



Safety Data Sheet

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006

BETTIX FLO

Preparation Date 25-Mar-2014

Revision date 14-Nov-2019

Revision Number: 4

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the product

Product code	HBT01
Product Description	BETTIX FLO
Formulation	Metamitron 700 g/L SC
Synonyms	Defiant SC Target Flo
Pure substance/preparation	Preparation

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended use	Herbicide
Sector(s) of use	SU1 - Agriculture, forestry, fishery
Product category	PC27 - Plant protection products

1.3 Details of the Supplier of the Safety Data Sheet

Supplier	UPL Europe Ltd Engine Rooms Birchwood Park Warrington WA3 6YN Cheshire UK Tel. : +44 (0) 1925 819999 Fax : +44 (0) 1925 856075
E-mail address	sds.info@upl-ltd.com

1.4 Emergency Telephone Number

Emergency Telephone	(CARECHEM 24): +44 (0) 1235 239670
United Kingdom	NHS no. 111

Section 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture**Classification according to Regulation (EC) No. 1272/2008 [CLP]****Acute aquatic toxicity** Category 1 - (H400)**Chronic Aquatic Toxicity** Category 1 - (H410)**Additional information**

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements**Labeling according to Regulation (EC) No. 1272/2008 [CLP]****signal word**

WARNING

Hazard Statements

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

P273 - Avoid release to the environment

P391 - Collect spillage

P501 - Dispose of contents/ container in accordance with national regulation

EU Specific Hazard Statements

EUH208 - Contains (1,2-Benzisothiazolin-3-one). May produce an allergic reaction

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

2.3 Other Hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical name	CAS No	EC No	Index-No.	REACH No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Metamitron	41394-05-2	255-349-3	613-129-00-8	-	50 - 60	Acute Tox. 4 (H302) Aquatic Acute 1 (H400)
Ethylene glycol	107-21-1	203-473-3	603-027-00-1	01-2119456816-28	5 - 10	Acute Tox. 4 (H302)
Ethoxylated polyaryphenyl sulfate, ammonium salt	119432-41-6	601-612-6	-	-	1 - 5	Eye Dam. 1 (H318)
Alkyl-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	68425-94-5	614-476-8	-	-	1 - 5	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)
1,2-Benzisothiazolin-3-one	2634-33-5	220-120-9	613-088-00-6	-	< 1	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1 Description of first-aid measures

General advice

- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

Inhalation

- Move to fresh air
- Call a POISON CENTER or doctor if you feel unwell

Eye contact

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists, consult a specialist

Skin contact

- Wash off immediately with plenty of water
- If symptoms persist, call a physician

Ingestion

- Rinse mouth with water
- Call a POISON CENTER or doctor if you feel unwell

Self-protection of the first aider

- First aider: Pay attention to self-protection

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms

- No information available

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians

- Treat symptomatically

Section 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

- Water spray
- Dry powder
- Foam
- Carbon dioxide (CO₂)

Unsuitable extinguishing media

- No information available

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

- Thermal decomposition may release toxic fumes

5.3 Advice for Firefighters

- Wear self-contained breathing apparatus and protective suit

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures**For non-emergency personnel***Personal Precautions*

- Avoid contact with skin and eyes
- Wear protective gloves/protective clothing and eye/face protection

Emergency procedures

- Evacuate personnel to safe areas

Emergency responder

- Use personal protective equipment as required
- Evacuate personnel to safe areas

6.2 Environmental Precautions

- Prevent further leakage or spillage if safe to do so
- Do not allow material to contaminate ground water system
- Do not flush into surface water or sanitary sewer system

6.3 Methods and material for containment and cleaning up**Methods for containment**

- Prevent further leakage or spillage if safe to do so

Methods for cleaning up

- Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container

Prevention of secondary hazards

- Clean contaminated objects and areas thoroughly observing environmental regulations

6.4 Reference to other sections

- No information available

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling**Advice on safe handling**

- Provide adequate ventilation
- Use only outdoors or in a well-ventilated area
- Ensure that eyewash stations and safety showers are close to the workstation location

