

Safety Data Sheet

Safety Data Sheet / Targa Max

Issue Date : January 20, 2023

Revision Date : -

Version No. : 1

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

1.1. Product identifier

Name of product : **Targa Max**
Other names : Quizalofop-P-ethyl 100 g/L EC, Quizalofop-P-ethyl 10 % w/v EC,
Targa Super, Nervure Super
Formulation code : N24A ND-16
Type of formulation : Emulsifiable Concentrate (EC)
Product registration number
: 17135
Unique Formula Identifier (UFI)
: 16DY-DUUG-C00F-X7G9

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

Function : Plant protection product, Herbicide
Recommended restrictions on use
: Professional use

1.3. Details of the supplier of the safety data sheet

Manufacturer and Supplier

Nissan Chemical Europe S.A.S.
Parc d'Affaires de Crécy 10A, rue de la Voie Lactée 69370 Saint Didier au Mont d'Or, France
Contact person : Mr. Yasuhiro Fukami
Phone : +33 (0)4 37 64 40 20

1.4. Emergency telephone number

Nissan Chemical Europe S.A.S.
: +33 (0)4 37 64 40 20 (available only during office hours)

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 [CLP]

Acute Toxicity (Inhalation) Category 4, H302
Aspiration Toxicity Category 1, H304
Eye Irritation Category 1, H318
Aquatic Chronic Toxicity Category 2, H411

2.2. Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 [CLP]

Hazard pictogram



Signal word
Danger

Hazard statements
H318 : Causes serious eye damage.

2. HAZARD IDENTIFICATION (continued)

Precautionary statements

P264	:	Wash hands thoroughly after handling.
P280	:	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	:	If eye irritation persists: Get medical advice/attention.
EUH066	:	Repeated exposure may cause skin dryness or cracking.
EUH401	:	To avoid risks to human health and the environment comply with the instructions for use.

2.3. Other hazards

This product 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.

Ecological information: This product 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: This product 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. The product will be regarded to be neither PBT nor vPvB.

3. COMPOSITION/INFORMATION OF INGREDIENTS**3.2. Mixtures****Chemical Composition**

Quizalofop-P-ethyl	> 5 - < 15	% w/w
Polyoxyethylene alkyl ether	> 30 - < 50	% w/w
Benzenesulphonic acid, 4-C10-14-alkyl derivs., calcium salts	> 1 - < 5	% w/w
2-Ethylhexanole	> 1 - < 5	% w/w
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	> 30 - < 50	% w/w
Others.....	> 5 - < 10	% w/w

Active Ingredient

Common name	:	Quizalofop-P-ethyl
Code No.	:	D(+) NC-302
CAS No.	:	100646-51-3
Chemical name	:	
(CA)	:	Propanoic acid, 2-[4-[(6-chloro-2-quinoxalinyloxy)phenoxy]-, ethyl ester, (R)-
(IUPAC)	:	Ethyl (R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy] propionate
Classification in accordance with Regulation (EC) No 1272/2008 [CLP]	:	
	:	Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1
	:	H302, H400, H410
REACH registration No.	:	Not assigned
EINECS or ELINCS No.	:	682-518-2

Inert Ingredient 1

Common name	:	Polyoxyethylene alkyl ether
CAS No.	:	84133-50-6
Content	:	> 30 - < 50 % w/w
Classification in accordance with Regulation (EC) No 1272/2008 [CLP]	:	
	:	Eye Irrit. 1
	:	H318
REACH registration No.	:	Not disclosed
EINECS or ELINCS No.	:	Polymer

3. COMPOSITION/INFORMATION OF INGREDIENTS (continued)

Inert Ingredient 2

Common name : Benzenesulphonic acid, 4-C10-14-alkyl derivs., calcium salts
CAS No. : 90194-26-6
Content : > 1 - < 5 % w/w
Classification in accordance with Regulation (EC) No 1272/2008 [CLP]
: Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 3
H315, H318, H412
REACH registration No.
: Not disclosed
EINECS or ELINCS No.
: 290-635-1

