Safety Data Sheet
according to EC-Regulation 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

MISTRAL (FSG 01094 H-1)
700 g/kg Metribuzin CAS 21087-64-9

Use of the substance/preparation
Herbicide

Company/undertaking identification
Feinchemie Schwebda GmbH, Strassburger Str. 5, D-37269 Eschwege
Telephone ++49 (0)5651/9237-0, Fax ++49 (0)5651/22442

Emergency telephone / Office for advice
Advisory office in case of poisoning:
Tel.: +49 30 / 19240 Berlin
Telephone number of the company in case of emergencies:
Tel. ++49 (0)5651/9237-0

2. Composition/information on ingredients

Formulation:
Water-dispersible granulate

2.1 Chemical name	content %	symbol	R-phrases	EINECS, ELINCS
Metribuzin (ISO)	70	Xn/N	22-50-53	244-209-7
Sodium diisopropylnaphthalenesulphonate	1 - 5	Xn/Xi	22-36	215-343-3

For complete wording of the R-phrases, refer to point 16.

3. Hazards identification

Preparation is classified as hazardous in the sense of directive 1999/45/EC.

3.1 To people
See point 11 and 15.
Not applicable

3.2 To the environment
See point 12.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First aid measures

4.1 Inhalation
Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.

4.2 Eye contact
Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

4.3 Skin contact
Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

4.4 Ingestion
Give copious water to drink - consult doctor immediately.
Keep Data Sheet available.

4.5 Special resources necessary for first aid
n.c.

5. Fire-fighting measures

5.1 Suitable extinguishing media
Water

5.2 Extinguishing media which must not be used for safety reasons
Nicht anwendbar

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
In case of fire the following can develop:
Vapours hazardous to health
Organic decomposition products
Oxides of carbon
Oxides of sulphur
Oxides of nitrogen

5.4 Special protective equipment for fire-fighters
Protective respirator with independent air supply
According to size of fire
Full protection, if necessary

5.5 Further information
Dispose of contaminated extinction water according to official regulations.

6. Accidental release measures

Refer to point 13. and for personal protection refer to point 8.

6.1 Personal precautions
Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.

6.2 Environmental measures
Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent from entering drainage system.
If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods for cleaning up
Collect mechanically and dispose of according to point 13.
As a precaution, douse dust with water.

7. Handling and storage

7.1 Handling
Tips for safe handling:
See point 6.1
Ensure good ventilation.
Avoid build up of dust.
I.e. caution - note danger of explosive-dust
Observe directions on label and instructions for use.
Use working methods according to operating instructions.
General hygiene measures for the handling of chemicals are applicable.

7.2. Storage
Requirements for storage rooms and containers:
Observe regulations for keeping separated.
Store products only unopened, in original packing.
Not to be stored in gangways or stair wells.

Special storage conditions:
See point 10.2
Protect against moisture and store closed.
Only store at temperatures from -5°C to 35°C

8. Exposure controls/personal protection

GB Chemical Name	China stone	
WEL-TWA: 2 mg/m3 (res. dust)	WEL-STEL: ---	---
BMGV: ---	Other information: ---	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-terme exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.

Respiratory protection: Filter A P 3 (EN 141)	If OES or MEL is exceeded.
Hand protection: Protective nitrile gloves (EN 374) Protective hand cream recommended.	Protective Neopren gloves (EN 374).
Eye protection:	Tight fitting protective goggles with side protection (EN 166).
Skin protection:	Protective working garments (e.g. safety shoes EN 344, long-sleeved protective working garments)

Additional information on hand protection - No tests have been performed.
Selection made for preparations according to the best available knowledge and information on the ingredients.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

9. Physical and chemical properties

Physical state:	Solid
Colour:	Beige
Odour:	Characteristic
1 % pH-value:	9,2 (CIPAC MT 75.3)
Boiling point/range (°C):	n.av.
Melting point/range (°C):	125,3 (OECD 102) *
Flash point (°C):	n.a.
Flammability (solid/gas):	EG A 10, No
Autoflammability:	EG A 16, No
Oxidising properties:	No
Minimum limit of explosion:	n.a.
Maximum limit of explosion:	n.a.
Product is not explosive.	
Vapour pressure:	1,21*10-4 Pa (20°C), 2,55*10-4 Pa (25°C) (OECD 104) *
Density (g/ml):	n.d.a.
Bulk density:	0,52 (pour density), 0,53 (tapdensity) (CIPAC MT 186)
Solubility in water:	Dispersion
Partition coefficient (n-octanol/water):	log Pow 1,7 (25°C, pH 6,9) (OECD 117) *
Vapour density (air = 1):	n.c.

* Metribuzin (ISO)

10. Stability and reactivity

Conditions to avoid

See point 7
Stable when handled and stored correctly.
Protect from humidity.

Materials to avoid
See point 7
Avoid contact with other chemicals.
Avoid contact with strong oxidizing agents.
Avoid contact with strong alkalis.