General hygiene considerations

- Do not eat, drink or smoke when using this product
- Keep away from food, drink and animal feeding stuffs
- Avoid contact with skin and eyes
- Wash hands before breaks and immediately after handling the product
- Remove contaminated clothing and protective equipment before entering eating areas

7.2 Conditions for safe storage, including any incompatibilities

- Keep container tightly closed in a dry and well-ventilated place

7.3 Specific end uses

- Herbicide
- Please refer to the product labeling and packaging for information about appropriate use

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Exposure Limits

Chemical name	Eu	United Kingdom	France	Spain	Germany
Ethylene glycol 107-21-1	S* TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³	STEL: 40 ppm STEL: 104 mg/m ³ STEL: 30 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³ TWA: 10 mg/m ³ Skin	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³	S* STEL: 40 ppm STEL: 104 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Ethylene glycol 107-21-1	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³ Skin	Ceiling: 100 mg/m ³	Skin STEL: 104 mg/m ³ TWA: 52 mg/m ³ TWA: 10 mg/m ³	TWA: 20 ppm TWA: 50 mg/m ³ STEL: 40 ppm STEL: 100 mg/m ³ Skin	TWA: 10 ppm TWA: 26 mg/m ³ TWA: 10 mg/m ³ Skin
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Ethylene glycol 107-21-1	Skin STEL 20 ppm STEL 52 mg/m ³ TWA: 10 ppm TWA: 26 mg/m ³	Skin STEL: 20 ppm STEL: 52 mg/m ³ TWA: 10 ppm TWA: 26 mg/m ³	STEL: 50 mg/m ³ TWA: 15 mg/m ³	TWA: 10 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³ Skin Ceiling: 25 ppm STEL: 104 mg/m ³ STEL: 40 ppm	TWA: 10 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³ Skin

8.2 Exposure Controls

Engineering controls

- Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Eye/face protection

- Safety glasses with side-shields
- Eye protection must conform to standard EN 166

Hand protection

• Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed.

Wash hands frequently and always before eating, drinking, smoking or using the toilet.

- Gloves must conform to standard EN 374
- Wear protective nitrile rubber gloves
- Rate of permeability : > 480 min
- Glove thickness : > 0,4 mm

Skin and body protection

- Wear standard coveralls and Category 3 Type 4 suit.

If there is a risk of significant exposure, consider a higher protective type suit.

Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

Respiratory protection

- When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

General hygiene considerations

- Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

- Local authorities should be advised if significant spillages cannot be contained
- Do not allow into any sewer, on the ground or into any body of water
- Prevent product from entering drains

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance	Off-white (white; Yellowish white)	
Physical state	Liquid suspension concentrate (SC)	
Odor	paint like	
<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	8	(1% solution) CIPAC MT 75.3
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Flash Point	112 °C	EC A.9
Flammability (solid, gas)	Not applicable	
Surface tension	51.8 mN/m	20°C, EC A.5, OECD 115
Relative Density	1.203 g/ml	EC A.3
Water solubility	dispersible	
Solubility in Other Solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	479 °C	EC A.15
Decomposition temperature	No information available	
Viscosity	55 - 324	20 °C, Dynamic viscosity, CIPAC MT 192
Oxidizing properties	Non oxidizing	EC A.21
Explosive properties	According to the chemical structure no explosion reaction is expected	EC A.14

9.2 OTHER INFORMATION

VOC Content No information available

Section 10: STABILITY AND REACTIVITY**10.1 Reactivity**

- No information available

10.2 Chemical stability

- Stable under normal conditions

10.3 Possibility of hazardous reactions

- None under normal processing

10.4 Conditions to avoid

- Keep away from open flames, hot surfaces and sources of ignition

10.5 Incompatible Materials

- Strong acids
- Strong oxidizing agents

10.6 Hazardous Decomposition Products

- Thermal decomposition giving flammable and toxic products.

