

FLEX W

Version 8 - This version replaces all previous versions.

Revision Date 01.09.2014

Print Date 01.09.2014

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier****Product name** : FLEX W**Design code** : A11928B**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****Company** : Syngenta Crop Protection AG
Postfach
CH-4002 Basel
Switzerland**Telephone** : +41 61 323 11 11**Telefax** : +41 61 323 12 12**E-mail address** : sds.ch@syngenta.com**1.4 Emergency telephone number****Emergency telephone number** : +44 1484 538444**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to Regulation (EU) 1272/2008

Skin sensitisation	Category 1B	H317
Eye irritation	Category 2	H319
Acute toxicity (Inhalation)	Category 3	H331
Chronic aquatic toxicity	Category 2	H411

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

Classification according to EU Directives 67/548/EEC or 1999/45/EC

T, Toxic**N, Dangerous for the environment****R23: Toxic by inhalation.****R36: Irritating to eyes.****R43: May cause sensitisation by skin contact.****R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**

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2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



Signal word	:	Danger	
Hazard statements	:	H317 H319 H331 H411	May cause an allergic skin reaction. Causes serious eye irritation. Toxic if inhaled. Toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 P280 P302 + P352 P304 + P340 P305 + P351 + P338 P311 P501 P391 P401	Keep out of reach of children. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/ physician. Dispose of contents/ container to an approved waste disposal plant. Collect spillage. Store .?.
Supplemental information	:	EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Hazardous components which must be listed on the label:

- 1,2-benzisothiazol-3(2H)-one

Labelling: EU Directives 67/548/EEC or 1999/45/EC

Symbol(s)



Toxic

Dangerous
for the envi-
ronment

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R-phrases(s)	: R23 R36 R43 R51/53	Toxic by inhalation. Irritating to eyes. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s)	: S 2 S13 S24 S35 S36/37 S45 S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. Avoid contact with skin. This material and its container must be disposed of in a safe way. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Use appropriate container to avoid environmental contamination.
Additional Labelling	: To avoid risks to man and the environment, comply with the instructions for use.	

Hazardous components which must be listed on the label:

- 1,2-benzisothiazol-3(2H)-one

2.3 Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration
fomesafen-sodium	108731-70-0	Xn, N R22 R36 R50/53	Acute Tox.4; H302 Eye Irrit.2; H319 Aquatic Acute1; H400 Aquatic Chronic1; H410	22.7 % W/W
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9	Xn, N R22 R38 R41 R43 R50	Acute Tox.4; H302 Skin Irrit.2; H315 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Acute1; H400	0.05 - 0.1 % W/W

Substances for which there are Community workplace exposure limits.

For the full text of the R-phrases mentioned in this Section, see Section 16.

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

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

- General advice** : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.
- Inhalation** : Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or poison control centre immediately.
- Skin contact** : Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label.
Do NOT induce vomiting.

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

- Medical advice** : There is no specific antidote available.
Treat symptomatically.
-

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media**

Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam
or
Water spray

Do not use a solid water stream as it may scatter and spread fire.

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5.2 Special hazards arising from the substance or mixture

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).

Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Wear full protective clothing and self-contained breathing apparatus.

Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so.

Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

If the product contaminates rivers and lakes or drains inform respective authorities.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.

Refer to disposal considerations listed in section 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

No special protective measures against fire required.
 Avoid contact with skin and eyes.
 When using do not eat, drink or smoke.
 For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required.
 Keep containers tightly closed in a dry, cool and well-ventilated place.
 Keep out of the reach of children.
 Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

Registered Crop Protection products: For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
fomesafen	2 mg/m ³	8 h TWA	SYNGENTA

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

8.2 Exposure controls

Engineering measures : Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.
 The extent of these protection measures depends on the actual risks in use.
 If airborne mists or vapors are generated, use local exhaust ventilation controls.
 Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.
 Where necessary, seek additional occupational hygiene advice.

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.
 When selecting personal protective equipment, seek appropriate professional advice.
 Personal protective equipment should be certified to appropriate standards.

Respiratory protection : A gas and vapor filter respirator may be necessary until effective technical

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measures are installed.

