SAFETY DATA SHEET

According to regulation (EU) 2015/830

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF COMPAGNY/UNDERTAKING

1.1. Product identifier

Product name: **WHITE MARKING SHALK POWDER**

1.2. Using of substance/mixture

Powder marking.

1.3. Details of the supplier of the safety data sheet

Company address : DEFI – HOUILLERES DE CRUEJOULS
215 ZI La Gloriette
38160 CHATTE
FRANCE

Phone number: + 33 (0)4 76 64 85 64

Mail: defi.h2c@colorfrance.fr

1.4. Emergency phone number:

ORFILA +0033 (0)1 45 42 59 59

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

. Classification according to (EC) N° 1272/2008 [CLP]:
Product is not classified according to CLP regulation.

. Classification according to 67/548/EEC or 1999/45/EC:
Not classified.

2.2. Labelling elements

. Labelling according to (EC) N° 1272/2008 [CLP]: None
. Hazard identification: None.
. Signal word: None.

. Hazardous components critical to labelling:
. **Hazard Statement**: None.

. Labelling according to 67/548/EEC or 1999/45/EC

2.3. Other hazards

No special hazards.

3. COMPOSITION/INFORMATIONS ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixture

Calcium carbonate CAS Number : 471-34-1, EC N° : 207-439-9.

4. FIRST AIDS MEASURES

4.1. Description of first aids measures

Following inhalation:
Move patient from contaminated area to fresh air. If symptoms persist, call a physician.
Following skin contact:
Remove contaminated clothing. Wash off with plenty of water. Get medical attention if symptoms appear.
Following eye contact:
Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Following ingestion:
Immediately give large quantities of water to drink. If symptoms persist, call a physician.
Self-protection of the first aider:
No special precautions required.

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

No specific symptoms or effects have been reported.

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

Not applicable.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:
The product itself does not burn. No special protective measures against fire required.

Unsuitable extinguishing media:
None

5.2 Special hazards arising from the substance or mixture

Asphyxiating gases/ vapors/ fumes of carbon dioxide at temperature> 600 °C.

5.3. Advice for firefighters

No special precaution required.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedure

Use personal protective equipment:

Respiratory protection: In case of dust, dust mask type P1 or P3 (European Norm 143)
Hand protection: Wear protective gloves (PVC, Neoprene, Natural Rubber)
Eye protection: Chemical resistant goggles must be worn.
Skin and body protection: Protective suit
Avoid dust formation. Do not breathe dust.

6.2. Environmental precautions

No special environmental measures are necessary.

6.3 Methods and material for containment and cleaning up

- Pick up and arrange disposal without creating dust.
- Dam and absorb spillage with sand, sawdust or other absorbent material
- Keep in properly labelled containers.
- Keep container closed.
- Treat recovered material as described in the section "Disposal considerations".
- Flush with plenty of water.
- Keep away from acids.

6.4. Refer to other sections

Refer to section 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Protective measures:
Do not breathe dust.
Avoid dust formation.
Avoid contact with skin, eyes and clothing.
Use only in well-ventilated areas.
Keep away from incompatible products.

Advice on protection against fire and explosion:
The product is not flammable. No special protective measures against fire required.

Advice on general occupational hygiene:
Handle in accordance with good industrial hygiene and safety practice.
Do not eat, drink and smoke in work areas
Wash hands after use.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Condition for safe storage, including any incompatibilities

- Keep in a dry place.
- Keep in covered storage tank.
- Keep container closed.

7.3. Specific end use(s)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:
Air limit values:
Respect regulatory provisions for dust (inhalable and respirable). Please refer to the Annex 1 of this SDS for the appropriate national exposure limit values.

Biological limit values:
None.

DNELs:

	Workers			
Route exposure	**Acute effect local**	**Acute effects systemic**	**Chronic effects local**	**Chronic effects systemic**
Oral	Not required			
Inhalation	No hazard identified	No hazard identified	No hazard identified	10mg/m^3
Dermal	No hazard identified			

	Consumers			
Route exposure	**Acute effect local**	**Acute effects systemic**	**Chronic effects local**	**Chronic effects systemic**
Oral	No hazard identified	6.1mg/kg bw/day	No hazard identified	6.1mg/kg bw/day
Inhalation	No hazard identified	No hazard identified	No hazard identified	10mg/m^3
Dermal	No hazard identified			

