



GROUP 27 HERBICIDE



Product reg. no: MAPP 17490 **UFI:** NSE0-A5H8-E006-6J11

Water dispersible granule (WDG) containing 500 g/kg mesotrione.

Herbicide for the control of annual grass and broad-leaved weeds in maize.

The (COSHH) Control Of Substances Hazardous to Health regulations may apply to the use of this product at work.

In case of toxic or transport emergency ring +44 (0)1484 538444 any time

Syngenta UK Limited
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Tel: Cambridge (01223) 883400

PROTECT FROM FROST. STORE IN A COOL, DRY PLACE.

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SAFETY PRECAUTIONS

(a) Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment: WEAR SUITABLE PROTECTIVE GLOVES when handling the product or handling contaminated surfaces.

However engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

1kg


This product label is compliant with the CPA Voluntary Initiative (VI) guidance.



The
Voluntary
Initiative

1411/2018
WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.
AVOID ALL CONTACT WITH SKIN.
WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.

(b) Environmental protection

 To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing water body, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. [DO NOT ALLOW DIRECT SPRAY from hand-held sprayers to fall within 1 m of the top of a bank of a static or flowing water body]*. Aim spray from water. *if hand-held uses are permitted.

This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer, either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from yards and roads.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

(c) Storage and disposal

KEEP IN ORIGINAL CONTAINER, tightly closed in a safe place. RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

L1081800 GBRI/10Z PPE 4148689

EVOLYA™

A water dispersible granule containing 500 g/kg of mesotrione.

Warning

Suspected of damaging the unborn child.

May cause damage to organs (Nervous system, eyes) through prolonged or repeated exposure.

Very toxic to aquatic life with long lasting effects.

Avoid release to the environment.

Obtain special instructions before use.

Do not breathe dust.

Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

IF exposed or concerned: Get medical advice/ attention.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

To avoid risks to man and the environment, comply with the instructions for use.



MAPP: 17490 **UFI:** NSE0-A5H8-E006-6J11

IMPORTANT INFORMATION

FOR USE ONLY AS A HERBICIDE

Crop	Maximum individual dose (kg product/ha)	Maximum number of treatments (per crop)	Latest time of application	Aquatic buffer zone distance (metres)
Forage maize, Grain maize	0.3	1	BBCH 19	5

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

GENERAL INFORMATION

EVOLYA™ contains mesotrione a foliar applied herbicide for selective control of annual broad-leaved weeds. The activity of EVOLYA is mostly by foliar uptake and to some extent by soil uptake. EVOLYA is rapidly absorbed through the leaves and moves to the growing point.

Crops

For use only as a herbicide for the control of weeds in forage maize and grain maize. **DO NOT USE** on forage maize and grain maize seed crops or on sweet corn varieties.

Spray timing

Always inspect crop and weed growth stage immediately before spraying. For the best results treat young weed seedlings. See weed control table for application details.

CONDITIONS FOR USE

Crops

Forage maize and grain maize may be sprayed any time from the two to nine leaf stage (BBCH 12-19).

Weather

For the best results EVOLYA should be applied when the weeds are actively growing i.e. in warm humid weather with adequate soil moisture. Treatment in poor growing conditions or in dry soil may give less reliable control. Do not spray when weed or crop foliage is wet.

AGRICULTURAL PRACTICE

It is not recommended to spray crops suffering stress e.g. when in very cold or drought conditions, or when wide temperature fluctuations are expected or excessive rainfall is expected to follow application. Under these adverse conditions mild to moderate chlorosis may be observed on sprayed leaves. This effect is usually transient and does not affect yield.

Take extreme care to avoid drift onto dicotyledonous plants outside the target area. Take extreme care to avoid drift onto all crops outside the target area, otherwise crop damage will result. Ensure that spray swaths are matched accurately and do not overlap.

SOIL CONDITIONS

No specific restrictions.

RESISTANCE MANAGEMENT

EVOLYA is a 4-HPPD inhibitor, disrupting development of plant pigments which are essential for photosynthesis. This inhibition causes leaf chlorosis and eventual death of sensitive weed species. Its mode of action is different from other herbicide groups, and there is no known cross resistance in weeds which exhibit reduced sensitivity to other herbicides. Weed control may be reduced if strains of individual species less sensitive to EVOLYA develop.