Inert Ingredient 3

Common name : 2-Ethylhexanole
CAS No. : 104-76-7
Content : > 1 - < 5 % w/w
Classification in accordance with Regulation (EC) No 1272/2008 [CLP]
: Skin Irrit. 2, Eye Irrit. 2, Acute Tox.4, STOT SE 3
H315, H319, H332, H335
REACH registration No.
: 01-2119487289-20
EINECS or ELINCS No.
: 203-234-3

Inert Ingredient 4

Common name : Hydrocarbons, C10-C13, aromatics, <1% naphthalene
CAS No. : 64742-94-5
Content : > 30 - < 50 % w/w
Classification in accordance with Regulation (EC) No 1272/2008 [CLP]
: Asp. Tox. 1, Aquatic Chronic 2
H304, H411, EUH066
REACH registration No.
: 01-2119451097-39
EINECS or ELINCS No.
: 922-153-0

4. FIRST AID MEASURES

4.1. Description of first aid measures

Call a POISON CENTER or doctor/physician if you feel unwell (P312).

Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338). Seek medical advice.

Skin contact : Remove all contaminated clothing, shoes and socks from the affected area. Wash material off the skin in flowing water or shower with soap. If irritation persists, consult a physician immediately.

Inhalation : If respiratory discomfort occurs, remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). If not breathing, give mouth-to-mouth resuscitation (or an artificial respiration). Keep warm with blanket and keep at rest.

Ingestion : Do not induce vomiting. Wash out mouth with water. Do not give anything by mouth if person is unconscious. Immediately call a POISON CENTER or doctor/physician (P301+P310).

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

No symptoms have been identified in humans to date.

4. FIRST AID MEASURES (continued)

4.3. Indication of any immediate medical attention and special treatment needed

Treat based on judgment by physician in response to symptoms of patient. No specific antidotes are known.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

: Water, foam, dry chemicals or carbon dioxide.

Extinguishing media which shall not be used for safety reasons

: High volume water jet.

5.2. Special hazards arising from the substance or mixture

Carbon dioxide, carbon monoxide, hydrogen chloride and oxides of nitrogen are potential thermal decomposed products.

5.3. Advice for firefighters

In the event of fire and/or explosion do not breathe fumes. Use self-contained breathing apparatus and protective clothing.

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing, shoes, gloves and goggles. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

6.2. Environmental precautions

Keep unauthorized persons, children and animals away from the affected area. Prevent spillage from entering the drainage systems or watercourses.

6.3. Methods and material for containment and cleaning up

Carefully sweep up and collect the spilled material using an inert absorbent material (sand, vermiculite, or sawdust) and place in a closed container (drum) for disposal. Remove (large quantities) with vacuum truck. Do not raise dust. Wash affected area with water containing detergent.

6.4. Reference to other sections

See section 8 for personnel protective equipment.

See section 13 for waste disposal.

7. HANDLING AND STORAGE

Obtain special instructions before use (P201).

7.1. Precautions for safe handling

No specific precautions required when handling unopened packs/containers. Use only outdoors or in a well-ventilated area (P271). Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid contact with skin or eyes. Protect containers against physical damage. Wear suitable protective clothing, shoes, gloves and goggle during handling. Avoid breathing fume/gas/mist/vapours/spray (P261). Do not eat, drink, or smoke during the work. Prevent spillage from entering the drainage systems or watercourses.

7.2. Conditions for safe storage, including any incompatibilities

Keep tightly closed in original labeled container. Store in a cool and dry place and protect from direct sunlight. Keep away from the reach of children. Keep away from foods, drinks and animal feeding stuffs.

