



SENCOREX FLOW

Version 4 / IRL
102000016510

1/10
Revision Date: 06.11.2015
Print Date: 21.03.2016

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

1.1 Product identifier

Trade name SENCOREX FLOW
Product code (UVP) 79017286, 80899823

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use Herbicide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer CropScience Ltd
Bayer Ltd
The Atrium, Blackthorn Road
Sandyford
Dublin 18
Ireland

Telephone +353-1-2999313

Responsible Department Email: ukinfo@bayercropscience.com

1.4 Emergency telephone no.

Emergency telephone no. 1800-409-399

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Metribuzin



Signal word: Warning

Hazard statements



SENCOREX FLOW

Version 4 / IRL
102000016510

2/10
Revision Date: 06.11.2015
Print Date: 21.03.2016

H410 Very toxic to aquatic life with long lasting effects.
 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.

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P501 Dispose of contents/container to a licensed waste disposal contractor or collection site, except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate)(SC)
 Metribuzin 600 g/l

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		Regulation (EC) No 1272/2008	
Metribuzin	21087-64-9 244-209-7	Acute Tox. 4, H302 Aquatic Chronic 1, H410 Aquatic Acute 1, H400	52.17
Fatty alcohol ethoxylate	68131-39-5 500-195-7	Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Acute 1, H400	> 1.00 – < 2
1,2-Propanediol	57-55-6 200-338-0 01-2119456809-23-xxxx	Not classified	> 1.00
1,2-Benzisothiazol-3(2H)-one	2634-33-5 220-120-9	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Skin Sens. 1, H317	>= 0.005 – <= 0.05

Further information

Metribuzin	21087-64-9	M-Factor: 10 (acute), 10 (chronic)
------------	------------	------------------------------------

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



SENCOREX FLOW

Version 4 / IRL
102000016510

3/10

Revision Date: 06.11.2015
Print Date: 21.03.2016

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. Get medical attention if irritation develops and persists.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Sulphur oxides, Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for fire-fighters	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
Further information	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

**SENCOREX FLOW**Version 4 / IRL
102000016510

4/10

Revision Date: 06.11.2015

Print Date: 21.03.2016

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling**

Advice on safe handling No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from freezing.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

Suitable materials HDPE (high density polyethylene)

7.3 Specific end uses Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Metribuzin	21087-64-9	5 mg/m ³ (TWA)	2011	ELV (IE)

**SENCOREX FLOW**Version 4 / IRL
102000016510

5/10

Revision Date: 06.11.2015
Print Date: 21.03.2016

Metribuzin	21087-64-9	0.56 mg/m ³ (TWA)		OES BCS*
1,2-Propanediol (Total vapour and particulates.)	57-55-6	470 mg/m ³ /150 ppm (TWA)	2011	ELV (IE)
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m ³ (TWA)	2011	ELV (IE)

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2 Exposure controls**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

Respiratory protection is not required under anticipated circumstances of exposure.

Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

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.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 0.4 mm
Protective index	Class 6
Directive	Protective gloves complying with EN 374.

Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection

Wear standard coveralls and Category 3 Type 6 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.

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

Form	Liquid
Colour	white

**SENCOREX FLOW**Version 4 / IRL
102000016510

6/10

Revision Date: 06.11.2015
Print Date: 21.03.2016

Odour	strong, characteristic
pH	6.0 - 7.0 at 100 % (23 °C)
Flash point	>100 °C No flash point - Determination conducted up to the boiling point.
Ignition temperature	435 °C
Density	ca. 1.15 g/cm ³ at 20 °C
Water solubility	suspensive
Partition coefficient: n-octanol/water	Metribuzin: log Pow: 1.6
Surface tension	30.9 mN/m at 25 °C Determined in the undiluted form.
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive
9.2 Other information	Further safety related physical-chemical data are not known.

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

Thermal decomposition	from 175 °C, Heating rate: 0.3 K/min The value mentioned relates to the active ingredient.
------------------------------	---

10.2 Chemical stability	Stable under recommended storage conditions.
--------------------------------	--

10.3 Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
--	--

10.4 Conditions to avoid	Extremes of temperature and direct sunlight.
---------------------------------	--

10.5 Incompatible materials	Store only in the original container.
------------------------------------	---------------------------------------

10.6 Hazardous decomposition products	No decomposition products expected under normal conditions of use.
--	--

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects**

Acute oral toxicity	LD50 (rat) > 2,000 mg/kg
----------------------------	--------------------------

Acute inhalation toxicity	LC50 (rat) > 0.967 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration.
----------------------------------	---

Acute dermal toxicity	LD50 (rat) > 2,000 mg/kg
------------------------------	--------------------------

Skin irritation	No skin irritation (rabbit)
------------------------	-----------------------------

**SENCOREX FLOW**Version 4 / IRL
102000016510

7/10

Revision Date: 06.11.2015
Print Date: 21.03.2016

Eye irritation	No eye irritation (rabbit)
Sensitisation	Non-sensitizing. (mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment repeated dose toxicity

Metribuzin caused specific target organ toxicity in experimental animal studies in the following organ(s): liver, kidneys.

Assessment mutagenicity

Metribuzin was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Metribuzin was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Metribuzin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Metribuzin is related to parental toxicity.

Assessment developmental toxicity

Metribuzin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Metribuzin are related to maternal toxicity.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 74.6 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 49.6 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient.
Toxicity to aquatic plants	IC50 (Desmodesmus subspicatus (green algae)) 0.036 mg/l Growth rate; Exposure time: 72 h EC50 (Lemna gibba (gibbous duckweed)) 0.0614 mg/l Growth rate

12.2 Persistence and degradability

Biodegradability	Metribuzin: not rapidly biodegradable
Koc	Metribuzin: Koc: 24 - 106

12.3 Bioaccumulative potential

Bioaccumulation	Metribuzin: Does not bioaccumulate.
------------------------	--

12.4 Mobility in soil

Mobility in soil	Metribuzin: Mobile in soils
-------------------------	-----------------------------



SENCOREX FLOW

Version 4 / IRL
102000016510

8/10

Revision Date: 06.11.2015
Print Date: 21.03.2016

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Metribuzin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.

Contaminated packaging Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.
Add washings to sprayer at time of filling.
Dispose of empty and cleaned packaging safely.
Follow advice on product label and/or leaflet.

Waste key for the unused product **02 01 08*** agrochemical waste containing dangerous substances

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (METRIBUZIN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (METRIBUZIN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES



SENCOREX FLOW

Version 4 / IRL
102000016510

9/10

Revision Date: 06.11.2015
Print Date: 21.03.2016

IATA

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (METRIBUZIN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Republic of Ireland Regulations

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Supply and Use

European Communities (Prohibition of Certain Active Substances in Plant Protection Products) Regulations 1981 (SI No 320/1981)

European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations 2003 (SI No 83/2003)

European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001)

2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (SI No 619/2001)

Waste Treatment

Landfill Directive

Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

Further information

WHO-classification: III (Slightly hazardous)

15.2 Chemical Safety Assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H302 Harmful if swallowed.

**SENCOREX FLOW**Version 4 / IRL
102000016510

10/10

Revision Date: 06.11.2015
Print Date: 21.03.2016

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
ELV	Exposure Limit Value
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SI	Statutory Instrument
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

Reason for Revision: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection. Section 12. Ecological information. Section 16: Other Information.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.