Protection provided by air-purifying respirators is limited.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

- Hand protection** : Suitable material:Nitrile rubber
 Break through time: > 480 min
 Glove thickness: 0.5 mm
 Chemical resistant gloves should be used.
 Gloves should be certified to an appropriate standard.
 Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure.
 The breakthrough time of gloves varies according to the thickness, material and manufacturer.
 Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection** : If eye contact is possible, use tight-fitting chemical safety goggles.
- Skin and body protection** : Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material.
 Wash with soap and water after removing protective clothing.
 Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.)
 Wear as appropriate:
 impervious protective suit

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Form	: liquid
Colour	: brown
Odour	: No data available
Odour Threshold	: No data available
pH	: 7.5 - 8.5 at (20 °C)
Melting point/range	: No data available
Boiling point/boiling range	: 100 °C
Flash point	: > 100 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 1.15 g/cm ³
Solubility in other solvents	: Miscible in Water
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available

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Thermal decomposition : No data available
Viscosity, dynamic : No data available
Viscosity, kinematic : No data available
Explosive properties : Not explosive
Oxidizing properties : not oxidizing

9.2 Other information : No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity : No information available.

10.2 Chemical stability : No information available.

10.3 Possibility of hazardous reactions
None known.
Hazardous polymerisation does not occur.

10.4 Conditions to avoid : No information available.

10.5 Incompatible materials : No information available.

10.6 Hazardous decomposition products
Combustion or thermal decomposition will evolve toxic and irritant vapors.

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

Acute oral toxicity : LD50 male and female Rat, > 2,000 mg/kg

Acute inhalation toxicity : LC50 male Rat, 0.06 - 0.557 mg/l , 4 h

: LC50 female Rat, > 0.557 mg/l , 4 h

Acute dermal toxicity : LD50 male and female Rat, > 2,400 mg/kg

Skin corrosion/irritation : Rat: Slightly irritating

Serious eye damage/eye irritation : Rabbit: Moderately irritating

Respiratory or skin sensitisation : Buehler Test Guinea pig: A mild skin sensitizer in animal tests

Germ cell mutagenicity : No information available.

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Carcinogenicity : No information available.

Teratogenicity : No information available.

Reproductive toxicity : No information available.

STOT - repeated exposure : No information available.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Toxicity to fish** : LC50 *Oncorhynchus mykiss* (rainbow trout), > 680 mg/l , 96 h
Derived from components.**Toxicity to aquatic invertebrates** : *Daphnia magna* (Water flea), > 1,000 mg/l , 48 h
Derived from components.**Toxicity to aquatic plants** : EbC50 *Selenastrum capricornutum* (green algae), 0.67 mg/l , 72 h
: ErC50 *Selenastrum capricornutum* (green algae), 2.7 mg/l , 72 h
: NOErC *Selenastrum capricornutum* (green algae), 0.41 mg/l , 72 h**12.2 Persistence and degradability**Stability in water
fomesafen-sodium : No data availableStability in soil
fomesafen-sodium : No data available**12.3 Bioaccumulative potential**

fomesafen-sodium : No data available

12.4 Mobility in soil

fomesafen-sodium : No data available

12.5 Results of PBT and vPvB assessment

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fomesafen-sodium : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.
Triple rinse containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1 UN number: UN 3082
14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FOMESAFEN)
14.3 Transport hazard class(es): 9
14.4 Packing group: III
Labels: 9
14.5 Environmental hazards : Environmentally hazardous
Tunnel restriction code: E

Sea transport(IMDG)

14.1 UN number: UN 3082
14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FOMESAFEN)
14.3 Transport hazard class(es): 9
14.4 Packing group: III
Labels: 9
14.5 Environmental hazards : Marine pollutant

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Air transport (IATA-DGR)

14.1 UN number: UN 3082
14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FOMESAFEN)
14.3 Transport hazard class(es): 9
14.4 Packing group: III
Labels: 9

14.6 Special precautions for user

none

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

GHS-Labeling

Hazard pictograms



Signal word	:	Danger
Hazard statements	:	H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H331 Toxic if inhaled. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 Keep out of reach of children. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P311 Call a POISON CENTER or doctor/ physician. P391 Collect spillage. P501 Dispose of contents/ container to an approved waste disposal plant.

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Remarks : Classified using all GHS hazard classes and categories.
Where the GHS contains options, the most conservative option has been chosen.
Regional or national implementations of GHS may not implement all hazard classes and categories.

Hazardous components which must be listed on the label:

- 1,2-benzisothiazol-3(2H)-one

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: OTHER INFORMATION**Further information**

Full text of R-phrases referred to under sections 2 and 3:

R22	Harmful if swallowed.
R36	Irritating to eyes.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R50	Very toxic to aquatic organisms.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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Full text of other abbreviations

ADR:	European Agreement Concerning the International Carriage of Dangerous Goods by Road	RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
IMDG:	International Maritime Code for Dangerous Goods	IATA-DGR:	International Air Transport Association Dangerous Goods Regulations
LC50:	Lethal concentration, 50%	LD50:	Lethal dose, 50%
EC50:	Effective dose, 50%	GHS:	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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