The use of EVOLYA in programmes or tank mixtures with a broad-leaved weed herbicide possessing a different mode of action will reduce the likelihood of resistance developing in broad-leaved weeds e.g. Fat hen, Black nightshade or Common amaranth. At the present time there is no similar mode of action in herbicides for crops other than forage maize and grain maize and therefore crop rotation will also delay the onset of any resistance. Where continuous forage maize and grain maize are grown the use of EVOLYA for more than two seasons should be avoided.

WEEDS CONTROLLED

EVOLYA must be applied with 'ADIGOR'. EVOLYA + 'ADIGOR' can be used to control the following weeds in maize post emergence to the growth stage indicated:

Weed species	EVOLYA at 0.3 kg/ha + 'ADIGOR'	Weed Growth stage range
Fat Hen	S	GS10-51
Barnyard grass	MS	GS10-39
Common Amaranth	S	GS12-23
Black Bindweed	S	GS10-55
Black Nightshade	S	GS11-61
Mayweeds	MS	GS09-33
Redshank	S	GS12-25
Pansies	S	GS12-15
Red Deadnettle	S	GS12-51
Chickweed	S	GS12-35
Cleavers	MR	GS10-25
Knotgrass	MR	GS11-22
Maple leaved Goosefoot	S	GS14-16
Manyseed Goosefoot	S	GS14-16
Gallant Soldier	S	GS10-16
Pale Persicaria	S	GS11-18
Speedwells	R	GS12-51
Volunteer Oilseed Rape	S	GS12-16

Key: S = susceptible, MS = moderately susceptible, MR = moderately resistant, R = resistant

CROP SPECIFIC INFORMATION

Timing and Rates of Use

EVOLYA can be applied early post emergence of the crop. EVOLYA should be applied to the maize crop no later than the 9 leaf stage. Refer to maximum weed growth stage limits approved. EVOLYA must be used with the adjuvant 'ADIGOR'. Apply EVOLYA at 0.3 kg per hectare with an equivalent rate of 1.5l/ha 'ADIGOR'.

MIXING AND SPRAYING

Preparation of the spray solution

Shake thoroughly the EVOLYA container. Half fill the spray tank with clean water and begin agitation. Add the required quantity of EVOLYA to the tank and complete filling. Continue agitation until spraying is completed.

Application

Application of EVOLYA will be achieved by using conventional ground spraying equipment at water volumes of 200-400 L/ha.

Do not spray EVOLYA post emergence of the crop if any rainfall is expected in the next 6 hours.

After Use

It is important to wash equipment thoroughly after use to remove all traces of EVOLYA as even small amounts may cause damage to crops. Rinse inside of tank with clean water using at least one tenth of the spray tank volume. After flushing through pump and spray lines, drain and repeat procedure.

Disposal of spray tank washings should be in accordance with local, state or national legislation.

FOLLOWING CROPS AND RECULTIVATION

Recultivation

Ploughing is recommended prior to reseedling. Some slight crop effects may be seen soon after emergence, but these are usually transitory in nature. Forage maize and grain maize can be re-seeded immediately in case of crop failure.

Rotational crops

Autumn

Winter wheat (including durum wheat), winter barley and rye grass can follow a forage maize and grain maize crop treated with EVOLYA.

Deep ploughing (greater than 15cm) followed by cultivation is necessary before drilling oilseed rape.

Spring

Forage maize and grain maize, ryegrass, spring wheat and spring barley may be sown in the spring following application of EVOLYA, do not sow any other crop at this time.

Section 6 of the Health and Safety at Work Act **Additional Product Safety Information**

(This section does not form part of the product label under the Plant Protection Products Regulations 1995.)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'extensions of use' approval or is otherwise permitted under the Plant Protection Products Regulations.

The information on this label is based on the best available information including data from test results.

