

METRIC**SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1. Product identifier : METRIC
- 1.2. Relevant identified uses of the substance or mixture and uses advised against : Herbicide
- 1.3. Details of the supplier of the safety data sheet
- Name : FMC CHEMICAL Sprl
- Address : Boulevard de la Plaine, 9/3
1050 BRUXELLES
BELGIQUE
- Telephone number : 00 32 2 6459584
- Telefax number : 00 32 2 6459655
- E-mail : msdsinfo@fmc.com
- 1.4. Emergency telephone number : 00 32 14 58 45 45

SECTION 2 HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture****MOST IMPORTANT HAZARDS**

- Adverse human health effects** : To our knowledge, no specific risk when handled in accordance with good occupational hygiene and safety practice.
- Environmental effects** : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- Physical and chemical hazards**
- Fire or explosion : Slightly combustible. May support combustion at elevated temperatures
Not classified as flammable by EC criteria
- Classification of the product** : According to European regulations (67/548/EEC & 1999/45/EC), this product is classified as :
N; R50/53

2.2. Label elements**- Symbols and indications of danger**

- R phrases : - DANGEROUS FOR THE ENVIRONMENT (N)
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S phrases : S2 : Keep out of the reach of children.
S13 : Keep away from food, drink and animal feedingstuffs.
S20/21 : When using, do not eat, drink or smoke.
S36/37 : Wear suitable protective clothing and gloves.
- Additional phrases : The following must appear on the label :
To avoid risks to man and the environment, comply with the instructions for use
- 2.3. Other hazards : None, to our knowledge



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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

MIXTURE

Chemical nature : Herbicide based on metribuzine and clomazone

Hazardous constituents

Substance name	Contents	CAS No	EC No	Index No	No registration	Classification
Metribuzin (ISO)	< 25 %	21087-64-9	244-209-7	606-034-00-8	----	Xn; R22 N; R50-53 ----- Acute Tox. 4 (oral) H302 Aquatic Acute 1 H400 (M fact. = 10) Aquatic Chronic 1 H410 (M fact. = 10)
Sodium nitrate	< 12 %	7631-99-4	231-554-3	-----	----	O; R8 Xn; R22 Xi; R36/37/38 ----- Ox. Sol. 1 H271 Acute Tox. 4 (oral) H302 Eye irrit. 2 H319 Skin Irrit. 2 H315 STOT SE 3 H335
Calcium chloride	< 10 %	10043-52-4	233-140-8	017-013-00-2	----	Xi; R36 ----- Eye irrit 2 H319
Clomazone	< 10 %	81777-89-1	-----	-----	----	Xn; R20/22 N; R50-53 ----- Acute Tox. 4 (inhal) H332 Acute Tox. 4 (oral) H302 Aquatic Acute 1 H400 Aquatic Chronic 1 H410

Further information : Full text of R and H phrases : see section 16

SECTION 4 FIRST AID MEASURES

4.1. Description of first aid measures

- Inhalation** : Move the affected person to the fresh air
In the event of coughing and slight breathlessness:
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 unconscious person anything to drink
Consult a doctor
- 4.2. Most important symptoms and effects, both acute and delayed** : No information available
- 4.3. Indication of any immediate medical attention and special treatment needed** : Treat symptomatically and supportively in response to reactions of patient

SECTION 5 FIRE-FIGHTING MEASURES

5.1. Extinguishing media

- Suitable extinguishing media** : Foam
Carbon dioxide (CO₂)
Powders
- Not suitable extinguishing media** : Water (the product is dangerous for the environment - do not dilute it)

5.2. Special hazards arising from the substance or mixture : Toxic fumes are released



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SECTION 5 FIRE-FIGHTING MEASURES (continued)

- 5.3. Advice for fire-fighters** : Isolate fire area. Evacuate downwind
Do not dispose of fire-fighting water in the environment
Do not breath fumes
Do not attempt to fight the fire without suitable protective equipment :
Self-contained breathing apparatus
Complete protective clothing

