remove all residue. If possible, use isotonic water (0.9% NaCl). If irritation persists, seek medical advice, showing this safety data sheet or label.
Ingestion:	rinse the mouth with plenty of water, do not induce vomiting. If the person is conscious, rinse the mouth with water and drink plenty of water. Consult a doctor immediately, showing this safety data sheet. Never give anything by mouth to an unconscious person.

4.1 Most important symptoms and effects, both acute and delayed

Eyes: Eye contact with the product dust (dry or wet) may cause serious and potentially irreversible injuries.

Skin: The product and its preparations may have an irritating effect on moist skin (due to perspiration or humidity) after prolonged contact or may cause contact dermatitis after repeated contact. Prolonged contact of the skin with wet cement or wet preparations (concrete / mortar fresh etc) can cause irritation, dermatitis or burns.

TECHNICAL DEPARTMENT

Inhalation: Repeated inhalation of powder of the product for a long period of time increases the risk of onset of lung diseases.

Ingestion: If swallowed accidentally, the product may cause ulceration of the digestive system.

Environment: in normal use, the product is not dangerous for the environment.

4.2 Indication of any immediate medical attention or special treatment.

When you contact a doctor, bring along your SDS.

5. Fire-fighting measures

5.1 Thermal decomposition

No information available.

5.2 Suitable extinguishing media

The product is not flammable.

For extinguishing fires use water spray, dry powder or CO₂. Use extinguishing measures appropriate to local circumstances and the surrounding environment.

Extinguishers not anyone.

5.3 Special hazards arising from the substance

The product is not flammable. It is not combustible or explosive and does not support combustion of other materials.

5.4 Advice for fire-fighters

This product has no risks related to the fire. No special protective equipment necessary for officers to fire.

Do not breathe fumes from the fire. Use extinguishing measures appropriate to local circumstances and the surrounding environment. Wear complete protection to eyes, full flash barrier suit, gloves and shoes Heat. The debris and contaminated extinguishing water must be disposed of according to local regulations, national and Community.

6. Measures in case of accidental release

6.1.1 For non-emergency personnel

Remove people who do not wear any protective device.

Avoid contact with skin and eyes - wear appropriate personal protective equipment (see. Point 8).

6.1.2 For emergency responders

Remove people who do not wear any protective device.

Avoid contact with skin and eyes - wear suitable protective equipment (see. Point 8).

In any case, protection of the respiratory tract, eyes and skin is required in situations with high levels of dust. Not smoking.

Ensure adequate ventilation.

TECHNICAL DEPARTMENT

6.2 Environmental

Contain the spillage. Avoid that the product or washing liquids reach uncontrollably water course or sewage system. In case of spills into waterways, alert the Environment Agency or other body in charge of environmental protection.

6.3 Methods and materials for containment and cleaning

Small quantity: use methods of dry cleaning like vacuum cleaners or vacuum extractors (industrial portable units, equipped with high efficiency particulate filters or equivalent technical), that does not disperse dust into the environment. Never use compressed air. Pour the product in appropriate labelled containers and dispose of according to local, national and EU regulations. After collection, wash with water the area and materials involved recovering the water used and eventually send for disposal in approved facilities.

Big quantity: mechanically remove the product, never use compressed air, pour it into appropriate labelled containers, recover or dispose of according to local, national and EU regulations. After collection, wash with water the area and materials involved recovering the water used and eventually send for disposal in approved facilities.

6.4 Reference to other sections

Information regarding exposure controls / personal protection and disposal considerations can be found in sections 8 and 13.

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7. Manipolazione And storage

7.1 Precautions for safe handling

7.1.1 Protective Measures

Avoid contact with skin, eyes and mucous membranes, do not swallow. Wear protective equipment for hands, eyes and skin (see item 8). Do not wear contact lenses when working with this product. Keep away from food and drink. Do not breathe vapours, mist or gas. Do not sweep. Use dry cleanup methods (eg. Vacuum cleaners and vacuum extractors), which do not cause air leakage.

7.1.2 Advice on general occupational hygiene

Avoid inhalation, ingestion or contact with skin and eyes. They also require general measures of hygiene at work to ensure the safe handling of the substance. These measures include good personal practices, regular cleaning of workplaces, do not drink, eat or smoke in the workplace, wash hands after handling any, take a shower and change clothes at the end of each work shift. Do not wear contaminated clothing at home. Separate working clothes from others. Wash them separately.

