



SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF COMPAGNY/UNDERTAKING

1.1. Product identifier

Product name : BLACK MARKING CHALK POWDER

1.2. Using of substance/mixture

Marking powder.

1.3. Details of the supplier of the safety data sheet

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

Telephon number : + 0033 (0)4 76 64 85 64

Mail: defi.h2c@orange.fr

1.4. Numéro de téléphone d'appel d'urgence

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 reglementation.

. **Classification according to 67/548/EEC ou 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 ou 1999/45/EC**

2.3. Other hazards

No special hazards.

3. COMPOSITION/INFORMATIONS ON INGREDIENTS

3.1. Substances

Date of establishment: 2015/09/29

Révision date : 2015/09/29

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Not applicable.

3.2. Mixture

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

Natural Barium sulphate (BaSO₄) C.A.S number: 7727.43.7 E. I.N.E.CS. Number: 231.784.4

Crystalline silica (SiO₂) C.A.S number: 14808.60.7 E. I.N.E.CS. Number: 238-878-4

Lead sulphide or sulphate (PbS/SO₄) C.A.S number: 7446.14.2

PROLONGED INHALATION OF DUST CONTAINING CELLULAR CRYSTALLINE SILICA CAN INDUCE PULMONARY DISORDERS AND, IN THE LONG-TERM, PNEUMOCONIOSIS.

4. FIRST AID 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

This product is not flammable. Use extinguishing media appropriate to the surrounding fire conditions.

5.2 Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Protection against fire : Do not enter area without proper protective equipment, including respiratory protection.

Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.



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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

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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. Précautions 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 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

Storage : Keep only in the original container in a cool, dry well-ventilated place. Keep container closed when closed when not use. Storage temperature : 0-50°C.

Storage-away from : strong acids. Strong bases



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7.3. Specific end use(s)

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

- Calcium carbonate

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 :

Route exposure	Workers			
	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			

Route exposure	Consumers			
	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

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		<p>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.</p> <p>Due to the natural occurrence of calcium carbonate in the environment, it is expected that calcium carbonate would not be toxic to sediment organisms.</p>
Microorganisms in sewage treatment	10mg/L	NOEC ; AF=10
Soil (agricultural)	No hazard identified	Not acutely toxic to earthworms, plants (soya, tomato 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	

- Natural Barium sulphate:

This product contains free silica and, accordingly, specific measures have to be taken to prevent dust deposits by installing sealed systems and by working under a suction system.

The maximum exposure limit (French regulations) to airborne dust in the case of powders containing more than 1% silica has been set at **0.1mg/m³**

8.2. Exposure controls

8.2.1. Exposure control

Appropriate engineering controls :

Minimise 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 organisational measures e.g. by isolating personnel from dusty areas. Remove and 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: Wear protective gloves (PVC, Neoprene, Natural Rubber)

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.



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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on physical and chemical properties

State : Powder

Color : Black

Odour : Odourless

Melting point/range : decompose at temperature than 450°C without melting.

Flammability (auto-ignition temperature) : Not flammable.

Water solubility(20°C in g/L) : insoluble.

Explosive properties : No explosive properties predicted from the structure.

9.2. Other information

None.

10. STABILITY ET REACTIVITY

10.1. Réactivité

Stable under recommended storage conditions.

10.2. Chemical 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. Strong oxidising agents.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong acids. Strong bases.

10.6 Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicologic effects

- Calcium carbonate

Relevant hazard class	Effect dose	Species	Method	remark
Acute oral toxicity	LD 50 >2000 mg/kg bw.	Rat	OECD 420	

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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 sensitization	Not applicable	Mouse	OECD 429	Not a skin sensitizer
Germ cell mutagenicity	Not applicable	<i>In vitro</i> 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 developmental 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

- Iron oxide black

Acute toxicity : No cumulative effects reported.

Skin corrosion/Irritation : May cause irritation to skin, eyes and mucous membranes.

Respiratory or skin sensitisation : May cause sensibilisation by inhalation and skin contact.

Germ cell mutagenicity : No mutagenic effects reported.

Carcinogenicity : No carcinogenic effects reported.

Reproductive toxicity : No tetratogenic effects reported.

- Natural Barium sulphate:

Danger of irritation when respirators are not worn.
In the long-term, silica can cause pneumoconiosis.

11.1.4 Toxicologic information

May cause irritation to respiratory system. May cause irritation to eyes.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

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Aquatic toxicity	Effect dose	Exposure time	Species	Method	Evaluation	Remark
Acute fish toxicity	LC50> 100% v/v saturated solution of test material	96h	<i>Oncorhynchus mykiss</i>	OECD 203	Exceeds maximum solubility substance	Limit test
Acute daphnia toxicity	LC50> 100% v/v saturated solution of test material	48h	<i>Daphnia magna</i>	OECD 202	Exceeds maximum solubility substance	Limit test
Acute algae toxicity	EC50>14mg/L NOEC 14 mg/L	72h	<i>Desmodesmus subspicatus</i>	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	<i>Eisenia fetida</i>	OECD 207	Not acutely toxic	Limit test
Toxicity to plants	EC50>1000mg/L dry soil NOEC 1000 mg/L dry soil	21d	<i>Glicine max</i> (soybean) <i>Lycopersicon esculentum</i> (tomato) <i>Avena sativa</i> (oats)	OECD 208	Not acutely toxic	Results based on seedling emergence & growth
Toxicity to soil microorganisms	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

Not applicable.

12.3. Bioaccumulative potentiel

Not applicable.

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.



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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.

14. TRANSPORT INFORMATION

14.1. Land transport (ADR-RID)

General information : not regulated.

14.2. Sea transport (IMDG)

General information : not regulated.

14.3. Air transport (IACO-IATA)

General information : not regulated.

15. REGULATORY INFORMATION

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.

15.2 Evaluation of chemical security

Not studies have been found.

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



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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 treatment 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.



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ANNEX 1

Occupational exposure limits in mg/m³ 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