Safety Data Sheet v5.0

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

1.1 Product Identifier

Product Name: EVOLYA

Trade name : EVOLYA

Design code : A14203B

Product Registration Number : MAPP 17490

1.2 Relevant Identified Uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Herbicide

Recommended restrictions on use: professional use

1.3 Details of the supplier of the safety data sheet

Company: Syngenta UK Limited
CPC4, Capital Park
Fulbourn, Cambridge CB21 5XE
United Kingdom

Telephone: +44 (0) 1223 883400

Telefax: +44 (0) 1223 882195

E-mail address of person responsible for the SDS: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency phone No.: +44 1484 538444

SECTION 2. HAZARDS IDENTIFICATION



2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child.
Specific target organ toxicity - repeated exposure, Category 2, Nervous system,
Eyes - H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, Category 1 - H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1 - H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms		
Signal Word	Warning	
Hazard Statements	H361d H373 H410	Suspected of damaging the unborn child. May cause damage to organs (Nervous system, Eyes) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.
Precautionary Statements	P273 P201 P260 P280 P308+P313 P391 P501	Avoid release to the environment. Obtain special instructions before use. Do not breathe dust. Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection. IF exposed or concerned: Get medical advice/ attention. Collect spillage. Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- mesotrione (ISO)

Additional Labelling

EUH208 Contains 2-Butenedioic acid (2Z)-, sodium salt (1:2). May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. May form combustible dust concentrations in air.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS**3.2 Mixtures****Components**

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
mesotrione (ISO)	104206-82-8 609-064-00-X	Repr. 2; H361d STOT RE 2; H373 (Nervous system, Eyes) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1010 M-Factor (Chronic aquatic toxicity): 1010	>= 50 - < 70
Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts	68425-94-5	Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 3 - < 10
reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda	Not Assigned 01-2119980979-09	Acute Tox.4; H302 Acute Tox.4; H332 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system)	>= 1 - < 3
2-Butenedioic acid (2Z)-, sodium salt (1:2)	371-47-1 206-738-1 01-2120135687-48	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 STOT SE 3; H335 (Respiratory system)	>= 0.1 - < 1
Substances with a workplace exposure limit :			
silica	61790-53-2 293-303-4		>= 1 - < 10

For explanation of abbreviations see section 16.

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 Centre or physician, or going for treatment.

If inhaled: 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.

In case of 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.

In case of 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.

If swallowed: 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: Nonspecific. No symptoms known or expected

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: There is no specific antidote available. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable 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

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting: 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 fire-fighters

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: 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

Personal precautions: Refer to protective measures listed in sections 7 and 8. Avoid dust formation.

6.2 Environmental precautions:

Environmental precautions: Do not flush into surface water or sanitary sewer system. 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: Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13). Do not create a powder cloud by using a brush or compressed air. Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling: This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents. 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

Requirements for storage areas and containers: 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 uses

Specific use(s): 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

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
mesotrione	104206-82-8	TWA	5 mg/m ³	SYNGENTA
silica	61790-53-2	TWA (Respirable dust)	1.2 mg/m ³	GB EH40

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
sodium sulphate	Workers	Inhalation	Systemic effects	20 mg/m ³
	Workers	Inhalation	Local effects	20 mg/m ³
	Consumers	Inhalation	Systemic effects	12 mg/m ³
	Consumers	Inhalation	Local effects	12 mg/m ³

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
sodium sulphate	Fresh water	11.09 mg/l
	Freshwater - intermittent	17.66 mg/l
	Marine water	1.109 mg/l
	Sewage treatment plant	800 mg/l
	Fresh water sediment	40.2 mg/kg dry weight (d.w.)
	Marine sediment	4.02 mg/kg dry weight (d.w.)
	Soil	1.54 mg/kg dry weight (d.w.)

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. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection: No special protective equipment required.

Hand protection

Material : Nitrile rubber

Break through time : > 480 min

Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. 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. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

Respiratory protection: No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Granules
Colour	:	Beige to yellowish
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	3 - 6
		Concentration: 1 %
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	May form combustible dust concentrations in air.
Burning number	:	2 (20 °C) 2 (100 °C)
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1 g/cm ³
Solubility(ies)		
Solubility in other solvents	:	No data available
Partition Coefficient n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other Information

Minimum ignition temperature	:	450 °C
Minimum ignition energy	:	> 1,000 mJ

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

See section "Possibility of hazardous reactions".

