



**MERLIN WG75**Version 4 / ZA  
10200001698

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Revision Date: 26.04.2023  
Print Date: 26.04.2023**Signal word:** Warning**Hazard statements**

H361d Suspected of damaging the unborn child.  
 H410 Very toxic to aquatic life with long lasting effects.  
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

**Precautionary statements**

P201 Obtain special instructions before use.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P391 Collect spillage.  
 P501 Dispose of contents/container in accordance with local regulation.

**2.3 Other hazards**

May form explosible dust-air mixture if dispersed.

Isoxaflutole: 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).

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2 Mixtures****Chemical nature**

Water dispersible granules (WG)  
 Isoxaflutole 750 g/kg

**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	
Isoxaflutole	141112-29-0		75,00
Lignosulfonic acid, sodium salt, sulfomethylated	68512-34-5	Eye Irrit. 2, H319	>= 3,0 – <= 10,0
Reaction product of naphthalene, propan-2-ol,	1322-93-6 01-2119969954-16-XXXX	Acute Tox. 4, H302 Acute Tox. 4, H332	>= 3,0 – <= 10,0

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sulfonated and neutralized by caustic soda		Eye Dam. 1, H318 STOT SE 3, H335	
Pyrogenic (fumed) amorphous silica	112945-52-5 01-2119379499-16-XXXX	Not classified	>= 1,0
Kaolin	1332-58-7	Not classified	>= 1,0

**Further information**

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

**SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures**

<b>General advice</b>	Remove contaminated clothing immediately and dispose of safely. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
<b>Inhalation</b>	Move the victim to fresh air and keep at rest. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Keep at rest. Rinse mouth. Induce vomiting only, if: 1. patient is fully conscious, 2. medical aid is not readily available, 3. a significant amount (more than a mouthful) has been ingested and 4. time since ingestion is less than 1 hour. (Vomit should not get into the respiratory tract.) Obtain medical attention.

**4.2 Most important symptoms and effects, both acute and delayed****Symptoms** To date no symptoms are known.**4.3 Indication of any immediate medical attention and special treatment needed****Treatment** Local treatment: Initial treatment: symptomatic.  
Systemic treatment: Initial treatment: symptomatic. Carefully monitor the liver functions. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. 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



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<b>5.2 Special hazards arising from the substance or mixture</b>	In the event of fire the following may be released:., Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Nitrogen oxides (NO <sub>x</sub> ), Sulphur oxides, Hydrogen fluoride
<b>5.3 Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.
<b>Further information</b>	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

**Precautions** Avoid dust formation. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. Remove all sources of ignition.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

### 6.3 Methods and materials for containment and cleaning up

**Methods for cleaning up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect and transfer the product into a properly labelled and tightly closed container. Clean floors and contaminated objects with plenty of water.

**Additional advice** Check also for any local site procedures.

**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.

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## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

**Advice on safe handling** Avoid dust formation. Use only in area provided with appropriate exhaust ventilation.

**Advice on protection against fire and explosion** Dust may form explosive mixture in air. Keep away from heat and sources of ignition. Take measures to prevent the build up of electrostatic charge.

**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** Store in a place accessible by authorized persons only. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.

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

**Suitable materials** Aluminium composite film (min. 0,007 mm Aluminium)



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**7.3 Specific end use(s)** Refer to the label and/or leaflet.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Isoxaflutole	141112-29-0	0,6 mg/m <sup>3</sup> (TWA)		OES BCS*
Kaolin (Total dust.)	1332-58-7	10 mg/m <sup>3</sup> (TWA)	1995	ZA REL
Kaolin (Respirable dust.)	1332-58-7	5 mg/m <sup>3</sup> (TWA)	1995	ZA REL
Pyrogenic (fumed) amorphous silica	112945-52-5	10 mg/m <sup>3</sup> (TWA)	03 2021	ZA REL
Pyrogenic (fumed) amorphous silica (Respirable fraction.)	112945-52-5	5 mg/m <sup>3</sup> (TWA)	03 2021	ZA REL

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

**8.2 Exposure controls**

**Respiratory protection**

Wear respirator conforming to EN136P3, EN14594 or EN14593-1 (continuous flow).  
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 5 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

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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**

<b>Form</b>	water-dispersible granules
<b>Colour</b>	brown
<b>Odour</b>	weak, characteristic
<b>Odour Threshold</b>	No data available
<b>pH</b>	4,0 - 6,0 (1 %) (23 °C) (deionized water)
<b>Melting point/range</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash point</b>	Not applicable
<b>Flammability</b>	The product is not highly flammable.
<b>Auto-ignition temperature</b>	The product is not self-ignitable.
<b>Thermal decomposition</b>	No data available
<b>Minimum ignition energy</b>	> 30 - < 100 mJ
<b>Self-accelarating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	60 mg/m <sup>3</sup>
<b>Dust explosion class</b>	St1 (weak to moderately explosible)
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	No data available
<b>Bulk density</b>	0,56 - 0,63 g/ml (loose)
<b>Water solubility</b>	dispersible
<b>Partition coefficient: n-octanol/water</b>	Isoxaflutole: log Pow: 2,32 (20 °C)
<b>Viscosity, dynamic</b>	No data available
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No oxidizing properties
<b>Explosivity</b>	Not explosive
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.



