

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



SIGNATURE XTRA STRESSGARD

Version 4.0 Revision Date: 09.11.2023 SDS Number: 11170661-00005 Date of last issue: 04.08.2023
Date of first issue: 02.02.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : SIGNATURE XTRA STRESSGARD
Product code : Article/SKU: 86768690 UVP: 81691088 Specification:
102000029598

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

Use of the Sub-stance/Mixture : Fungicide, Plant protection agent
Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : 2022 Environmental Science FR S.A.S.
Lyon Vaise Business Center, 1 Place Giovanni Da Verrazzano
69009 Lyon, France
Telephone : +41 0800 1214 9451
E-mail address of person responsible for the SDS : service.clients.es.france@envu.com

1.4 Emergency telephone number

National Poisons Information Centre (for public):
+353 1 809 2166
National Poisons Information Centre (for professionals):
+353 1 809 2566
For Emergency or Spill call:
+353 1 901 4670 (24/7 multilingual support)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Eye irritation, Category 2 H319: Causes serious eye irritation.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P337 + P313 If eye irritation persists: Get medical advice/ attention.

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

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.

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

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Water dispersible granules (WG)

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Fosetyl-aluminium	39148-24-8 254-320-2	Eye Dam. 1; H318	>= 50 - < 70

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	006-095-00-5		
2-Propanol, reaction products with naphthalene, sulfonated, sodium salts	1322-93-6 215-343-3 01-2119969954-16	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Dam. 1; H318 STOT SE 3; H335 Acute toxicity estimate Acute oral toxicity: 453.05 mg/kg Acute inhalation toxicity (dust/mist): 1.09 mg/l	>= 3 - < 10
Tristyrylphenol ethoxylates	99734-09-5	Aquatic Chronic 3; H412	>= 2.5 - < 10
Formic acid	64-18-6 200-579-1 607-001-00-0 01-2119491174-37	Flam. Liq. 3; H226 Acute Tox. 4; H302 Acute Tox. 3; H331 Skin Corr. 1A; H314 Eye Dam. 1; H318 EUH071 specific concentration limit Skin Corr. 1A; H314 >= 90 % Skin Corr. 1B; H314 10 - < 90 % Skin Irrit. 2; H315 2 - < 10 % Eye Irrit. 2; H319 2 - < 10 % EUH071 >= 10 % Acute toxicity estimate Acute oral toxicity: 730 mg/kg Acute inhalation toxicity (vapour): 7.85 mg/l	>= 1 - < 2

For explanation of abbreviations see section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.
- In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : The following symptoms may occur:
The product causes irritation of eyes, skin and mucous membranes.
- Risks : This product is not a cholinesterase inhibitor.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : There is no specific antidote available.
Treat symptomatically.
Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

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Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Oxides of phosphorus
Metal oxides
Sulphur oxides
Chlorine compounds
Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding

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certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- | | | |
|-------------------------|---|---|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | Use only with adequate ventilation. |
| Advice on safe handling | : | Do not swallow.
Do not get in eyes.
Avoid prolonged or repeated contact with skin.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Take care to prevent spills, waste and minimize release to the environment. |
| Hygiene measures | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. |
| Dust explosion class | : | No data available |

7.2 Conditions for safe storage, including any incompatibilities

- | | | |
|---|---|---|
| Requirements for storage areas and containers | : | Keep in properly labelled containers. Store in accordance with the particular national regulations. |
| Advice on common storage | : | Do not store with the following product types:
Strong oxidizing agents |
| Recommended storage temperature | : | 0 - 35 °C |

7.3 Specific end use(s)

- | | | |
|-----------------|---|------------------------------------|
| Specific use(s) | : | Refer to the label and/or leaflet. |
|-----------------|---|------------------------------------|
-

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

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Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Fosetyl-aluminium	39148-24-8	OELV - 8 hrs (TWA)	2 mg/m ³ (Aluminium)	IE OEL
Formic acid	64-18-6	TWA	5 ppm 9 mg/m ³	2006/15/EC
Further information: Indicative				
		OELV - 8 hrs (TWA)	5 ppm 9 mg/m ³	IE OEL