7.3. Specific end use(s)

Use this product only for plant protection.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values (DNEL, PNEC)
 : RCP-TWA 100 mg/ m³ /15 ppm (Hydrocarbons, C10-C13, aromatics, <1% naphthalene)

8.2. Exposure controls

Exposure controls

Occupational exposure controls

Respiratory protection

: Filter apparatus (a half face filter mask, filter type A)

Hand protection : Chemical resistant gloves, Rubber gloves

Eye protection : Safety glasses or goggles

Skin protection : Impervious clothing such as gloves, apron or PVC boots

Environmental exposure controls

: Prevent spillage from entering the drainage systems or watercourses.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state : Liquid at 20 °C

Colour : Amber

Odour : Aromatic hydrocarbon odour

Melting point : No data available.

Boiling point : 175 - 292 °C (Solvent naphtha)

Flammability : See Auto-ignition temperature

Lower and upper explosion limit

: Not explosive

Flash point : 110 °C (closed cup)

Auto-ignition temperature

: > 400 °C

Decomposition temperature

: Not required as this product is not self-reactive.

pH : 6.2 (1% w/v suspension)

Kinetic viscosity : Kinematic viscosity at 40°C = 15.4 mm²/s

Solubility (QPE) : Water 0.61 mg/L (20 °C)

n-Heptane 7.2 g/L (20 °C)

Methanol 35 g/L (20 °C)

Acetone > 250 g/L (22 - 23 °C)

1,2-Dichloroethane > 1000 g/L (22 - 23 °C)

Partition coefficient (*n*-octanol/water) (QPE)

: Log Pow 4.61 at 23 °C

Vapour pressure : 0.09 kPa (0.68 mm Hg) at 20°C (Solvent naphtha)

Relative density : 1.021 g/ml at 20°C

Relative vapour density

: > 1 (Solvent naphtha)

Particle characteristics

: Not required as this product is liquid.

9.2. Other information

No other information is available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

May react with strong bases, acids or strong oxidizing agents, such as chlorates, nitrates, peroxides.

10.2. Chemical stability

Stable under normal ambient storage conditions.

10. STABILITY AND REACTIVITY (continued)**10.3. Possibility of hazardous reactions**

Hazardous reactions will not occur.

10.4. Conditions to avoid

Avoid high temperatures. Protect from sunlight, open flame, sources of heat and humidity.

10.5. Incompatible materials

May react with strong bases, acids or strong oxidizing agents, such as chlorates, nitrates, peroxides.

10.6. Hazardous decomposition products

None hazardous decomposition products under normal conditions of storage and use. Thermal decomposition products include carbon monoxide, nitrogen oxides and halogenated compounds.

11. TOXICOLOGICAL INFORMATION**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 [CLP]****Information on likely routes of exposure**

: Ingestion, inhalation, skin contact and eye contact

Product

Acute oral toxicity LD₅₀ (rats)

: 3,297/3,125 mg/kg (M/F)

This product has no acute oral toxicity.

Acute dermal toxicity LD₅₀ (rats)

: > 2,000 mg/kg

This product has no acute dermal toxicity.

Acute inhalation toxicity LC₅₀ (rats)

: > 5.9 mg/L (4 hrs.)

This product has no acute inhalation toxicity.

Eye irritation (rabbits)

: Severely irritant (Required R41)

Skin irritation (rabbits)

: Slightly irritant (Not required R38)

Sensitization (guinea pigs)

: No data available

Components**Quizalofop-P-ethyl (ISO)**

Toxicokinetics, metabolism and distribution

: Rapidly absorbed and extensively metabolised. Up to 70% of radioactivity was excreted in urine and faeces within 48 hours. Very low potential for accumulation.