7.2 Conditions for safe storage, including any incompatibilities

The product should be stored in a dry place, sheltered from sunlight, water and frost, at temperatures between + 5 ° C and + 35 ° C in original packaging intact and airtight. Keep away from acids, ammonium salts, aluminium or other non-noble metals. Keep out of the reach of children.

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If the product is stored on site, it must be adequately protected from the sun, frost and water and stored at temperatures between + 5 ° C and + 35 ° C.

8. Exposure controls / personal protection

8.1 Control parameters

Components with limit value:

The Threshold Limit Value Time-Weighted (TLV-TWA) adopted at the workplace Association American Industrial Hygienists (ACGIH) for particulate matter is equal to 1 mg / m³ (respirable fraction). For an indication of the level of exposure you:

DNEL (inhalable fraction): 1 mg / m³

DNEL (skin): not applicable

DNEL (ingestion): not relevant

As regards the environmental risk assessment, we have:

PNEC (water): not applicable

PNEC (sediment): not applicable

PNEC (soil): not applicable

8.2 Exposure Controls

It is recommended to use only outdoors or in area provided with appropriate exhaust ventilation.

Wear personal protective equipment (goggles and protective clothing, safety shoes).

8.2.1 Appropriate engineering controls

In systems where handling, transporting, loading and storing the discharge concrete measures must be taken to protect workers and to contain dust emissions at the workplace as indicated (DNEL = 1 mg / m³).

8.2.2 Individual protection measures, such as personal protective equipment

8.2.2.1 Eye / face

Do not use contact lenses. Wear approved goggles or masks safety according to EN 166.

Use an eye protection compatible with the system used for the protection of the respiratory tract.

8.2.2.2 Skin protection

Wear waterproof gloves, resistant to abrasion and alkalis and in conformity with UNI EN 374 parts 1, 2 and 3 lined cotton . It should be borne in mind that, because of several factors (for example temperature), the duration of a glove for protection against chemical agents may be considerably lower than the permeation time detected by the test. Change protective gloves used in the presence of signs of wear or contamination. Wear protective standards that cover the entire surface of the skin, long pants, long-sleeved suit, adhering to the end and safety footwear. For workers who suffer from dermatitis or sensitive skin, we recommend appropriate protection.

8.2.2.3 Respiratory protection

When a person is potentially exposed to dust levels above exposure limits, use appropriate respiratory protection commensurate with the level of dust and comply with relevant EN (filtering facepiece certified UNI EN 149 or dust masks certified UNI EN 140).

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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. See the engineering control measures to prevent the spread of dust in the environment. Take measures to ensure that the product reaches the water (sewage systems or ground water or surface).

In systems where handling, transporting, loading and discharge and storing the product, appropriate measures must be taken to contain dust emissions at the workplace. Control of environmental exposure to the emissions to air of cement particles must be performed according to the available technology and regulations concerning emissions of dust particles in general. Environmental exposure control is relevant for the aquatic environment as emissions of cement at different stages of the life cycle (production and use) mainly apply to ground and waste water. The aquatic effect and risk assessment covers the effect on organisms / ecosystems due to possible pH changes related to the release of hydroxides. It is believed that the toxicity of other dissolved inorganic ions may be negligible compared to the potential pH effect. Any other effect that may occur during the production and use shall be considered to take place on a local scale. The pH of the discharge and surface water should not exceed the value 9.

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9. Physical and chemical

9.1 Information on basic physical and chemical

Appearance:	powder
Colour:	Grey
Odour:	typical
Odour threshold:	No data available.
pH:	No data available.
Density:	0.88 kg / l.
Punto / intervallo di fusione:	1250°C.
Point / range:	not applicable.
Flash point:	non-combustible.
Flammability (solid, gas):	not applicable.
Evaporation rate:	not applicable.
Vapour pressure:	not available.
Relative vapour density:	not available.
Explosion hazard:	not explosive.
Lower Explosive Limit:	not applicable.
Upper explosion limit:	not applicable.
Solubility in water:	soluble.
Coefficient of n-octanol / water:	no data available.
Ignition temperature:	not applicable.

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Decomposition temperature: not applicable.
Dynamic viscosity: no data available.
Oxidizing properties: no data available.

9.2 Other information

Percentage of volatile: No data available.
Solubility in other solvents: no data available.

Note: The values presented above with physico-chemical values are typical for the product and should not, therefore, be construed as a specification.

10. Stability and reactivity

10.1 Reactivity

Non reactive.

