SAFETY DATA SHEET

(According to regulation (EU) 2015/830)

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

1.1 Product name: Marking chalk powder: blue, red, yellow and black

1.2 Using of substance/mixture: Marking chalk powder

1.3 Details of the supplier/manufacturer of the safety data sheet:

Supplier:	**Kennedy Tools** Wigston Leiicester, England, LE18 2FS	**Manufacturer:**	**ZENTEN BERNHARD GROTEN, S.L.** Pol. Soroxarta, Burniola 20C 20305 IRUN SPAIN +34 943 61 21 02
Tel:	+44 (0)116 288 8000	**Email:**	webmaster@zentenbg.com
Fax:	+44 (0)116 288 8222	**Emergency Tel:**	**+33 (0) 140 025 045**

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to (EC) Nº 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) Nº 1272/2008 [CLP]: None.
Hazard identification: None.
Signal word: None.

Hazardous components critical to labelling.
Hazard statement: None.

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

2.3 Other hazards
No special hazards.

3. COMPOSITION/INFORMATIONS ON INGREDIENT

3.1 Substances

Not applicable.

3.2 Mixture

Blue:
Calcium carbonate CAS Number 471-34-1, EC Nº 207-439-9 > 50%
Sodium Aluminium Sulphosilicate Pigment blue 29, CI 77007, Alternative CAS Nº: 57455-37-5
CAS nº: 101357-30-5, EC Nº: 309-928-3; REACH ref: 01-2119488928-13 < 50%

Red:
Calcium carbonate CAS Number 471-34-1, EC Nº 207-439-9 > 50%
Red iron oxide CAS Nº: 1309-37-1; EINECS Nº: 215-168-2 REACH ref: 01-2119457614-35-0043< 50%

Yellow:
Calcium carbonate CAS Number 471-34-1, EC Nº 207-439-9 > 50%
Yellow iron oxide CAS Nº: 51274-00-1 REACH ref: 01-2119457554-33-0014< 50%

Black:
Calcium carbonate CAS Number 471-34-1, EC Nº 207-439-9 > 50%
Synthetic iron oxide Fe_3O_4 CAS Nº: 1317-61-9; EINECS Nº: 215-277-5; REACH ref: 01-2119457646-28-0014< 50%

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

Blue:
Suitable extinguishing media: Foam. Water spray. Dry powder. Carbon dioxide. Sand.
Unsuitable extinguishing media: Do not use heavy water stream.
Surrounding fire: Use water spray or fog for cooling exposed containers.

Red, yellow and black:
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/ vapors/ 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.

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".
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 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 contamined 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 not use. Storage temperature: 0-50°c.

Storage-away from:
Strong acids. Strong bases

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:

	Workers			
Route exposure	**Acute local effect**	**Acute systemic effects**	**Chronic local effects**	**Chronic systemic effects**
Oral	Not required			
Inhalation	No Hazard identified	No Hazard identified	No Hazard identified	10 mg/ m^3
Dermal	No Hazard identified			
	Consumers			
Route exposure	**Acute local effect**	**Acute systemic effects**	**Chronic local effects**	**Chronic systemic effects**
Oral	No Hazard identified	6,1 mg/kg bw/day	No Hazard identified	6,1 mg/kg bw/day
Inhalation	No Hazard identified	No Hazard identified	No Hazard identified	10 mg/ 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	10 mg/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	

Blue:
Sodium Aluminium Sulphosilicate:

Occupational exposure limits:	TLV: 15 mg/ m^3 (total dust). Non-occupational exposure standards have been developed for this material.

Red:
Iron oxide red

Iron oxide red (iron oxide, fume (as Fe)):	WEL 8hr limit mg/ m^3: 5. WEL 15 min limit mg/ m^3: 10.
Iron oxide red (rouge respirable):	WEL 8hr limit mg/ m^3: 4.
Iron oxide red (rouge total inhalable 8130):	WEL 8hr limit mg/ m^3: 10.

Yellow:
Iron oxide yellow

Iron oxide yellow 8920 (rouge respirable):	WEL 8hr limit mg/ m^3: 4.

Black:
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 máximum exposure limit (French regulations) to airborne dust in the case of powders containing more than 1% silica has been set at 0.1 mg/ m^3.