Short-term oral toxicity (90 days)

: NOAEL (rats) 7.7 mg/kg/day

Short-term oral toxicity (1 year)

: NOAEL (dogs) 13.4 mg/kg/day

Short-term dermal toxicity (21 days)

: NOEL (rats) 2,000 mg/kg

Chronic/Carcinogenicity (1.5 years/mice)

: NOAEL (toxicity) 1.55 mg/kg/day

: NOEL (tumour) Not carcinogenic

Chronic/Carcinogenicity (2 years/rats)

: NOAEL (toxicity) 0.9 mg/kg/day

: NOEL (tumour) Not carcinogenic

Reproductive toxicity (rats)

: NOEL (toxicity) 25 mg/kg diet

: NOEL (reproduction) No effects on reproduction

11. TOXICOLOGICAL INFORMATION (continued)

Developmental toxicity (rats)	: NOEL (toxicity)	30 mg/kg/day
	: NOEL (development)	100 mg/kg/day Not teratogenic
Developmental toxicity (rabbits)	: NOEL (toxicity)	30 mg/kg/day
	: NOEL (development)	60 mg/kg/day Not teratogenic
Mutagenicity	: Not mutagenic (Negative in <i>in vitro</i> & <i>in vivo</i> studies)	

Polyoxyethylene alkyl ether

Acute oral toxicity LD ₅₀ (rats)	: 1,800 mg/kg [reference value]
Acute dermal toxicity LD ₅₀ (rats)	: 2,000 mg/kg [reference value]
Acute inhalation toxicity	
(Gases)	: Not applicable
(Vapour)	: No data available
(Dust and mist)	: No data available
Skin corrosion/irritation	: Mild irritability (rabbits, 20 % aq. solution)/ No corrosive [as reference] Negative (humans, open, 0.6 % aq. solution, 24h)
Eye damage/irritation:	Positive (rabbits, 20 % aq. solution, no eye washing)/No corrosive [reference value]
Sensitization - Respiratory or skin	: No skin sensitization [as reference]
Germ cell mutagenicity	: Negative (mutagenicity test with use of microorganisms) [as reference]
Carcinogenicity	
(IRAC)	: Not listed on IRAC
(Japan Society for Occupational Health)	: Not listed
Toxic to reproduction:	Teratogenicity was not confirmed. (oral administration in rats; No observable adverse effect level in 2 generations; 1,600 ppm dose) [reference]
Specific target organ systemic toxicity (Single exposure)	: No data available
Specific target organ systemic toxicity (Repeated exposure)	: No data available
Aspiration hazard	: No data available

Benzenesulphonic acid, 4-C10-14-alkyl derivs., calcium salts

Acute oral toxicity LD ₅₀ (OECD 401)	: 4,445 mg/kg (rats - female)
Acute dermal toxicity LD ₅₀ (OECD 402)	: > 2,000 mg/kg (rat, read across from similar material)
Dermal irritation/corrosion (OECD 404)	
(Erythema/Eschar)	: 2.7 (rabbits)
(Oedema)	: 1.8 (rabbits)
Eye irritation/corrosion (OECD 405)	: Eyes - Irritant (rabbits)
Skin sensitization (OECD 406)	: Not sensitizing (guinea pigs, read across from similar material)
Repeated dose 90-day oral toxicity study in rodents (OECD 408)	: NOAEL 85 mg/kg (rats, read across from similar material) LOAEL 145 mg/kg (rats, read across from similar material)
Mutagenicity (EU B. 13/14, OECD 474, OECD 476)	: Negative (in <i>in vitro</i> & <i>in vivo</i> studies)
Reproductive toxicity	: NOAEL 350 mg/kg P./F1/F2 (rats)

