

MATERIAL SAFETY DATA SHEET

Product**CENTIUM 36 CS**

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Product code : 1693-6270.

Version : 1

Date : 21/12/2004

01 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

PRODUCT NAME : CENTIUM 36 CS
Name : FMC CHEMICAL
Address : Boulevard de la Plaine, 9/3
1050 BRUXELLES
BELGIQUE
Telephone number : 32(0)2 6459584
Telefax number : 32(0)2 6459655
EMERGENCY TELEPHONE
NUMBER : 00 32 14 58 45 45
Recommended use : Herbicide

02 COMPOSITION / INFORMATION ON INGREDIENTS

PREPARATION :
Chemical nature : Herbicide based on Clomazone
Hazardous constituents : Clomazone (CAS : 81777-89-1, EC auto-class. : Xn; R20/22 - R52) : 34.83 %
Sodium nitrate (CAS : 7631-99-4, Einecs : 231-554-3, EC classification : R8 - Xn; R22 - Xi; R36/37/38) : 4.5 %
Calcium chloride (CAS : 10043-52-4, Einecs : 233-140-8, EC classification : Xi; R36) : 4.5 %

03 HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARDS :
Adverse human health effects : No specific risk when handled in accordance with good occupational hygiene and safety practice, to our knowledge
Environmental effects : Presents no particular risk to the environment, provided the disposal requirements (see section 13) and national or local regulations are complied with.
Physical and chemical hazards :
- Fire or explosion : Slightly combustible. May support combustion at elevated temperatures
Burning and thermal decomposition may form toxic by-products
Classification of the product : According to EC regulations, this product is not classified as a "hazardous preparation"

04 FIRST AID MEASURES

Inhalation : Move the affected person to the fresh air
In case of cough or mild shortness of breath :
Call a doctor
Skin contact : Remove all contaminated clothing and footwear
Wash with soap and water
Eye contact : Rinse with plenty of water immediately
If irritation persists, consult an eye specialist
Ingestion : Rinse mouth out with water
If the person is fully conscious, make him/her drink water. Never give an

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unconscious person anything to drink
Consult a doctor

05 FIRE-FIGHTING MEASURES

Suitable extinguishing media :
Foam
Carbon dioxide (CO₂)
Powders

Specific hazards :
Toxic fumes are released

Specific fire fighting methods :
Isolate fire area. Evacuate downwind
Do not dispose of fire-fighting water in the environment
Do not attempt to fight the fire without suitable protective equipment
Do not breathe fumes

Protection of fire-fighters :
Self-contained breathing apparatus
Complete protective clothing

06 ACCIDENTAL RELEASE MEASURES

Personal precautions :
Avoid contact with skin and eyes
Do not breathe vapours.
Do not attempt to intervene without a suitable protective equipment

Environmental precautions :
Do not allow product to spread into the environment
Contain the spilled material by bunding

Methods for cleaning up :
- Neutralization :
Absorb spillage with:
- inert absorbent material.
- earth or sand
Neutralize non-recoverable product with :
- a 20 % solution of potassium hydroxide in methanol
Cover the treated area with plastic and let stand for 24 h. Remove the covering and place in a drum for a later disposal.

- Cleaning/decontamination :
Wash with plenty of water and detergent.

- Disposal :
Dispose of contaminated materials in accordance with current regulations

07 HANDLING AND STORAGE**HANDLING**

Technical measures :
Vapour extraction at source

Precautions :
Avoid any direct contact with the product
Work in a well-ventilated area

STORAGE

Storage conditions :
- Recommended :
Store :
- in a cool, dry area
- in a well-ventilated area
- protected from frost
- away from food and drinks and animal foodstuffs
- out of reach of children.

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Packaging materials :

- Recommended : Original packaging

08 EXPOSURE CONTROLS / PERSONAL PROTECTIONEngineering measures :
Ensure good ventilation of the work station
Extraction to remove vapours at their source.