10.2 Chemical stability

The product itself is stable the longer the more it is stored properly (see Section 7). It must be kept dry. It should be avoided contact with incompatible materials.

The wet product is alkaline and incompatible with acids, with ammonium salts, with aluminum and with other non-noble metals. The product in contact with hydrofluoric acid decomposes, producing corrosive silicon tetrafluoride gas. The product reacts with water to form silicates and calcium hydroxide. The silicates in the product react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

The package integrity and respect of the storage conditions mentioned in section 7.2 (special closed containers, cool and dry place and no ventilation) are indispensable conditions to maintain the effectiveness of the reducing agent in the retention period specified on the bag or DDT.

10.3 Possibility of hazardous reactions

The product in contact with hydrofluoric acid decomposes, producing corrosive silicon tetrafluoride gas. The product reacts with water to form silicates and calcium hydroxide. Silicates in cement react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

10.4 Conditions to avoid

The product should be stored in a dry place, sheltered from sunlight, water and frost, at temperatures between + 5 ° C and + 35 ° C in original packaging intact and airtight. Store away from acids, with ammonium salts, with aluminum and with other non-noble metals. Keep out of the reach of children.

If the product is stored on site, it must be adequately protected from the sun, frost and water and stored at temperatures between + 5 ° C and + 35 ° C.

10.5 Incompatible materials

Acids, ammonium salts, aluminium or other non-noble metals.

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10.6 Hazardous decomposition products

No decomposition in any hazardous product.

11. Toxicological information

Acute toxicity: no data available.

Irritation / corrosion: prolonged contact can cause dry skin and irritation. Small amounts in the eyes may cause irritation and burning. The product in contact with moist skin may cause thickening, cracking and cracking of the skin. Prolonged contact in combination with existing abrasion can cause severe burns.

Respiratory tract irritation: possible exposure to fumes may form at elevated temperatures may be irritating to the respiratory tract.

Respiratory sensitization and skin: No data available.

Germ cell mutagenicity: no data available.

Carcinogenicity: no data available.

Reproductive toxicity: no data available.

Developmental Toxicity: no data available.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure): There is an indication of COPD. The effects are acute and due to high exposures. No effects were observed or chronic effects at low concentration. Based on available data, the classification criteria are not met.

Other relevant toxicity: no data available.

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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 make up the product.

12. Ecological

Adopt good working practices, avoiding littering.

12.1 Toxicity

The addition of large amounts of cement to water may, however, cause an increase in pH and may, therefore, be toxic to aquatic life under certain circumstances.

12.1.1 Acute / prolonged on fish

Data not available.

12.1.2 Acute / prolonged on aquatic invertebrates

Data not available.

12.1.3 Acute / prolonged on aquatic plants

Data not available.

TECHNICAL DEPARTMENT

12.1.4 Toxicity to microorganisms (eg. Bacteria) / effects on activated sludge

Data not available.

12.1.5 Chronic toxicity to aquatic organisms

Data not available.

12.1.6 toxicity on soil organisms

Data not available.

12.1.6 Toxicity terrestrial plants

Data not available.

12.1.7 General effect

Data not available.

12.2 Persistence and degradability

This product is not biodegradable.

Disposal considerations:

Data not available.

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.

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12.3 Bioaccumulative potential

Data not available.

12.4 Mobility in soil (and other compartments if available)

Assessment transport between environmental compartments:

No data available.

12.5 Results of evaluations on the PBT or vPvB

Not relevant, since the product is an inorganic material. After curing, the product poses no risk of toxicity.

12.6 Other adverse effects

No data available.

12.7 Additional information

Absorbable organic halogen compounds (AOX):

No data available.

TECHNICAL DEPARTMENT

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 make up the product.

13. Disposal disposal

13.1 Methods of waste treatment

If any products are intended for disposal must be managed in accordance with the provisions of Part IV "Rules on waste management" of Legislative Decree 152/2006 "Environmental Regulations", as amended and related decrees implemented. The product does not show, however, any kind of risk for the eventual disposal.

14. Transport

Product not classified as hazardous for transport (ADR for road, RID for rail, sea transport ADN internal IMDG / GGVSea by sea, IATA / ICAO aviation).

14.1 UN number

Not regulated.

Proper Shipping Name 14.2 for UN

Not regulated.

14.3 Hazard class for transport

Product is not classified as dangerous for transport.

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14.4 Packing Group

Not regulated.

14.5 Environmental hazards

Product is not classified as dangerous for transport.

14.6 Special precautions for users

Product is not classified as dangerous for transport.