SECTION 6 ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment and emergency procedures** : For non-emergency personnel :
Avoid contact with skin and eyes
Do not breathe vapours
For emergency responders :
Do not attempt to fight the fire without suitable protective equipment
For further information see section 8
- 6.2 Environmental precautions** : Do not allow product to spread into the environment
Contain the spilled material by bunding (product is hazardous for the environment)
- 6.3. Methods and material for containment and cleaning up**
- **Neutralization** : Absorb spillage with:
- inert absorbent material
- earth or sand
- **Cleaning/decontamination** : Wash with plenty of water and detergent
- **Disposal** : Dispose of contaminated materials in accordance with current regulations
- 6.4 Reference to other sections** : For further information see section 13

SECTION 7 HANDLING AND STORAGE

- 7.1. Precautions for safe handling**
- Technical measures** : Vapour extraction at source
- Precautions** : Avoid any direct contact with the product
Work in a well-ventilated area
- Hygiene measures** : Always wash your hands after handling the product
Do not eat, drink or smoke during use
Separate working clothes from town clothes and launder separately
- 7.2. Conditions for safe storage, including any incompatibilities**
- Storage conditions**
- **Recommended** : Store :
- in a cool and dry area
- in a well-ventilated area
- protected from frost.
- away from direct sunlight
- away from food and drinks and animal foodstuffs
- out of reach of children
- Packaging materials**
- **Recommended** : Original packaging
- 7.3. Specific end use(s)** : No information available



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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits : No specific limit

8.2. Exposure controls

Engineering 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 : Nitrile-rubber protective gloves
- Eye protection : Safety goggles
- Skin and body protection : Impermeable clothing

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- Physical state : Viscous liquid
 - Colour : light brown
 - Odour : slight aromatic
 - Odour threshold : Not determined
 - pH : 8.27 (20 °C)
 - Specific temperatures
 - Boiling : Not applicable to this kind of formulation
 - Melting point : Not applicable to this kind of formulation
 - Decomposition temperature : Not applicable to this kind of formulation
 - Flammability characteristics
 - Flash point : Not determined
 - Auto-ignition temperature : 330 °C
 - Oxidizing properties : Non oxidizing material according to EC criteria
 - Explosion properties : Not explosive
 - Vapour pressure : Not applicable
 - Vapour density (air = 1) : Not applicable
 - Relative density (water = 1) : 1.2074 (20 °C)
 - Solubility
 - in water : Soluble
 - Octanol/water partition coefficient : Not applicable
 - Kinematic viscosity : 133.1 mm²/s (20 °C)
 - Dynamic viscosity : 160.7 mPa.s (20 °C)
 - Evaporation rate : Not applicable to this kind of formulation
- 9.2 Other information : No additional information available

SECTION 10 STABILITY AND REACTIVITY

- 10.1. Reactivity : To our knowledge, the product does not present any particular risk
- 10.2. Chemical stability : Stable at ambient temperature and under normal conditions of use
- 10.3. Possibility of hazardous reactions : None under normal conditions.



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SECTION 10 STABILITY AND REACTIVITY (continued)

- 10.4. Conditions to avoid** : High temperature
- 10.5. Incompatible materials** : None, to our knowledge
- 10.6. Hazardous decomposition products** : On thermal decomposition (pyrolysis), releases :
Carbon oxides (CO, CO₂)
Nitrogen oxides
Sulphur oxides
Hydrogen cyanide
Chlorine
Phosgene
Various hydrocarbon fragments

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

- Acute toxicity** : LD 50 skin (Rat) : > 2000 mg/kg
LD 50 oral (rat) : > 2000 mg/kg
- Skin corrosion/irritation** : Not irritating to rabbits on cutaneous application.
- Serious eye damage/irritation** : Slightly irritating to rabbits on ocular application.
- Respiratory or skin sensitization** : Does not cause sensitisation
- Repeated dose toxicity** : NOAEL (rat, 28 days) : 1000 mg/kg/ day (Clomazone technical)
- Carcinogenicity** : No carcinogenic effect was noted (Clomazone technical)
- Mutagenicity** : No mutagenic effects were noted (Clomazone technical)
- Reproductive toxicity** : No indication of effect on reproduction (Clomazone technical)