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects**Acute toxicity**

LD50 Oral > 2000 mg/kg - OECD 420
LD50 Dermal > 2000 mg/kg - OECD 402
LC50 Inhalation > 3.49 mg/l - OECD 403

Skin corrosion/irritation

- No skin irritation
- OECD 404

Serious eye damage/eye irritation

- No eye irritation
- OECD 405

Respiratory or skin sensitization

- skin: Did not cause sensitization
- OECD 429

Germ cell mutagenicity

- No information available

Carcinogenicity

- No information available

Reproductive toxicity

- No information available

Specific target organ toxicity (single exposure)

- No information available

Specific target organ toxicity (repeated exposure)

- No information available

Aspiration hazard

- No information available

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity

EC50/72h/algae = 2.32 mg/L - OECD 201

EC50/48h/daphnia = > 100 mg/L - OECD 202

LC50/fish/96 h = > 100 mg/L - OECD 203

EC/7d/aquatic plant = 1.76 mg/L (Lemna) - OECD 221

EC/14d/aquatic plant = 2.28 mg/L (Myriophyllum) - OECD 239

12.2 Persistence and Degradability

- No information available

12.3 Bioaccumulative Potential

Chemical name	Log Pow
Metamitron	0.83
Ethylene glycol	-1.93
1,2-Benzisothiazolin-3-one	1.3

12.4 Mobility in Soil

- No information available

12.5 Results of PBT and vPvB Assessment

- This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

12.6 Other Adverse Effects

- No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste from residues/unused products

- Dispose of in accordance with local regulations

Contaminated packaging

- Empty containers should be taken for local recycling, recovery or waste disposal

EWC waste disposal No

- 020108 - agrochemical waste containing dangerous substances

OTHER INFORMATION

- According to the European Waste Catalogue, Waste Codes are not product specific, but application specific

Section 14: TRANSPORT INFORMATION

14.1 UN Number

- ADR, IMDG, IATA : UN3082

14.2 UN proper shipping name

- ADR : Environmentally hazardous substance, liquid, n.o.s. (Metamitron)
- IMDG : Environmentally hazardous substance, liquid, n.o.s (Metamitron)
- IATA : Environmentally hazardous substance, liquid, n.o.s (Metamitron)

14.3 Transport Hazard Class(es)

Hazard class

- ADR, IMDG, IATA : 9

Subsidiary class

- ADR, IMDG, IATA : Not applicable

14.4 Packing Group

- ADR, IMDG, IATA : III

14.5 Environmental Hazards

- ADR, IATA : DANGEROUS FOR THE ENVIRONMENT
- IMDG : IMDG - Marine Pollutant

14.6 Special Precautions for User

Special Provisions

- ADR : 274, 335, 375, 601
- IMDG : 274, 335, 969
- IATA : A97, A158, A197

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC CODE

- Not applicable

Section 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Registration n° MAPP 16559

- To avoid risks to human health and the environment, comply with the instructions for use

15.2 Chemical safety assessment

- A chemical safety assessment has not been carried out

Section 16: OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H318 - Causes serious eye damage
- H319 - Causes serious eye irritation
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects

Classification procedure

- On basis of test data

Abbreviations and acronyms

- CLP : Classification, Labelling and Packaging = Regulation (EC) No 1272/2008
- CAS : Chemical Abstracts Service
- EC No : EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- LDx : Lethal dose to x %
- LCx : Lethal concentration to x %
- ECx : Effective concentration to x %
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
- Very Persistent and very Bioaccumulative (vPvB) Chemicals
- EWC : European Waste Catalogue
- ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
- IMDG : International Maritime Dangerous Goods Code
- IATA : International Air Transport Association

Preparation Date 25-Mar-2014

Revision date 14-Nov-2019

Reason for revision **New formatting**

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 + Commission Regulation (EU) No 2015/830 of 28 May 2015

Disclaimer

The information contained is based on our knowledge of the product at the date of publishing.

It applies to the PRODUCT AS SUCH. In case of formulation or mixture, make sure that a new danger will not appear.

Users are advised of possible additional hazards when the product is used in applications for which it was not intended.

This sheet shall only be used and duplicated for prevention and Safety purposes.

For rates and use recommendations, refer to the information displayed on the packaging.

It is the responsibility of the handlers of the product to pass on this safety data sheet to any subsequent persons who will come into contact with the product.

End of Safety Data Sheet