14.7 Transport of the product in accordance with the MARPOL73 / 78 and the IBC Code

Product is not classified as dangerous for transport.

Transportation classifications may vary according to the different national laws.

15. Regulatory information

15.1 Regulations / legislation on safety

Health and environment specific to the product

Permissions: not required.

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Restrictions on use: None.

Other EU regulations: The product does not contain substances included in the Seveso Directive, nor substances that deplete the ozone layer and even persistent organic pollutants (POPs).
 Directive 67/548 / EEC and subsequent amendments (classification, labelling and packaging of hazardous substances);
 Directive 2006/8 / CE (Ministerial Decree of 03/04/2007);
 Regulation CE / 1907/2006 and subsequent amendments (Registration, Evaluation and Authorisation of Chemicals REACH);
 Regulation CE / 1272/2008 (classification, labeling and packaging of substances and mixtures).

National regulation: Presidential Decree 1124/65 (consolidated law for compulsory insurance against accidents at work and occupational diseases);
 Legislative Decree n. 475/82 and subsequent amendments (Implementation of Directive 89/686 / EEC of 21.12.1989 on the approximation of the laws of the Member States relating to personal protective equipment);
 Law no. 52 of 03/02/1997;
 D.M. 28/04/1997;
 D.M. 04/04/1997;
 D.M. 07/09/2002 (Implementation of Directive 2001/58 / CE);
 Legislative Decree no. 65 of 14/03/2003 (Implementation of Directive 1999/45 / CE and 2001/60 / CE);
 Legislative Decree n. 152/2006 and subsequent amendments (environmental standards);
 Legislative Decree no. 81/2008 and subsequent amendments (implementation of art. 1 of the law 03/08/2007 on the protection of health and safety in the workplace).

The Regulation 1907/2006 / CE concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII, paragraph 47, as amended by Regulation no. 552/2009, imposes the prohibition on marketing and use cement and preparations if they contain, when hydrated, more than 0,0002% (2 ppm) soluble chromium VI of the total dry weight of the cement. Compliance with this threshold limit is ensured by addition to the cement of an agent reducing the effectiveness of which is guaranteed for a predetermined time period and with the continuous compliance with adequate arrangements for storage (described in paragraphs 7.2 and 10.2). Under this regulation, the use of the reducing agent involves the communication of the following information:

DATE OF PACKAGING	Reported on the bag or on DDT
CONDITION OF CONSERVATION(*)	In special closed containers in a cool, dry and with no ventilation, with a guarantee of maintaining the integrity of the package.
STORAGE PERIOD (*)	As reported on DDT (both product lots that bulk) and on each bag.

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(*)to maintain the effectiveness of the reducing agent.

15.2 Chemical Safety Assessment (CSA)

Not required. Free of registration REACH.

16. Other information

Full text of abbreviated H statements

H335	May cause respiratory irritation
H315	Causes eye irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Full text of the safety advice

P271	Use only outdoors or in a well ventilated area.
P405	Store locked up.
P501	Dispose of the container in the containers for recycling.
P280	Wear protective gloves / protective clothing / eye protection / face.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.
P310	Immediately call a doctor.

Classification and procedure used to derive it in accordance with Regulation (CE) No. 1272/2008 [CLP] in relation to the mixtures:

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Classification in accordance with Regulation (CE) No. 1272/2008	Classification procedure
STOT SE 3 H335 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Dam. 1 H318	Minimum classification .

Abbreviation

ADR:	Accord européen relative au transport international des marchandises dangereuses par route (Accordo europeo relativo al trasporto internazionale delle merci pericolose su strada).
ASTM:	ASTM International, originariamente nota come American Society for Testing and Materials (ASTM).
EINECS:	European Inventory of Existing Commercial Chemical Substances (Registro Europeo delle Sostanze chimiche in Commercio).
EC(0/50/100):	Effective Concentration 0/50/100 (Concentrazione Effettiva Massima per 0/50100% degli Individui).
LC(0/50/100):	Lethal Concentration 0/50/100 (Concentrazione Letale per 0/50100% degli Individui).
IC50:	Inhibitor Concentration 50 (Concentrazione Inibente per il 50% degli Individui).