PNECs

Environment protection target	**PNEC**	**Remarks**
Water	No hazard identified	Not acutely toxic to fish, invertebrates, algae and microorganisms at the concentrations tested in the studies. Acute toxicity to fish, invertebrates, algae and microorganisms is greater than the highest concentration tested and therefore exceeds the maximum solubility of calcium carbonate in water.
Sediments	No hazard identified	Calcium carbonate and calcium and carbonate ions are ubiquitous in the environment and are found naturally in soil, water and sediment. Sediments naturally contain a high concentration of calcium and carbonate due to the physical and/or chemical weathering of calcium-rich rocks that takes place in the environment. Calcium will be assimilated by species residing in the sediment and is necessary to maintain a good chemical balance in soils, water and sediment. The carbonate will become part of the carbon cycle and is then cycled throughout the biosphere. Due to the natural occurrence of calcium carbonate in the environment, it is expected that calcium carbonate would not be toxic to sediment organisms.
Micro organisms in sewage treatment	10mg/L	NOEC ; AF=10
Soil (agricultural)	No hazard	Not acutely toxic to earthworms, plants (soya, tomato

	identified	and oat) and soil microorganisms at the concentrations tested in the studies. Acute toxicity to earthworms, plants and soil microorganisms is greater than highest concentrations tested and therefore exceeds the maximum solubility of calcium carbonate in water.
Air	No hazard identified	

8.2.1. Exposure control

Appropriate engineering controls:

Minimize airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organizational measures e.g. by isolating personnel from dusty areas. To remove and to wash soiled clothing.

8.2.2 Personal protective equipment

Respiratory protection: In case of dust, dust mask type P1 or P3 (European Norm 143)
Hand protection: solvent-resistant gloves (butyl-rubber) tested to EN374 ; Thickness of the glove material : 0.7mm. Breakthrough time (maximum wear duration 480min).
Eye protection: Chemical resistant goggles must be worn.
Skin and body protection: Protective suit

8.2.3 Environmental exposure controls

Dispose of rinse water in accordance with local and national regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on physical and chimical properties

State: Powder
Color: White
Odor: Odorless
pH: (20°c) : 9 (in suspension at 10% water)
Melting point/range: decompose at temperature than 450°c without melting.
Flammability (auto-ignition temperature): Not flammable.
Relative density: 2.7-2.95
Water solubility (20°c in g/L) : 0.0166g/L at 20°c
Explosive properties: No explosive properties predicted from the structure.
Oxidising properties: No oxidising properties predicted from the structure.

9.2. Other information

None.

10. STABILITY ET REACTIVITY

10.1. Réactivity

Stable under recommended storage conditions.

10.2. Chimical stability

Contact with acids or strong heating liberates carbon dioxide, sometimes violently.

10.3. Possibility of hazardous reactions

Contact with acids liberates carbon dioxide, sometimes violently.

10.4. Conditions to avoid

Will produce carbon dioxide on strong heating or on contact with acids.

10.5. Incompatible materials

Acids.

10.6 Hazardous decomposition products

Reacts with acids to form dioxide which displaces the oxygen in the air in closes spaces.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicologic effects

Relevant hazard class	Effect dose	Species	Method	remark
Acute oral toxicity	LD 50 >2000 mg/kg bw.	Rat	OECD 420	
Acute dermal toxicity	LD 50>2000 mg/kg bw.	Rat	OECD 402	
Acute inhalative toxicity	LC 50(4h) >3 mg/L air bw.	Rat	OECD 403	
Skin corrosion/irritation	Not applicable	Rabbit	OECD 404	Not irritating
Serious eye damage/irritation	Not applicable	Rabbit	OECD 405	Not irritating
Respiratory or skin sensitisazion	Not applicable	Mouse	OECD 429	Not a skin sensitizer
Germ cell mutagenicity	Not applicable	*In vitro* tests	OECD 471 OECD 476 OECD 473	Not mutagenic
Carcinogenicity	Not applicable			No indication of carcinogenicity
Reproductive toxicity	NOEL (parental) 1000mg/kg bw/day.	Rat	OECD 422	No signs of reproductive or devlopmental toxicity observed
STOT single exposure	Not applicable			No organ toxicity

				observed in acute tests
STOT repeat exposure				No organ toxicity observed in repeated dose toxicity tests
Aspiration Hazard				No aspiration hazard envisaged