SECTION 12 ECOLOGICAL INFORMATION

- 12.1. Toxicity** : Product as is :
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
LC 50 (Fish : Onchorhynchus mykiss) / 96h : > 100 mg/l
EC 50 (Daphnia : Daphnia magna) / 48h : 72 mg/l
EC 50 (Algae : Desmodesmus subspicatus) / 72 h : < 1 mg/l
Clomazone :
LD50(birds) : > 2510 mg/kg
- 12.2. Persistence and degradability** : Clomazone :
Half-life (in water) : 1.5 - 7 d
Half-life (in soil) : 24 - 84 d
- 12.3. Bioaccumulative potential** : Clomazone :
log Pow = 2.5
BCF : 27 - 40
Metribuzin :
log Pow = 1.6
- 12.4. Mobility in soil** : Clomazone has medium mobility in soil
- 12.5. Results of PBT and vPvB assessment** : Clomazone does not meet the PBT and vPvB classification criteria
- 12.6. Other adverse effects** : No information available



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SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

WASTE FROM PRODUCT

- Prohibition :** : Discharging waste into rivers and drains is prohibited
- Destruction/Disposal :** : Dispose of in accordance with relevant local regulations
Incinerate at a licensed installation

CONTAMINATED PACKAGING

- Decontamination/cleaning :** : Clean with water
- Destruction/disposal :** : Dispose of in accordance with relevant local regulations
- NOTE :** : The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal

SECTION 14 TRANSPORT INFORMATION

- 14.1. UN number :** : 3082
- 14.2. UN proper shipping name :** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Metribuzin (ISO), Clomazone)
- 14.3. Transport hazard class(es) :** : 9
- 14.4. Packing group :** : III
- 14.5. Environmental hazards :** : Additional marking : "Environmentally hazardous substance"
- 14.6. Special precautions for user :** : No information available
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code :** : No information available

SECTION 15 REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture :** : No additional information available
- 15.2. Chemical Safety Assessment :** : A chemical safety assessment acc. to art. 14 of Regulation (EC) No 1907/2006 is not required, because art. 15 of the same regulation applies

SECTION 16 OTHER INFORMATION

- R phrases text of § 2&3 :** : R8 : Contact with combustible material may cause fire.
R20/22 : Harmful by inhalation and if swallowed.
R22 : Harmful if swallowed.
R36 : Irritating to eyes.
R36/37/38 : Irritating to eyes, respiratory system and skin.
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- H phrases text of § 2&3 :** : H271 : May cause fire or explosion; strong oxidizer
H302 : Harmful if swallowed
H315 : Causes skin irritation
H319 : Causes serious eye irritation
H332 : Harmful if inhaled
H335 : May cause respiratory irritation
H400 : Very toxic to aquatic life
H410 : Very toxic to aquatic life with long lasting effects
- Registered trademarks :** : Metric is a registered trademark of Belchim Crop Protection NV
FMC is a registered trademark of FMC Corporation



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SECTION 16 OTHER INFORMATION (continued)

Sources of data : : Dossiers Belchim Crop Protection NV

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

Besides, the attention of the user is drawn to the possible risk incurred by using the product for any other use than that for which it was intended.

In no way does this exempt the user from knowing and applying all the regulations controlling his activity. The user alone will take on the responsibility for taking the precautions involved by the use of the product.

The aim of all the mandatory regulations mentioned is just to help the user to fulfill his obligations regarding the use of hazardous products.

This information must not be considered exhaustive. It does not exempt the user from ensuring that other obligations than those mentioned could apply, related to the storage and use of the product, this being his sole responsibility.

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