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NOEL:	No Observed Effect Level (Dose massima senza effetti).
NOEC:	No Observed Effect Concentration (Concentrazione massima senza effetti).
LOEC:	Lowest Observed Effect Concentration (Concentrazione massima alla quale è possibile evidenziare un effetto).
DNEL:	Derived No Effect Level (Dose derivata di non effetto).
DMEL:	Derived Minimum Effect Level (Dose derivata di minimo effetto).
CLP:	Classification, Labelling and Packaging (Classificazione, Etichettatura e Imballaggio).
CSR:	Rapporto sulla Sicurezza Chimica (Chemical Safety Report).
LD(0/50/100):	Lethal Dose 0/50/100 (Dose Letale per 0/50/100% degli Individui).
IATA:	International Air Transport Association (Associazione Internazionale del Trasporto Aereo).
ICAO:	International Civil Aviation Organization (Organizzazione Internazionale dell'Aviazione Civile).
Codice IMDG:	International Maritime Dangerous Goods code (Codice sul Regolamento del Trasporto Marittimo).
PBT:	Persistent, bioaccumulative and toxic (sostanze persistenti bioaccumulabili e tossiche).
RID:	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regolamento concernente il trasporto Internazionale ferroviario delle merci Pericolose).
STEL:	Short term exposure limit (limite di esposizione a breve termine).
TLV:	Threshold limit value (soglia di valore limite).
TWA:	Time Weighted Average (media ponderata nel tempo).
vPvB:	Very persistent very bioaccumulative (sostanze molto persistenti e molto bioaccumulabili).
VwVwS.:	Text of Administrative Regulation on the Classification of Substances hazardous to waters into Water Hazard Classes (Verwaltungsvorschrift wassergefährdende Stoffe – VwVwS).
PNEC:	Predicted No Effect Concentration.
PNOS:	Particulates not Otherwise Specified.
BOD:	Biochemical Oxygen Demand.
COD:	Chemical Oxygen Demand.
BCF:	BioConcentration Factor.
TRGS :	Technische Regeln für Gefahrstoffe -Technical Rules for Hazardous Substances, defined by The Federal Institute for Occupational Safety and Health, Germany.
LCLo:	Lethal Concentration Low (La minima concentrazione letale).
ThOD:	Theoretical Oxygen Demand.

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Anonimo, 2007: HERAG fact sheet - assessment of occupational dermal exposure and dermal absorption for metals and inorganic metal compounds; EBRC Consulting GmbH, Hannover, Germania; agosto 2007.

Anonimo, 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 febbraio 2008.

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) (Ufficio europeo delle sostanze chimiche)

CIRC (Centre International de Recherche sur le Cancer) (Centro internazionale di ricerca sul cancro).

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).

Istituto Superiore di Sanità – Schede tossicologiche di solventi organici utilizzati in cicli tecnologici industriali (1985).

Istituto Superiore di Sanità – Inventario nazionale sostanze chimiche.

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 the legal provisions contained in the REACH Regulation (EC / 1907/2006), as amended and supplemented. The information contained herein is based on information in the MSDS of the raw materials that make up the product and our knowledge of the date indicated. They refer solely to the product indicated and constitutes no guarantee of particular quality.

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

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ATTACHMENT: FLUE DUST – Exposition scenario n. 9.1

1. Industrial production of plumbing materials for the building and construction

Title	Production of mixtures containing Flue Dust: cement, hydraulic binder, a material with low resistance controlled, concrete (pre-mixed or precast), mortar, grout and other works for the building and construction
Field of use	Not applicable
Commercial field	PC 0: Products for the building and construction PC 9b: Fillers, putties, plasters, modelling clay PC 9a: Coatings and paints, thinners, paint removers
Environmental scenario	ERC 2: Formulation of preparations
Worker scenarios	PROC2 : Use in closed, continuous process with occasional controlled exposure PROC3 : Use in closed batch process (synthesis or formulation) PROC5 : Mixing or blending in batch processes for formulation of preparations and articles (multistage and / or significant contact) PROC8b: Transfer of substance or preparation (charging / discharging) from / to vessels / large containers at dedicated facilities PROC9 : Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletization PROC26: Handling of solid inorganic substances at ambient temperature
Method of valuation	The inhalation exposure assessment is based on the dustiness / volatility of the substance, using the exposure estimation tool MEASE. The environmental assessment is based on a qualitative approach, described in the introduction. The benchmark is the pH in water and soil.

2. Operational conditions and risk management measures

2.1 Control of workers

Feature Product

The plumbing materials for the building and construction are inorganic binders. Generally, these products are mixtures of Portland cement clinker and other constituents hydraulic and no. The Flue Dust can be part of common cements, eg. Portland cement. In this main application, the Flue Dust content is below 5%. In other hydraulic binders the Flue Dust content could be above 50%. Generally, their content in a hydraulic mixture is not restricted. The Flue Dust is highly powdery substances.