Personal protective equipment :

- Respiratory protection : If the ventilation is suitable, it is not essential to wear respiratory equipment
- Hand protection : Neoprene protective gloves.
Nitrile protective gloves.
- Eye protection : Safety spectacles
- Skin and body protection : Impermeable clothing
Hygiene measures : Always wash your hands after handling the product
Do not eat, drink or smoke during use
Separate working clothes from town clothes. Launder separately**09 PHYSICAL AND CHEMICAL PROPERTIES**Physical state : Liquid
Colour : brown
Odour : slight aromatic
pH : 8.87 (Aqueous dispersion - 1 %)
Flammability characteristics :
- Flash point : > 98 °C
- Auto-ignition temperature : 392 °C
Specific gravity : 1.16 g/cm³ at 20 °C
Solubility :
- in water : Dispersible.
Dynamic viscosity : 143 - 412 mPa.s at 20 °C
Surface tension : 68.9 mN/m at 20.5 °C**10 STABILITY AND REACTIVITY**Stability : Stable at ambient temperature and under normal conditions of use
Hazardous reactions :
- Hazardous decomposition products :
On thermal decomposition (pyrolysis), releases :
Carbon oxides (CO, CO₂)
Nitrogen oxides
Hydrogen chloride, Chlorine**11 TOXICOLOGICAL INFORMATION**Acute toxicity : LC 50 inhalation/4h/rat: >5.21 mg/l
(maximum attainable concentration - zero mortality)

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Local effects : LD 50 skin (Rat) : > 5000 mg/kg
LD 50 oral (Rat) : > 5000 mg/kg
Not irritating to rabbit skin
Not irritating to rabbit eyes

Sensitization : Not sensitizing

12 ECOLOGICAL INFORMATION**DEGRADABILITY:**

Persistence: Clomazone :
Half-life (in water) : 1.5 - 7 d
Half-life (in soil) : 24 - 84 d

BIOACCUMULATION:

Octanol/water partition coefficient : Clomazone :
2.5

Bioconcentration factor. Clomazone :
BCF = 27 - 40

ECOTOXICITY :

Effects on the aquatic environment : Product as is :
LC50 (Rainbow trout / 96 h) : 592.7 mg/l
EC 50 (Daphnia)/ 48 h : 491.3 mg/l
EC 50 (Algae)/ 96 h : 160.85 mg/l

Effects on terrestrial animals: Clomazone :
LD50(birds) : > 2510 mg/kg

13 DISPOSAL CONSIDERATIONS**WASTE FROM PRODUCT :**

Destruction/Disposal : Dispose of in accordance with relevant local regulations
Incinerate at a licensed installation

CONTAMINATED PACKAGING :

Decontamination/cleaning : Clean with water.

Destruction/disposal : Reuse or recycle following washing

NOTE : The user's attention is drawn to the possible existence of specific european,
national or local regulations regarding disposal

14 TRANSPORT INFORMATION**INTERNATIONAL REGULATIONS :**

RID/ADR/IMDG/IATA : Not restricted

15 REGULATORY INFORMATION**LABELLING :**

- Identification of the hazardous
product:

Contains :
Active ingredient(s) :
Clomazone : 34.83 % weight (360 g/l - 20°C)

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- R phrases :

No R phrase

- S phrases :

S 2 : Keep out of the reach of children

S 13 : Keep away from food, drink and animal feedingstuffs

S 20/21: When using do not eat, drink or smoke.

- Additional phrases :

To avoid risks to man and the environment, comply with the instructions for use

Safety data sheet available for professional user on request

NOTE :

Refer to all applicable international, national and local regulations or provisions.

The user's attention is drawn to the possible existence of additional provisions which complete these regulations.

The above information refers to the main regulations specifically applicable to the product described in the MSDS.

The cited basic community texts are being updated and transcribed in national law.

16 OTHER INFORMATION

Registered trademarks :

Centium and FMC are registered trademarks of FMC Corporation, USA.

This sheet completes the technical sheets but it does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith.

The attention of the user is drawn to the risks possibly incurred by using the product for any other purpose than that for which it was intended.

This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product.

The mandatory regulations mentioned are only intended to help the user to fulfil his obligations regarding the use of hazardous products.

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