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: Hazardous polymerisation does not occur. This material may degrade, decompose exothermically, and may even catch fire, when large quantities are exposed to elevated temperatures.

10.4 Conditions to avoid

Conditions to avoid: Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid: None known.

10.6 Hazardous decomposition products

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure: Ingestion, Inhalation, Skin contact, Eye contact

Acute toxicity

Product:

Acute oral toxicity: LD50 (Rat, female): > 5,000 mg/kg

Acute inhalation toxicity: LC50 (Rat, male and female): > 2.58 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD50 (Rat, male and female): > 5,000 mg/kg

Components:

mesotriene (ISO):

Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity: LC50 (Rat, male and female): > 4.75 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Acute oral toxicity : LD50 (Rat): 1,800 mg/kg

Acute inhalation toxicity: LC50 (Rat): 4.08 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 3,000 mg/kg

2-Butenedioic acid (2Z)-, sodium salt (1:2):

Acute oral toxicity: Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation

Product:

Species: Rabbit

Result: No skin irritation

Components:

mesotrione (ISO):

Species: Rabbit

Result: No skin irritation

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Method : in vitro skin corrosion test

Result: Irritating to skin.

2-Butenedioic acid (2Z)-, sodium salt (1:2):

Result : Irritating to skin.

Serious eye damage/eye irritation

Product:

Species: Rabbit

Result: No eye irritation

Components:

mesotrione (ISO):

Species: Rabbit

Result: No eye irritation

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Method : in vitro eye irritation test

Result : Risk of serious damage to eyes.

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Species : Rabbit

Result : Risk of serious damage to eyes.

2-Butenedioic acid (2Z)-, sodium salt (1:2):

Result : Eye irritation

Respiratory or skin sensitisation

Product:

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Components:

mesotrione (ISO):

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

2-Butenedioic acid (2Z)-, sodium salt (1:2):

Result : May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

mesotrione (ISO):

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Germ cell mutagenicity- Assessment: In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

mesotrione (ISO):

Carcinogenicity - Assessment: Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Components:

mesotrione (ISO):

Reproductive toxicity - Assessment: Animal testing did not show any effects on fertility.

STOT - single exposure

Components:

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

2-Butenedioic acid (2Z)-, sodium salt (1:2):

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Repeated dose toxicity

Components:

mesotrione (ISO):

Remarks: No adverse effect has been observed in chronic toxicity tests.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Components:

mesotrione (ISO):

Toxicity to fish:

LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 120 mg/l

Exposure time: 96 h

LC50 (*Cyprinus carpio* (Carp)): > 97.1 mg/l

Exposure time: 96 h

Toxicity to daphnia and

other aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): 900 mg/l

Exposure time: 48 h

Toxicity to algae:

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 12 mg/l

Exposure time: 96 h

NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 0.75 mg/l

End point: Growth rate

Exposure time: 96 h
ErC50 (*Lemna gibba* (gibbous duckweed)): 0.0301 mg/l
Exposure time: 7 d
EC10 (*Lemna gibba* (gibbous duckweed)): 0.00187 mg/l
End point: Growth rate
Exposure time: 7 d

M-Factor

(Acute aquatic toxicity): 10

Toxicity to fish

(Chronic toxicity): NOEC: 12.5 mg/l
Exposure time: 36 d
Species: *Pimephales promelas* (fathead minnow)

Toxicity to daphnia and
other aquatic invertebrates

(Chronic toxicity): NOEC: 180 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)

M-Factor

(Chronic aquatic toxicity): 10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Toxicity to fish : LC50 (*Danio rerio* (zebra fish)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): > 100 mg/l
Exposure time: 48 h
Remarks: Information given is based on data obtained

from similar substances.

Toxicity to algae/
aquatic plants:

EC50 (*Raphidocelis subcapitata* (freshwater green alga)):
> 200 mg/l
Exposure time: 72 h
Remarks: Information given is based on data obtained
from similar substances.