In all end-uses, the substance will intentionally in contact with water. In part, the substance reacts with water and forms hydration products. At this stage of wet or pasty suspension, the product is

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irritating, due to the pH that is greater than 11. At the end, the final product is hardened (eg. Mortar, concrete) and not irritating, since no free alkaline moisture remains.

Amounts Used

It is considered that the amount / year manipulated for each work shift, can not influence the exhibition scenario. Instead, the combination of the type of operation (industrial rather than professional) and level of containment and / or automation (as reported in the PROC) is the main aspect of potential impact with the powder, which is intrinsic to the process.

Frequency and duration of use / exposure

Process	Duration of exposure
PROC 2,3,5,8b,9,14,26 (all)	No limitation (480 minutes)

Human factors not influenced by risk management.

The volume breathable per shift during all stages of the process contained in the PROCs is assumed to be 10 m³ / shift (8 hours).

Other operational conditions affecting worker exposure

The operating conditions such as temperature and process pressure are not considered relevant to the evaluation of occupational exposure conducted processes.

Technical conditions and measures at process level (source) in order to prevent release

The measures of the risk management process level are generally not operational conditions such as temperature and process pressure are not considered relevant to the evaluation of occupational exposure conducted processes.

Technical conditions and measures in order to control dispersion of the source towards the worker

Process	Localised controls (LC)	Efficiency of LC (According MEASE)	More information
PROC 2, 3	General ventilation	17%	-
PROC 5, 8b, 9, 14, 26	Local general ventilation	78%	-

Organisational measures to prevent / limit releases, dispersion and exposure

Avoid inhalation or ingestion. Hygiene measures at the workplace are required to ensure the safe handling of the substance. These measures include good personal and management practices (eg. Regular cleaning with suitable devices), no eating or smoking in the workplace, wear clothes and shoes labour standards unless otherwise noted below.

Shower and changing clothes at the end of the work shift. Do not wear contaminated clothing at home. Do not remove dust with compressed air.

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Conditions and measures related to personal protection, hygiene and health assessment

Process	Indication for protective equipment for recording (RPE)	Efficiency for RPE – assigned protection factor (APF)	Indication for gloves	Further personal protective equipment (PPE)
PROC 2, 3	No required	No applicable	Waterproof gloves, resistant to abrasion and alkalis, coated inside with cotton. The use of gloves is mandatory, since the Flue Dust is classified as irritant to the skin.	Safety glasses or facial (according to EN 166) are mandatory, since the Flue Dust is classified as highly irritating to eyes. And 'it required the wearing appropriate face protection additional protective clothing and safety shoes.
PROC 5, 8b, 9	Mask FFP2	APF = 10		
PROC 14, 26	Mask FFP1	APF = 4		

Gloves must be worn and protective equipment for the eyes, unless potential contact with skin and eyes may be due to the nature and type of application (eg. Closed processes).

An overview of the APF of different RPE (according to BS EN 529: 2005) can be found in the glossary of MEASE.

Any RPE as defined above should be worn if the following principles are implemented in parallel: The duration of work (compared to the "duration of exposure" above) should reflect the additional psychological stress for the worker due to the breathing resistance and weight the same RPE, increasing the thermal stress considering the head. Also, it should be considered that the worker's ability to use tools and communication is reduced while wearing RPE.

For these reasons, the worker should therefore be healthy (i)(especially in view of medical problems that could lead to the use of RPE), ii) have suitable facial features to reduce points of discontinuity between the face and the mask (in view of scars and

hair). The recommended devices above which rely on a tight seal on the face does not provide the required protection unless they are sticking to the facial features in an appropriate and safe.

The employer and the employee have their own legal responsibility for the maintenance and spread of respiratory protective devices and the management of their correct use in the workplace.

Therefore, they should define and document a suitable policy for the program on the respiratory protective equipment that includes the education and training of workers.

2.2 Environmental exposure controls

Feature product

The plumbing materials for the building and construction are inorganic binders. Generally, these products are mixtures of Portland cement clinker and other constituents hydraulic and no. The Flue Dust can be part of common cements, eg. Portland cement. In this main application, the Flue Dust content is below 5%. In other hydraulic binders the Flue Dust content could be above 50%.