8.2 Exposure controls

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: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on physical and chemical properties

State: powder.
Color: blue, red, yellow and black.
Odour: odorless.
Melting point/range: decompose at temperature bigger 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.

Blue:
pH: (20ºC): 7-9

9.2 Other information

None.

10. STABILITY AND REACTIVITY

10.1 Reactivity

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.

Red, yellow and black: besides, strong oxidizing agents.

10.4 Conditions to avoid

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

Blue:
Besides:
At temperatures above 400°C in the presence of air, Sulphur dioxide (SO2) gas can be released.

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.

Blue:
Besides:

At temperatures above 400°C in the presence of air, Sulphur dioxide (SO_2) gas can be released. Hydrogen sulphide may be released in contact with acids. (not resistant grades).

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	
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 sensitivity	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) 1000 mg/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

Blue:
- Sodium Aluminium Sulphosilicate

Ingestion: based on available data, the classification criteria are not met.

LD50 (oral, rat) > 10000mg/kg.

Irritation: Non-irritating.
Sensitization: No sensitizing potential.
Mutagenicity: No experimental or epidemiological evidence exists.
Carcinogenicity: No experimental or epidemiological evidence exists.
Reproductive toxicity: No experimental or epidemiological evidence exists.
Specific target organ toxicity (STOT) single exposure: No experimental or epidemiological evidence exists.
Specific target organ toxicity (STOT) repeated exposure: No experimental or epidemiological evidence exists.
Aspiration hazard: Not applicable.

Red, yellow, black:
- Iron oxide red, iron oxide yellow and iron oxide black

Acute toxicity; no accumulative effects reported.
Skin corrosión/irritation: may cause irritation to skin, eyes and mucous membranes.
Respiratory or skin sensitization: may cause sensitization by inhalation and skin contact.
Germ cell mutagenicity: No mutagenic effects reported.
Carcinogenicity: No carcinogenic effects reported.
Reproductive toxicity: no tetratogenic effects reported.

Black:
Besides
-Natural barium sulphate

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

Red, yellow and black:

11.1.1 Toxicological information

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity

-Calcium carbonate

Acuatic toxicity	Effect dose	Exposure time	Species	Method	Evaluation	Remark
Acute fish toxicity	LC 50 > 100% v/v satured solution of test material	96 h	*Oncorhynchus mykiss*	OECD 203	Exceeds maximum solubility susbtance	Limit test
Acute daphnia toxicity	LC 50 > 100% v/v satured solution of test material	48 h	*Daphnia magna*	OECD 202	Exceeds maximum solubility substance	Limit test
Acute algae toxicity	EC 50 > 14mg/L NOEC 14 mg/L	72 h	*Desmodesmus subspicatus*	OECD 201	Exceeds maximum solubility substance	Limit test
Toxicity to STP microorganisms	EC 50 > 1000 mg/L NOEC 1000 mg/L	3 h	*Activated sewage sludge*	OECD 209	Not toxic	
Acute earthworm toxicity	LC 50 > 1000 mg/kg dry soil NOEC 1000 mg/kg dry soil	14 d	*Eisenia fetida*	OECD 207	Not acutely toxic	Limit test
Toxicity to plants	EC 50 > 1000 mg/L dry soil NOEC 1000 mg/L dry soil	21 d	*Glicine max (soybean) Lycopersicon esculentum (tomato) Avena sativa (oats)*	OECD 208	Not acutely toxic	Results based on seedling emergence & growth
Toxicity to soil microorganisms	EC 50 > 1000 mg/kg dry soil NOEC 1000 mg/L dry soil	28 d	Soil microorganisms	OECD 216	Not toxic	Limit test

Blue:

- Sodium Aluminium Sulphosilicate

Acute toxicity: LC50 96h Fish: >32000mg/L

12.2 Persistence and biodegradability

Not applicable.

12.3 Bioaccumulative potential

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.
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

Blue:
It has been carried out.

Red, yellow and black:
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 no 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
BW	Body weight

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 processes.
The application of this SDS does not exempt the user from the proper performance of the current regulation. The user is responsable for the missused of this information and its use conditions.
Information source: our supplier's SDS.

- **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