Hazardous decomposition products
See point 5.3

11. Toxicological information

Acute toxicity and immediate effects
Ingestion, LD50 rat oral (mg/kg): > 2000 (OECD 401, 92/69/EEC)
Inhalation, LC50 rat inhal.(mg/l/4h): LC0 > 4,8 (limit test) (OECD 403, 92/69/EEC)
Skin contact, LD50 rat dermal (mg/kg): > 2000 (OECD 402)
Not irritant to rabbit skin (OECD 404)
Eye contact: Not irritant to rabbit eye (OECD 405)

Delayed and chronic effects
Sensitization: No
(Magnusson and Kligman maximisation study)
Carcinogenicity: NOAEL (mouse) 3,2 mg/kg bw/day (OECD 451) *
NOAEL (rat) 2,0 mg/kg bw/day (OECD 453) *
Mutagenicity: NOAEL > 300 mg/kg bw ((in-vivo chromosomal aberration study in Swiss Albino Mice) (OECD 475) *

NOAEL 300 mg/kg bw (micronucleus test in mice) (OECD 474) *
Reproductive toxicity: NOAEL (3 gen.) 30 ppm in drinking water (Wistar rats) (OECD 416) *

NOAEL (maternal toxicity) >= 150 mg/kg bw (OECD 414) *
NOAEL (teratogenicity and/or embryo-/fetotoxicity) 40 mg/kg (Wistar rat) (OECD 414) *
NOAEL (embryotoxic and teratogenicity potential) 10 mg/kg (New Zealand White rabbits) *
Narcosis: n.c.

Further information
Classification based on toxicological analyses.
* Metribuzin (ISO)

12. Ecological information

Water hazard class (Germany): 3
Self classification: Yes (VwVwS)
Persistence and degradability: n.av.
Behaviour in sewage plants:
Inhibition of bacterial activity in waste water:
NOEC <= 1,579 mg/l (OECD 209)
Aquatic toxicity:
Toxicity to fish:
Onchorhynchus mykiss LC50 > 100 mg/l/96h, NOEC 100 mg/l/96h (OECD 203)
Toxicity to daphnia:
Daphnia magna EC50 > 100 mg/l/48h, NOEC 100 mg/l/48h (OECD 202)
Toxicity to algae:
Desmodesmus suspicatus EbC50 47µg/l/72h, ErC50 86 µg/l/72h, EyC50 45,6 µg/l/72h, NOEC 36 µg/l/72h (OECD 201)
Ecological toxicity: n.av.

13. Disposal considerations

13.1. for the material / preparation / residue
EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)
02 01 08 agrochemical waste containing dangerous substances
07 04 99 wastes not otherwise specified

20 01 19 pesticides
Recommendation:
Pay attention to local and national official regulations
E.g. suitable incineration plant.
Waste needs special observation measures (according to Waste Types Catalogue).

13.2 for contaminated packing material

See point 13.1
Pay attention to local and national official regulations
Re-use of packing materials is prohibited.

14. Transport information

General statements

UN-Number: 3077

Road/Rail-transport (ADR/RID)

Class/packing-group: 9/III
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (METRIBUZIN)
Classification code: M7
LQ: 27

Transport by sea

IMDG-code: n.a. (class/packing-group)
EmS: F-A, S-F
Marine Pollutant: n.a.

Transport by air

IATA: 9/-/III (class/secondary danger/packing-group)
Environmentally hazardous substance, solid, n.o.s. (METRIBUZIN)

Additional information:

Danger code and packing code on request.

15. Regulatory information

Classification according to Dangerous Product Regulations incl. EC Directives (67/548/EEC and 1999/45/EC)

Symbols: N
Indications of danger:
Dangerous for the environment
R-phrases:
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases:
2 Keep out of the reach of children.
13 Keep away from food, drink and animal feedingstuffs.
20/21 When using do not eat, drink or smoke.
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
57 Use appropriate container to avoid environmental contamination.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.
Additions:
Metribuzin (ISO)
To avoid risks to man and the environment, comply with the instructions for use.
Observe restrictions: Yes
Observe youth employment law (German regulation).
Observe law on protection of expectant mothers (German regulation).
Observe restrictive guidelines 76/769/EEC, 1999/51/EC, 1999/77/EC

16. Other information

These details refer to the product as it is delivered.
Storage class VCI (Germany): 11
Revised points: 12
Observe plant protection medium law.

ID: FSG 01094 H-1
TA air:
III 3.1.5
The following phrases represent the prescribed R-phrases for the ingredients (designated in point 2).
22 Harmful if swallowed.
50 Very toxic to aquatic organisms.
53 May cause long-term adverse effects in the aquatic environment.
36 Irritating to eyes.

Legend:

n.a. = not applicable / n.v., k.D.v. = n.av. = not available / n.g. = n.c. = not checked
WEL = Workplace Exposure Limit EH40, TWA = Long-term exposure limit (8-hour TWA (= time weighted average) reference period), STEL = Short-terme exposure limit (15-minute reference period) / BMGV = Biological monitoring guidance value EH40
AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany) / BGW = "Biologischer Grenzwert" (biological limit value, Germany)
VbF = Regulations for flammable liquids (Austria)
WGK = water hazard class (Germany) - WGK 3 = very hazardous, WGK 2 = hazardous, WGK 1 = slightly hazardous to water
VOC = Volatile organic compounds / AOX = Adsorbable organic halogen compounds
VwVwS = Administrative Order relating to substances hazardous to water (Germany)
The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.
These statements were made by:

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