



SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1272/2008 (REACH) Annex II

Sharp XD

Revision Date 12-October-2017

Version 1

Product No JTA/UK/003

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

1.1. Product identifier

Sharp XD

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

Recommended Use	Herbicide
Uses advised against	No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address	JT Agro Ltd 1 Bell Street, Maidenhead, Berkshire, SL6 1BU, U.K. Tel: +44 1628 421599 Fax: +44 1628 421623
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For further information, please contact

Email address	info@jtagro-cropthetics.com
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1.4. Emergency telephone number

Emergency Telephone	National Chemical Emergency Centre (UK): Tel: 01865 407333 (24 hours)
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Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity	Category 4 - (H302)
Specific target organ toxicity RE	Category 2 - (H373)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

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

Xn Harmful, R22
Xn Harmful, R48/22
N Dangerous for the environment, R50/53

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous components which must be listed on the label:

- Flufenacet
- Diflufenican

Hazard pictograms



Signal Word

Warning

Hazard Statements

H302 - Harmful if swallowed
 H373 - May cause damage to organs (nervous system) through prolonged or repeated exposure if swallowed
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P308 + P313 - If exposed or concerned: Call a POISON CENTER/doctor/physician
 P501 - Dispose of contents/ container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

Supplementary statements

EUH208 - Contains Flufenacet, 5-chloro-2-methyl-isothiazol-3-one / 2-methyl Isothiazol-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

3.1. Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate) (SC)
 Flufenacet/Diflufenican 400:100 g/l

Hazardous components

R-phrase(s) according to EC directive 67/548/EEC
 Hazard statements according to Regulation (EC) No. 1907/2006

Chemical Name	CAS No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Classification according to 67/548/EEC	Concentration
Flufenacet	142459-58-3	Acute Tox. 4 (H302) Skin Sens. 1 (H317) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Xn; R22, R48/22 R43 N; R50/53	33.60 %
Diflufenican	83164-33-4	Aquatic Chronic 3 (H412)	R52/53	8.40 %
Glycerine	56-81-5 200-289-5	Not classified	Not classified	> 1.00 %
Mixture of 5-Chloro-2-methyl-3(2H)-isothiazolone and 2-Methyl-3(2H)-isothiazolone	55965-84-9	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	T; R23/24/25 C; R34, R43 N; R50/53	> 0.0002 - < 0.0015 %

Substances for which there are Community workplace exposure limits.

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

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 the victim 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. If symptoms persist, call a physician.
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 eyes. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. 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).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis.
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4.3. Indication of any immediate medical attention and special treatment needed

Risks	Danger of formation of methaemoglobin.
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. In case of methaemoglobinemia, oxygen and specific antidotes (methylene blue/ toluidine blue) should be given.

Section 5: FIRE-FIGHTING 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), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NO_x), Sulphur oxides

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.

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.
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6.2. Environmental precautions

Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3. Methods and material 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). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

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 special protective measures against fire required. When handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection against fire and explosion

No special precautions required.

Hygiene measures

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

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. Protect from frost. Keep away from direct sunlight.

Advice on common storage

Keep away from food, drink and animal feeding-stuffs.

Suitable materials

HDPE (high density polyethylene).

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	CAS-No.	Control parameters	Source
Flufenacet	142459-58-3	0.47 mg/m ³ (TWA)	JT Agro
Diflufenican	83164-33-4	5.5 mg/m ³ (TWA)	JT Agro
Glycerine (Mist.)	56-81-5	10 mg/m ³ (TWA)	EH40 WEL

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

8.2. Exposure controls

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

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

Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and 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.

Eye protection

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

Skin and body protection

Wear standard coveralls and Category 3 Type 4 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. If there is a risk of significant exposure, consider a higher protective type suit.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form	Suspension
Colour	White to Beige
Odour	Weak, Characteristic
pH	4.0 - 6.5 at 100% (23 °C)
Flash point	> 100 °C
Density	No flash point - Determination conducted up to the boiling point
Water solubility	ca. 1.19 g/cm ³ at 20 °C
Partition Coefficient n-octanol /water	dispersible
	Flufenacet: log Pow 3.2
	Diflufenican: log Pow 4.2

9.2. Other information

Further safety related physical-chemical data are not known.