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**SECTION 10: STABILITY AND REACTIVITY**

<b>10.1 Reactivity</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>10.4 Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>10.5 Incompatible materials</b>	Store only in the original container.
<b>10.6 Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on hazard classes as defined in regulation (EC) No 1272/2008**

<b>Acute oral toxicity</b>	LD50 (Rat) > 5.000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (Rat) 5,26 mg/l Exposure time: 4 h
<b>Acute dermal toxicity</b>	LD50 (Rabbit) > 2.000 mg/kg
<b>Skin corrosion/irritation</b>	Slight irritant effect - does not require labelling. (Rabbit)
<b>Serious eye damage/eye irritation</b>	Slight irritant effect - does not require labelling. (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

**Assessment STOT Specific target organ toxicity – single exposure**

Isoxaflutole: Based on available data, the classification criteria are not met.

**Assessment STOT Specific target organ toxicity – repeated exposure**

Isoxaflutole caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver, Thyroid. The observed effects do not appear to be relevant for humans.

**Assessment mutagenicity**

Isoxaflutole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Isoxaflutole caused at high dose levels an increased incidence of tumours in the following organ(s): Liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

**Assessment toxicity to reproduction**

Isoxaflutole did not cause reproductive toxicity in a two-generation study in rats.

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Isoxaflutole caused developmental toxicity only at dose levels toxic to the dams. Isoxaflutole caused a delayed ossification of foetuses. The developmental effects seen with Isoxaflutole are related to maternal toxicity.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Further information**

The toxicological data refer to a similar formulation.

**11.2 Information on other hazards****Endocrine disrupting properties****Assessment**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity****Toxicity to fish**

LC50 (Oncorhynchus mykiss (rainbow trout)) > 65,0 mg/l  
Exposure time: 96 h

**Toxicity to aquatic invertebrates**

EC50 (Daphnia magna (Water flea)) 5 mg/l  
Exposure time: 48 h

**Toxicity to aquatic plants**

EC50 (Desmodesmus subspicatus (green algae)) > 34,7 mg/l  
Growth rate; Exposure time: 72 h

ErC50 (Lemna gibba (gibbous duckweed)) 0,0078 mg/l  
Exposure time: 7 d

**12.2 Persistence and degradability****Biodegradability**

Isoxaflutole:  
Not rapidly biodegradable

**Koc**

Isoxaflutole: Koc: 112

**12.3 Bioaccumulative potential****Bioaccumulation**

Isoxaflutole: Bioconcentration factor (BCF) 11  
Does not bioaccumulate.

**12.4 Mobility in soil****Mobility in soil**

Isoxaflutole: Moderately mobile in soils

**12.5 Results of PBT and vPvB assessment****PBT and vPvB assessment**

Isoxaflutole: 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 Endocrine disrupting properties**





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**Assessment** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7 Other adverse effects**

**Additional ecological information** No other effects to be mentioned.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product** In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

**Contaminated packaging** Triple rinse containers.  
Do not re-use empty containers.  
Not completely emptied packagings should be disposed of as hazardous waste.

**SECTION 14: TRANSPORT INFORMATION**

**SANS 10231**

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ISOXAFLUTOLE MIXTURE)
14.3 Transport hazard class(es)	9
14.4 Packaging Group	III
14.5 Environm. Hazardous Mark	YES

**IMDG**

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ISOXAFLUTOLE MIXTURE)
14.3 Transport hazard class(es)	9
14.4 Packaging Group	III
14.5 Marine pollutant	YES

**IATA**

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ISOXAFLUTOLE MIXTURE )
14.3 Transport hazard class(es)	9
14.4 Packaging 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 IMO instruments**



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No transport in bulk according to the IBC Code.

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**SECTION 15: REGULATORY INFORMATION**

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

**Further information**

WHO-classification: III (Slightly hazardous)

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**SECTION 16: OTHER INFORMATION**

**Text of the hazard statements mentioned in Section 3**

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

**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
ATE	Acute toxicity estimate
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
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
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) 2020/878 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace



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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:** The following sections have been revised: Section 8: Exposure Controls / Personal Protection.

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