



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 : YELLOW 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



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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

Yellow iron oxyde : CAS number : 51274-00-1

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 : Exercice 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 | |

- Iron oxyde yellow

Iron oxyde yellow 8920 (rouge respirable) : WEL 8hr limit mg/m³ : 4

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 : Yellow

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 | |
| Acute dermal toxicity | LD 50 >2000 mg/kg bw. | Rat | OECD 402 | |

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|-----------------------------------|--------------------------------------|-----------------------|----------------------------------|---|
| 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 Yellow

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 tetragenic effects reported.

11.1.4 Toxicologic information

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity

- Calcium carbonate

| 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 |
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|---------------------------------|--|-----|---|----------|--------------------------------------|--|
| 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.

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.



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- 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 INFORMATIONS

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 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.

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 |
| 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 |



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| 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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- Calcium carbonate

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 |