11. TOXICOLOGICAL INFORMATION (continued)**2-Ethylhexanole**

- Acute oral toxicity LD₅₀ (OECD 401)
: 2,047 mg/kg (rats - male)
- Acute dermal toxicity LD₅₀ (OECD 402)
: > 3,000 mg/kg (rats - male, female)
- Acute inhalation toxicity LC₅₀ (OECD 403)
(Dusts and mists) : < 5.3 mg/l (rats - male, female)
(Vapour) : > 0.89 mg/l (rats - male, female)
- Dermal irritation/corrosion (OECD 404)
: Skin - Moderate irritant (rabbits)
- Eye irritation/corrosion (OECD 405)
: Eyes - Moderate irritant (rabbits)
: Eyes - Severe irritant (rabbits)
- Skin sensitization (OECD 406)
: Not sensitizing
- Repeated dose 90-day oral toxicity study in rodents (OECD 408)
: NOEL 125 mg/kg (rats - male, female)
: NOAEL 250 mg/kg (rats - male, female)
- Subchronic 90-day inhalation toxicity (OECD 413)
(Vapour) : NOAEC 120 ppm (rats - male, female)
- Mutagenicity (OECD 471, OECD 473, OECD 476)
: Negative (in *in vitro* studies)
- Reproductive toxicity : NOAEL 300 mg/kg Maternal toxicity/ Teratogenicity (rats)

Hydrocarbons, C10-C13, aromatics, <1% naphthalene

- Acute oral toxicity LD₅₀ (OECD 401)
: > 5,000 mg/kg (rats)
Test scores or other study results do not meet criteria for classification.
Minimally toxic. Based on test data for structurally similar materials.
- Acute dermal toxicity LD₅₀ (OECD 402)
: > 2,000 mg/kg (rabbits)
Test scores or other study results do not meet criteria for classification.
Minimally toxic. Based on test data for structurally similar materials.
- Acute inhalation toxicity 4 hours LC₅₀ (OECD 403)
(Toxicity) : 4,778 mg/m³ (rats)
Test scores or other study results do not meet criteria for classification.
Minimally toxic. Based on test data for structurally similar materials.
(Irritation) : No end point data for material.
Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose throat, or lungs.
- Skin corrosion/irritation (OECD 404)
: Test scores or other study results do not meet criteria for classification.
May dry the skin leading to discomfort and dermatitis.
Based on test data for structurally similar
- Eye damage/irritation (OECD 405)
: Test scores or other study results do not meet criteria for classification.
May cause mild, short-long discomfort to eyes.
Based on test data for structurally similar materials.
- Skin sensitization (OECD 406)
(Skin) : Test scores or other study results do not meet criteria for classification.
Not expected to be a skin sensitizer.
Based on test data for structurally similar materials.
(Respiratory) : No end point data for material.
Not expected to be a respiratory sensitizer.
- Aspiration toxicity : May be fatal if swallowed and enters airways.
Based on physico-chemical properties of the material.
- Germ cell mutagenicity (OECD 471, 473, 474, 475, 476 and 479)
: Test scores or other study results do not meet criteria for classification.
Not expected to be a germ cell mutagen.
Based on test data for structurally similar materials.

11. TOXICOLOGICAL INFORMATION (continued)

- Carcinogenicity : No end point data for material.
Not expected to cause cancer.
- Reproductive toxicity (OECD 414 and 416) : Test scores or other study results do not meet criteria for classification.
Not expected to be a reproductive toxicant.
Based on test data for structurally similar materials.
- Lactation : No end point data for material.
Not expected to cause harm to breast-fed child.
- Specific target organ toxicity (OECD 408, 413 and 452)
(Single exposure) : No end point data for material.
Not expected to cause organ damage from a single exposure.
- (Repeated exposure) : Test scores or other study results do not meet criteria for classification.
Not expected to cause organ damage from prolonged or repeated exposure.
Base on test data for structurally similar materials.