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Generally, their content in a hydraulic mixture is not restricted. The Flue Dust is highly powdery substances. In all end-uses, the substance will intentionally in contact with water. In part, the substance reacts with water and forms hydration products. At this stage of wet or pasty suspension, the product is irritating, due to the pH that is greater than 11. At the end, the final product is hardened (eg. Mortar, concrete) and not irritating, since no free alkaline moisture remains.

Amount used

The daily amount to annual installation (per seat) is not considered to be crucial to their environmental exposure.

Frequency and duration of use

Use / release Intermittent (used <12 times per year for not more than 24 h) or continuous.

Environmental factors not influenced by risk management

Amount of flow of water receiving surface water: 18,000 m³ / day.

Other indicated operating conditions that affect environmental exposure

Amount discharge effluent: 2.000 m³ / g.

Technical conditions and measures in place to reduce or eliminate discharges, air emissions and releases to soil

The measures of risk management relating to the environment are designed to avoid exhaust suspensions containing Flue Dust in urban discharges or in the water surface, in which case the discharge, it is predictable, cause significant pH changes. Regular monitoring of the pH value during introduction into open waters is required. In general discharges should occur in order to minimize pH changes in the water receiving surface (eg. Through neutralization). In general, most aquatic organisms can tolerate pH values in the range 6-9. This is also shown in the description of standard OECD tests with aquatic organisms. The justification for the measurement of risk management can be found in the introduction.

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Organisational measures to prevent / limit releases from site

Training of workers, based on the data sheets for chemical safety.

Conditions and measures related to the treatment plants of urban discharges

The pH of wastewater that reaches the treatment plants of municipal effluents must be regularly monitored and neutralized if necessary. The solid constituents of Flue Dust should be separated from the effluent discharge.

Conditions and measures related to waste

The industrial solid waste of Flue Dust should be reused or disposed of after hardening and / or neutralization.

3. Exposure estimation and reference to its source

3.1 Occupational Exposure

The tool for estimating exposure MEASE was used for the assessment of inhalation exposure. The risk characterization ratio (RCR) is the quotient of the refined exposure estimate and the respective

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DNEL (derived no-effect level) should be below 1 to demonstrate a safe use. For inhalation exposure, the RCR is based on the DNEL of 1 mg / m³ (as inhalable dust) and the respective inhalation exposure estimate derived from MEASE (as inhalable dust). In this way, the RCR includes an additional safety margin since the inhalable fraction below a fraction of the inhalable fraction according to EN 481.

Process	Method used for the assessment of inhalation exposure	Estimation of inhalation exposure (RCR)	Method used for dermal exposure assessment	Dermal exposure estimate (RCR)
PROC 2, 3, 5, 8b, 9, 14, 26	MEASE	< 1 mg/m ³ (0.44 – 0.83)	Since Flue Dust is classified as irritant to the skin and eyes, dermal exposure has to be minimized as far as technically feasible. The DNEL for dermal effects has not been obtained. Thus, dermal exposure is not assessed in that exposure scenario.	

3.2 Environmental emissions

Significant emissions or exposure to air are not expected due to the low vapor pressure of Flue Dust. Emissions or exposure to the terrestrial environment are not expected and therefore not relevant for this exposure scenario.

The environmental exposure assessment is only relevant for the aquatic environment as emissions of Flue Dust in the different phases of the life cycle (production and use) mainly applied to the soil and water discharge. The aquatic effect and risk management covers the effect on organisms / ecosystems due to possible pH changes associated with discharges of hydroxides. The toxicity of the different inorganic ions dissolved is to be considered negligible compared to the potential effect of the pH. E' to consider only the local level, including the treatment plants of urban discharges (STPs) or treatment facilities of industrial waste water (WWTPs) when applicable, both for production and industrial use as any effects that might occur is expected to occur on a local scale. The exposure assessment is approached by assessing the resulting pH impact. The pH of surface water should not exceed the value 9.

Environmental Emissions

The production of Flue Dust can potentially result in an aquatic emission, where locally the pH and the amount of the following ions can be increased in the aquatic environment: K +, Na +, Ca²⁺, Mg²⁺, SO₄²⁻, Cl⁻. When the pH is not neutralized, the effluent of the production sites may impact the pH of the receiving water. Generally, the pH of the effluents is measured frequently and can be easily neutralized with the frequency required by national legislation.

Exposure concentration in treatment plants of waste water (WWTP)

The waste water of the production of Flue Dust is a stream of exhaust inorganic, for which it is not necessary no biological treatment. The exhaust streams from the production sites of Flue Dust will normally not be treated in the installations for the biological treatment of the discharges (WWTPs), but can be used for the control of the pH of acidic exhaust streams treated in the biological plants (WWTPs).