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity	Effect dose	Exposure time	Species	Method	Evaluation	Remark
Acute fish toxicity	LC50> 100% v/v saturated solution of test material	96h	*Oncrhychus mykiss*	OECD 203	Exceeds maximum solubility substance	Limit test
Acute daphnia toxicity	LC50> 100% v/v saturated solution of test material	48h	*Daphnia magma*	OECD 202	Exceeds maximum solubility substance	Limit test
Acute algae toxicity	EC50>14mg/L NOEC 14 mg/L	72h	*Desmodesmus subspicatus*	OECD 201	Exceeds maximum solubility substance	Limit test
Toxicity to STP microorganisms	EC50>1000mg/L NOEC 1000 mg/L	3h	Activated sewage sludge	OECD 209	Not toxic	
Acute earthworm toxicity	LC50>1000mg/kg dry soil NOEC 1000mg/kg dry soil	14d	*Eisenia fetida*	OECD 207	Not acutely toxic	Limit test
Toxicity to plants	EC50>1000mg/L dry soil NOEC 1000 mg/L dry soil	21d	*Glicine max* (soybean) *Lycopersicon esculentum* (tomato) *Avena sativa* (oats)	OECD 208	Not acutely toxic	Results based on seedling emergence & growth
Toxicity to soil micro organisms	EC50>1000mg/kg dry soil NOEC 1000 mg/L dry soil	28d	Soil microorganisms	OECD 216	Not toxic	Limit test

12.2. Persistence and biodégradability

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Abiotic Degradation:
The substance is inorganic and therefore will not undergo abiotic degradation.

Biodegradation:
The substance is inorganic and therefore will not undergo biodegradation.

12.3. Bioaccumulative potentiel

Bioaccumulation is not expected.

12.4 Mobility in soil

Not applicable.

12.5. Other adverse effects

This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Further information

According to the criteria of the European classification and labelling system, substance does not require classification as hazardous for environment.

13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Waste codes / waste designations according to EWC:
Waste codes should be assigned by the user based on the application for which the substance was used.
- Wastes should be handled in accordance with local and national regulations.
- Wastes can be landfilled when in compliance with local regulations.
- Dispose of waste in accordance with the European Directives.

Packaging treatment:
- Empty containers.
- Dispose of as unused product.
- The empty and clean containers are to be reused in conformity with regulations

14. TRANSPORT INFORMATIONS

The substance is not classified as dangerous in terms of transport regulation.

15. REGULATORY INFORMATIONS

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

Labelling (Regulation (EC) No 1272/2008 and Directive 67/548/EEC):
The substance is not labelled according to EU legislation.

National legislation Germany:

German storage class: 13 noncombustible solids
Waste contamination class: not water endangering.

15.2 Evaluation of chemical security

Calcium carbonate (natural) is exempted from REACH registration and thus no formal chemical safety assessment has been carried out for this substance by the supplier. However, calcium carbonate (precipitated) is regarded as the same substance as calcium carbonate natural) and calcium carbonate (precipitated) has been registered. Data from registration dossiers are disseminated on ECHA website (www.echa.europe.eu)

16. OTHER INFORMATION

Abbreviation and acronyms:

AF	Assessment factor
BCF	Bioconcentration factor
DMEL	Derived maximum effect level
DNEL	Derived no effect level
EC50	Median effect concentration
LC50	Median lethal concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
OEM	Operator exposure level
PBT	Persistent bioaccumulative toxic
PEC	Predicted effect level
PNEC	Predicted no effect level
SDS	Safety data sheet
STOT	Specific target organ toxicity
STP	Sewage treatement plant
vPvB	Very persistent very bioaccumulative

Objects revisions: Written in accordance with Regulation (EC) No 1907/2006, Article 31.

The information supplied in this Safety data sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or any other process.

SAFETY DATA SHEET

According to regulation (EU) 2015/830

ANNEX 1

Occupational exposure limits in mg/m^3 8 hours TWA dust		
Member state	Non specified (inert dust) INHALABLE	Non specified (inert dust) RESPIRABLE
Austria	15	6
Belgium	10	3
Bulgaria		4
Denmark	10	5
Finland	10	/
France	10	5
Germany	10	3
Greece	10	5
Ireland	10	4
Italy	10	3
Lithuania		10
Luxembourg	10	6
Netherlands	10	5
Norway	10	5
Portugal	10	5
Romania		10
Slovakia	10	
Spain	10	3
Sweden		5
Switzerland		6
UK	10	4