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

This product does not contain components considered to be 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. ECOLOGICAL INFORMATION**12.1. Toxicity****Product**

- | | | |
|------------------------|--|-----------------------|
| Toxicity to fish | : LC ₅₀ (96 h, Rainbow trout) | 2.87 mg/L |
| Toxicity to Daphnia | : EC ₅₀ (48 h, <i>Daphnia magna</i>) | 3.38 mg/L |
| Toxicity to algae | : EC ₅₀ (72 h, <i>S. capricornutum</i>) | 3.33 mg/L |
| Toxicity to bees | : LD ₅₀ (Oral/Contact, 48h, <i>Apis mellifera</i>) | 268.5 / 326.1 µg /bee |
| Toxicity to earthworm: | 14-day LC ₅₀ (<i>Eisenia foetida</i>) | 607 mg/kg soil |

Components**Quizalofop-P-ethyl (ISO)**

- | | | |
|----------------------------|--|-------------------|
| Toxicity to fish | : LC ₅₀ (96 h, Rainbow trout) | 0.388 mg/L |
| | : NOEC (21 days, Rainbow trout) | 0.044 mg/L |
| Toxicity to <i>Daphnia</i> | : EC ₅₀ (48 h, <i>Daphnia magna</i>) | 0.29 mg/L |
| Toxicity to algae | : EC ₅₀ (5 d, <i>S. capricornutum</i>) | 0.021 mg/L |
| Toxicity to aquatic plants | : EC ₅₀ (7 d, <i>Lemna gibba</i> G3) | 0.0828 mg/L |
| Toxicity to earthworm: | LC ₅₀ (<i>Eisenia foetida</i>) | >1,000 mg/kg soil |
| Toxicity to bird | : LD ₅₀ (Bobwhite quail) | >2,000 mg/kg |
| | : LC ₅₀ (5d, Bobwhite quail/Mallard duck) | >2,000 mg/kg diet |
| | : LC ₅₀ (5d, Mallard duck) | >2,000mg/kg |
| | : NOEL (reproduction) | 500 mg/kg diet |
| Soil micro-organism | : No effects on soil nitrification and respiration | |
| Sewage treatment | : No adverse effect in sewage sludge organisms | |

Polyoxyethylene alkyl ether

- | | | | |
|----------------------------|--|-----------|-------------------|
| Toxicity to fish | : LC ₅₀ (96 h, <i>Oryzias latipes</i>) | 11 mg/L | [reference value] |
| Toxicity to <i>Daphnia</i> | : EC ₅₀ (48 h, <i>Daphnia magna</i>) | 0.29 mg/L | [reference value] |

Benzenesulphonic acid, 4-C10-14-alkyl derivs., calcium salts

- | | | |
|------------------|---|--|
| Toxicity to fish | : LC ₅₀ (96 h, fish) | 1 to 10 mg/L (OECD 203) |
| | : Chronic NOEC (72 days, <i>O. mykiss</i>) | 0.23 mg/L
(read across from similar material) |

12. ECOLOGICAL INFORMATION (continued)

Toxicity to <i>Daphnia</i>	: LC ₅₀ (48 h, <i>Daphnia</i> sp.)	2.9 mg/L (OECD 202) (read across from similar material)
	: Chronic NOEC (21 days, <i>Daphnia</i> sp.)	1.18 mg/L (read across from similar material)
Toxicity to algae	: EC ₅₀ (96 h, Algae)	29 mg/L (read across from similar material)

2-Ethylhexanole

Toxicity to <i>Daphnia</i>	: EC ₅₀ (48 h, <i>Daphnia</i> sp.)	39 mg/L
Toxicity to algae	: EC ₅₀ (72 h, Algae)	11.5 mg/L

Hydrocarbons, C10-C13, aromatics, <1% naphthalene

Toxicity to fish	: LL ₅₀ (96 h, <i>O. mykiss</i>)	3.6 mg/L (data for the material)
Toxicity to <i>Daphnia</i>	: EL ₅₀ (48 h, <i>Daphnia magna</i>)	1.1 mg/L (data for similar material)
Toxicity to algae	: EL ₅₀ (72 h, <i>P. subcapitata</i>)	7.9 mg/L (data for similar material)
	: NOELR (72 h, <i>P. subcapitata</i>)	0.22 mg/L (data for similar material)

12.2. Persistence and degradability**Product**

No information is available for the product.