12.2 Persistence and degradability

Components:

mesotrione (ISO):

Stability in water: Degradation half life: > 30 d (25 °C)

Remarks: Persistent in water.

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Biodegradability : Result: Not readily biodegradable.

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Biodegradability : Result: Readily biodegradable.

Remarks: Information given is based on data obtained from similar substances.

silica:

Biodegradability : Result: Not readily biodegradable

12.3 Bioaccumulative potential

Components:

mesotrione (ISO):

Bioaccumulation: Remarks: Low bioaccumulation potential.

12.4 Mobility in soil

Components:

mesotrione (ISO):

Distribution among environmental compartments: Remarks: Mesotrione has medium to high mobility in soil.

Stability in soil: Dissipation time: 6 - 105 d

Percentage dissipation: 50 % (DT50)

Remarks: Product is not persistent.

12.5 Results of PBT and vPvB assessment

Product

Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

mesotrione (ISO):

Assessment: 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).

silica:

Assessment: 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

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

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

14.1 UN number

ADR: UN 3077

RID: UN 3077

IMDG: UN 3077

IATA: UN 3077

14.2 UN proper shipping name

ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(MESOTRIONE)

RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(MESOTRIONE)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(MESOTRIONE)

IATA: Environmentally hazardous substance, solid, n.o.s.
(MESOTRIONE)

14.3 Transport hazard class(es)

ADR: 9

RID: 9

IMDG: 9

IATA: 9

14.4 Packing group

ADN

Packing group: III

Classification Code: M7

Hazard Identification Number: 90

Labels: 9

ADR

Packing group: III

Classification Code: M7

Hazard Identification Number: 90

Labels: 9

Tunnel restriction code: (-)

RID

Packing group: III

Classification Code: M7

Hazard Identification Number: 90

Labels: 9

IMDG

Packing group: III

Labels: 9

EmS Code: F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft): 956

Packing instruction (LQ): Y956

Packing group: III

Labels: Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft): 956

Packing instruction (LQ): Y956

Packing group: III

Labels: Miscellaneous

14.5 Environmental hazards**ADR**

Environmentally hazardous: yes

RID

Environmentally hazardous: yes

IMDG

Marine pollutant: yes

IATA (Passenger)

Marine pollutant: yes

IATA (Cargo)

Marine pollutant: yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture**

Relevant EU provisions transposed through retained EU law REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Conditions of restriction for the following entries should be considered: formaldehyde (Number on list 72, 28)
xylene, acetonitrile, triethylamine

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

UK REACH List of substances subject to authorisation (Annex XIV): Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1 ENVIRONMENTAL HAZARDS

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

16. OTHER INFORMATION

Full text of H-Statements

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.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

H361d: Suspected of damaging the unborn child.

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.

Full text of other abbreviations

Acute Tox.: Acute toxicity

Aquatic Acute: Acute aquatic toxicity

Aquatic Chronic: Chronic aquatic toxicity

Eye Dam. : Serious eye damage

Eye Irrit. :	Eye irritation
Repr. :	Reproductive toxicity
Skin Irrit. :	Skin irritation
Skin Sens. :	Skin sensitisation
STOT RE :	Specific target organ toxicity - repeated exposure
STOT SE :	Specific target organ toxicity - single exposure
GB EH40:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA:	Long-term exposure limit (8-hour TWA reference period)

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; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance;

PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Repr. 2	H361d
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method

The information provided in this 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.

EVOLYA™

A water dispersible granule containing 500 g/kg of mesotrione.



Warning

**Suspected of damaging the unborn child.
May cause damage to organs (Nervous system, eyes) through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.**

Avoid release to the environment.
Obtain special instructions before use.
Do not breathe dust.

Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

IF exposed or concerned: Get medical advice/ attention.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

To avoid risks to man and the environment, comply with the instructions for use.

MAPP: 17490 UFI: NSE0-A5H8-E006-6J11

IMPORTANT INFORMATION

FOR USE ONLY AS A HERBICIDE

Crop	Maximum individual dose (kg product/ha)	Maximum number of treatments (per crop)	Latest time of application	Aquatic buffer zone distance (metres)
Forage maize, Grain maize	0.3	1	BBCH 19	5

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