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Thermal decomposition Weak, Characteristic

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

No decomposition products expected under normal conditions of use.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity	LD50 rat, 500 - 2000 mg/kg Test conducted with similar formulation.
Acute inhalational toxicity	LC50 rat, > 2.078 mg/l Exposure time: 4h Highest attainable concentration Test conducted with similar formulation.
Acute dermal toxicity	LD50 rat, >4000 mg/kg Test conducted with a similar formulation.
Skin corrosion/irritation	Rabbit: non-irritating Test conducted with a similar formulation.
Serious eye damage/eye irritation	Rabbit: non-irritating Test conducted with a similar formulation.
Respiratory or skin sensitisation	Mouse: not sensitising OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment repeated dose toxicity

Flufenacet caused neurobehavioral effects and/or neuropathological changes in animal studies.
Diflufenican did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

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

Assessment Carcinogenicity

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

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

Assessment toxicity to reproduction

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

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

Assessment developmental toxicity

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

Diflufenican did not cause developmental toxicity in rats and rabbits.

Section 12: ECOLOGICAL INFORMATION**12.1. Toxicity**

Toxicity to fish	LC50 (Cyprinus carpio (Carp)), 54.9 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)), 68.2 mg/l, Exposure time: 48 h
Toxicity to aquatic plants	EC50 (Pseudokirchneriella subcapitata), 0.00885 mg/l, Growth rate; Exposure time: 72 h

12.2. Persistence and degradability

Biodegradability	Flufenacet: Not readily biodegradable Diflufenican: Not readily biodegradable
Koc	Flufenacet: Koc: 202 Diflufenican: Koc: 3417

12.3. Bioaccumulative potential

Flufenacet	Bioconcentration factor (BCF) 71 Does not bioaccumulate.
Diflufenican	Bioconcentration factor (BCF) 1,596 Does not bioaccumulate.

12.4. Mobility in soil

Flufenacet	Moderately mobile in soils
Diflufenican	Slightly mobile in soils

12.5. Results of PBT and vPvB assessment

Flufenacet	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
Diflufenican	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (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 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. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

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.
Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.
Return large containers to supplier.
Follow advice on product label and/or leaflet.

Waste key for the unused product **020108** agrochemical waste containing dangerous substances

Section 14: TRANSPORT CONSIDERATIONS**ADR/RID/ADN**

14.1	UN number	3082
14.2	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUFENACET, DIFLUFENICAN SOLUTION)
14.3	Transport hazard class(es)	9
14.4	Packing group (Labels)	III 9
14.5	Environmental Hazards	Environmentally hazardous
	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. (FLUFENACET, DIFLUFENICAN SOLUTION)
14.3	Transport hazard class(es)	9
14.4	Packing group (Labels)	III 9
14.5	Environmental Hazards	Marine Pollutant

IATA

14.1	UN number	3082
14.2	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUFENACET, DIFLUFENICAN SOLUTION)
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental Hazards	Environmentally hazardous

UK 'Carriage' Regulations

14.1	UN number	3082
14.2	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUFENACET, DIFLUFENICAN SOLUTION)
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental Hazards	Environmentally hazardous
	Emergency action code	3Z

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****UK and Northern Ireland Regulatory References**

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.

Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348) Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367) Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716) Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009 Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677) EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits Control of Pesticide Regulations 1986 Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II Environmental Protection (Duty of Care) Regulations 1991 The Waste Management Licensing Regulations 1994 (as amended) Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended) Landfill Directive Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94) Water Resources Act 1991 Anti-Pollution Works Regulations 1999

Further information

WHO-classification: III (Slightly hazardous)

15.2. Chemical Safety Assessment

A chemical safety assessment is not required.

Section 16: OTHER INFORMATION

Full text of R-phrases mentioned in Section 3.

R22	Harmful if swallowed
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R34	Causes burns
R43	May cause sensitisation by skin contact
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful 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.

H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H331	Toxic if inhaled
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