Components**Quizalofop-P-ethyl (ISO)**

Quizalofop-P-ethyl is hydrolytically stable, but readily degraded in soils and water/sediment systems.

Hydrolysis (20°C)	: DT ₅₀	> 365 days	(pH 4)
		112 days	(pH 7)
		< 1 day	(pH 9)
Aqueous photolysis (25°C)	: DT ₅₀	38.3 days	(pH 5 xenon arc lamp)
Degradation in soil (20°C)	: DT ₅₀	< 2 days	
Degradation in water/sediment (20°C)	: DT ₅₀	< 2 days	
Ready biodegradability	: Poorly degradable		

Polyoxyethylene alkyl ether

No data available.

Benzenesulphonic acid, 4-C10-14-alkyl derivs., calcium salts

Readily biodegradability - CO ₂ Evolution Test (OECD 301B)	: 100 % - Readily - 28 days
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2-Ethylhexanole

Readily biodegradability - Modified MITI Test (I) (OECD 301C)	: 79 to 99.9 % - Readily - 14 days
Readily biodegradability - Manometric Respirometry Test (OECD 301F)	: > 60 % - Readily - 28 days

Hydrocarbons, C10-C13, aromatics, <1% naphthalene

Readily biodegradability - Water	: 28 days (% degraded 70)
Hydrolysis	: Transformation due to hydrolysis not expected to be significant.
Photolysis	: Transformation due to photolysis not expected to be significant.
Atmospheric oxidation	: Expected to degrade rapidly in air.

12. ECOLOGICAL INFORMATION (continued)**12.3. Bioaccumulative potential****Product**

No information is available for the product.

Components**Quizalofop-P-ethyl (ISO)**

The potential of the substance to accumulate in biota and pass through the food chain is considered to be low based on the BCF and a rapid degradation of the substance.

Partition coefficient (*n*-octanol/water)

: Log Pow 4.61 at 23 °C

Bioconcentration (Bluegill sunfish)

: BCF (28 days) 380 x (whole fish)

: Depuration (14 days) <1 % remained in whole fish

Polyoxyethylene alkyl ether

No data available.

Benzenesulphonic acid, 4-C10-14-alkyl derivs., calcium salts

No data available.

2-Ethylhexanole

Partition coefficient (*n*-octanol/water)

: Log Pow 2.3 to 3.1

BCF : 25.33

Potential : Low

Hydrocarbons, C10-C13, aromatics, <1% naphthalene

Not determined.

12.4. Mobility in soil**Product**

No information is available for the product.

Components**Quizalofop-P-ethyl (ISO)**

Quizalofop-P-ethyl is readily degraded to acid metabolite quizalofop-P in the environment. The acid quizalofop-P is less toxic than the parent quizalofop-P-ethyl. Quizalofop-P is further degraded in the environment.

Surface tension (quizalofop-P-ethyl)

: Not applicable due to the water solubility (less than 1 mg/l)

Adsorption/desorption (quizalofop-P)

: KFadsoc : 214- 1791 (acid metabolite: low-medium mobility)

Polyoxyethylene alkyl ether

No data available.

Benzenesulphonic acid, 4-C10-14-alkyl derivs., calcium salts

No data available.

2-Ethylhexanole

No data available.

Hydrocarbons, C10-C13, aromatics, <1% naphthalene

Expected to partition to sediment and wastewater solids. Moderately volatile.

12. ECOLOGICAL INFORMATION (continued)

12.5. Results of PBT and vPvB assessment

Product

This product 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.

12.6. Endocrine disrupting properties

Product

This product 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

Investigations indicate no significant loss of the parent quizalofop-P-ethyl to the air from either soils or plant surfaces following pesticide application.

Photochemical oxidative degradation in air
: DT₅₀ 4.5 hours

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Do not contaminate water, foodstuffs, feed or seed by disposal. Dispose of contents/container in accordance with regional regulation (P501).