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Exposure concentration in the aquatic pelagic

When Flue Dust is emitted to surface water happens to reports. Some Flue Dust constituents (sulphate and hydrochloric salts, potassium, calcium and magnesium) are highly and moderately soluble and will remain in the water. These salts are naturally present in seawater and groundwater. The amount in groundwater depends on the geological soil formation and varies between different areas. Some constituents react with water and form highly insoluble inorganic hydration products. Due to the hydration reaction, the pH of the water may increase, depending on the buffering capacity of the water. The higher the buffer capacity of the water, the lower the effect on pH. Typically, the buffering capacity that prevents the steps in acidity or alkalinity in natural waters is regulated by the equilibrium between carbon dioxide (CO₂), bicarbonate ion (HCO₃) and carbonate ion (CO₃²⁻).

Exposure concentration in sediments

A risk assessment for the sediment compartment is not considered relevant and therefore not included. When Flue Dust is emitted in this sector it occurs as follows. Some Flue Dust constituents are inert and insoluble (calcite, quartz, clay minerals), they are naturally occurring minerals and will have no impact on the sediment. Some of Flue Dust constituents react with water and form highly insoluble inorganic hydration products. In addition, these products have no bioaccumulation potential. Other constituents are highly soluble and will remain in the water.

Exposure concentration in soil and groundwater

When Flue Dust is spread on the ground and groundwater compartments it happens as follows. Some Flue Dust constituents are inert and insoluble (calcite, quartz, clay minerals), they are naturally occurring minerals and will have no impact on the ground. Some Flue Dust constituents (sulphate and hydrochloric salts, potassium, calcium and magnesium) are highly and moderately soluble. They will remain in groundwater. These salts are naturally present in seawater and groundwater. The amount in groundwater depends on the geological formation of the ground and is therefore very variable. Some constituents react with water and form highly insoluble inorganic hydration products. Due to the hydration reaction, the pH of water can increase, depending on the buffering capacity of the water. The higher the buffer capacity of the water, the lower the effect on pH. Typically, the buffering capacity that prevents the steps in acidity or alkalinity in natural waters is regulated by the equilibrium between carbon dioxide (CO₂), bicarbonate ion (HCO₃) and carbonate ion (CO₃²⁻).

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Exposure concentration in atmospheric compartment

A risk assessment of the atmospheric compartment is not considered relevant and therefore not included. When Flue Dust particles are spread in the air, they sediment or will be removed from the rain in a reasonably short time. In this way, the atmospheric emissions end up in soil and water.

Exposure concentration relevant for the food chain (secondary poisoning)

A risk assessment for secondary poisoning is not required because bioaccumulation in organisms is not relevant to the Flue Dust, which is an inorganic substance.

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4. Guide for l'UF to valuate if the labour activity is included within relationships as defined by SE

Occupational Exposure

An end user works inside the boundaries set by the Exposure Scenario if one of the measures of risk management proposals as described above exists or if the end user can demonstrate that its own operational conditions and risk management measures taken are adequate. This must be done by showing that they limit the inhalation and dermal exposure to a level lower than in the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the end user can make use of an appropriate tool protractor as MEASE (www.ebrc.de/mease.html) to estimate the associated exposure. DNEL inhalation: 1 mg / m³ (as respirable dust)
Important Note: The end user must be aware of the fact that apart from the long-term DNEL given above, a DNEL for acute effects exists with a value of 4 mg / m³. By demonstrating a safe use when comparing exposure estimates with the long-term DNEL is therefore also covered the acute DNEL (according to R.14 Guide, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor 2). When using MEASE for the derivation of exposure estimates it is noted that the exposure duration should only be reduced to half turn as riaschio management measure (leading to an exposure reduction of 40%).

Environmental Exposure

For that assessment, it is recommended a phased approach.

Level 1: Gather information on pH and outflow on the contribution of Flue Dust on the resulting pH. The pH should be above 9 and mainly due to the Flue Dust; then further action is required to demonstrate safe use.

Level 2: Gather information on receiving water pH after the discharge point. The pH of the receiving water should not be higher than 9.

Level 3: Measure the pH of the receiving water after the discharge point. If the pH is below 9, safe use is reasonably demonstrated and the ES ends here. If the pH is higher than 9, the measures must be implemented in the risk management; the outflow must be subjected to neutralization, so as to ensure the safe use of Flue Dust during the production or use phase.