PRODUCT DISPOSAL

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or burned in incinerator in accordance with all applicable regulations.

CONTAINER DISPOSAL

Completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Do not reuse container. Triple rinse container, then puncture and dispose of by incineration in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

14.1. UN number

3082

14.2. UN proper shipping name

Environmental Hazardous Substance, Liquid n.o.s. (quizalofop-P-ethyl, Hydrocarbons, C10-C13, aromatics, <1% naphthalene solution)

14.3. Transport hazard class(es)

Class 9

14.4. Packing group

Packing Group III

14.5. Environmental hazards

Marine Pollutant Label

: Marine Pollutant

14.6. Special precautions for user

No special precautions available.

14. TRANSPORT INFORMATION (continued)**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

No bulk transportation intended.

14.8. Supplemental information**IMDG**

UN No. : 3082
 Class : 9
 Packing Group : III
 Ems : F-A, S-F
 Marine Pollutant Label :
 Marine Pollutant :
 Proper Shipping Name : Environmental Hazardous Substance, Liquid n.o.s.
 (quizalofop-P-ethyl, Hydrocarbons, C10-C13, aromatics, <1% naphthalene solution)

ICAO/IATA

UN No. : 3082
 Class : 9
 Packing Group : III
 Proper Shipping Name : Environmental Hazardous Substance, Liquid n.o.s.
 (quizalofop-P-ethyl, Hydrocarbons, C10-C13, aromatics, <1% naphthalene solution)

ADR/RID

UN No. : 3082
 Class : 9
 Packing Group : III
 Proper Shipping Name : Environmental Hazardous Substance, Liquid n.o.s.
 (quizalofop-P-ethyl, Hydrocarbons, C10-C13, aromatics, <1% naphthalene solution)

ADN/ADNR

UN No. : 3082
 Class : 9
 Packing Group : III
 Proper Shipping Name : Environmental Hazardous Substance, Liquid n.o.s.
 (quizalofop-P-ethyl, Hydrocarbons, C10-C13, aromatics, <1% naphthalene solution)

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

The product is regulated under the EU Directive(s) or Regulation(s) on plant protection products since it is one of plant protection products.

Further Information

WHO Classification : III (Slightly hazardous)

15.2. Chemical safety assessment

The chemical safety assessment has not been carried out for this product yet.

16. OTHER INFORMATION**16.1. Classification and procedure used to derive the classification for mixtures in accordance with Regulation (EC) No 1272/2008 [CLP]**

Classification in accordance with Regulation (EC) No 1272/2008 [CLP]	Classification procedure
Eye Irritation Category 1, H318	On basis of test data

16.2. Relevant Hazard and Precautionary statements (see Sec. 2 and 3)

Hazard statements

H302	: Harmful if swallowed
H315	: Causes skin irritation
H318	: Causes serious eye damage
H319	: Causes serious eye irritation
H332	: Harmful if inhaled
H335	: May cause respiratory irritation
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

Precautionary statements

P261	: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	: Wash hands thoroughly after handling.
P270	: Do not eat, drink or smoke when using this product.
P271	: Use only outdoors or in a well-ventilated area.
P273	: Avoid release to the environment.
P280	: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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.
P310	: Immediately call a POISON CENTER or doctor/physician.
P312	: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	: Rinse mouth.
P332+P313	: If skin irritation occurs: Get medical advice/attention.
P337+P313	: If eye irritation persists: Get medical advice/attention.
P362	: Take off contaminated clothing and wash before reuse.
P391	: Collect spillage.
P403+P233	: Store in a well-ventilated place. Keep container tightly closed.
P405	: Store locked up.
P501	: Dispose of contents/container in accordance with local regulation.
EUH066	: Repeated exposure may cause skin dryness or cracking.

Version	Changes	Date
Version 1	First version	January 20, 2023

This Safety Data Sheet is prepared in accordance with Commission Regulation (EU) No 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

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