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
2-Propanol, reaction products with naphthalene, sulfonated, sodium salts	Workers	Inhalation	Long-term systemic effects	0.08 mg/m ³
	Workers	Inhalation	Acute systemic effects	23 mg/m ³
	Workers	Inhalation	Long-term local effects	0.08 mg/m ³
	Workers	Inhalation	Acute local effects	34 mg/m ³
C.I. Pigment Green 7	Workers	Skin contact	Long-term systemic effects	0.44 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.02 mg/m ³
	Consumers	Inhalation	Long-term local effects	0.02 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	0.22 mg/kg bw/day
Formic acid	Consumers	Ingestion	Long-term systemic effects	0.22 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	4 mg/m ³
	Workers	Skin contact	Long-term systemic effects	450 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	225 mg/kg bw/day
Sodium acetate	Consumers	Ingestion	Long-term systemic effects	45 mg/kg bw/day
	Workers	Inhalation	Acute local effects	19 mg/m ³
	Workers	Inhalation	Long-term local effects	9.5 mg/m ³
	Consumers	Inhalation	Acute local effects	9.5 mg/m ³
Sodium acetate	Consumers	Inhalation	Long-term local effects	3 mg/m ³
	Workers	Inhalation	Long-term systemic effects	1057.9 mg/m ³
	Workers	Inhalation	Acute systemic effects	6347.36 mg/m ³
	Workers	Skin contact	Long-term systemic	12 mg/kg

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			effects	bw/day
	Workers	Skin contact	Acute systemic effects	72 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	521.73 mg/m3
	Consumers	Inhalation	Acute systemic effects	3103.45 mg/m3
	Consumers	Skin contact	Long-term systemic effects	6 mg/kg bw/day
	Consumers	Skin contact	Acute local effects	36 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	6 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	36 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
2-Propanol, reaction products with naphthalene, sulfonated, sodium salts	Fresh water	0.2 mg/l
	Freshwater - intermittent	2 mg/l
	Marine water	0.02 mg/l
	Sewage treatment plant	0.016 mg/l
	Fresh water sediment	5.4 mg/kg dry weight (d.w.)
	Marine sediment	0.54 mg/kg dry weight (d.w.)
C.I. Pigment Green 7	Soil	0.12 mg/kg dry weight (d.w.)
	Fresh water sediment	10 mg/kg
	Marine sediment	1 mg/kg
Formic acid	Soil	1 mg/kg
	Fresh water	2 mg/l
	Marine water	0.2 mg/l
	Intermittent use/release	1 mg/l
	Sewage treatment plant	7.2 mg/l
	Fresh water sediment	13.4 mg/kg
Sodium acetate	Marine sediment	1.34 mg/kg
	Soil	1.5 mg/kg
	Fresh water	0.1 mg/l
	Marine water	0.01 mg/l
	Sewage treatment plant	0.72 g/l
	Fresh water sediment	0.000402 mg/kg dry weight (d.w.)
Marine sediment		0.00004 mg/kg dry weight (d.w.)
	Soil	0.000402 mg/kg dry weight (d.w.)

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8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:
Safety goggles
Equipment should conform to I.S. EN 166

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : > 0.4 mm
Directive : Equipment should conform to I.S. EN 374
Protective index : Class 6

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. 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.

Skin and body protection : Skin should be washed after contact.

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Equipment should conform to I.S. EN 14387

Filter type : Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : granules

Colour : green

Odour : acidic, slight

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Odour Threshold	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flammability (solid, gas)	:	Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	3.0 - 5.0 (23 °C) Concentration: 10 %
Viscosity Viscosity, kinematic	:	Not applicable
Solubility(ies) Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	Not applicable
Vapour pressure	:	Not applicable
Relative density	:	No data available
Bulk density	:	705 kg/m ³

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Relative vapour density : Not applicable

Particle characteristics
Particle size : No data available

9.2 Other information

Explosives : Not explosive
Method: Regulation (EC) No. 440/2008, Annex, A.14

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Self-ignition : Method: Regulation (EC) No. 440/2008, Annex, A.16
The substance or mixture is not classified as self heating.

Dust explosion class : No data available

Evaporation rate : Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents
Strong acids and strong bases

Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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SECTION 11: Toxicological information

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

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

Acute toxicity

Product:

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

Acute inhalation toxicity : LC50 (Rat): > 5.22 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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

Components:

Fosetyl-aluminium:

Acute oral toxicity : LD50 (Rabbit): 2,680 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.11 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): > 2,000 mg/kg

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Acute oral toxicity : LD50 (Rat): > 453 - 1,368 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male): 1.09 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, male): > 2,000 mg/kg
Remarks: Based on data from similar materials

Tristyrylphenol ethoxylates:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Remarks: Based on data from similar materials

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Formic acid:

Acute oral toxicity : LD50 (Rat): 730 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 7.85 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Product:

Species : Rabbit
Result : No skin irritation

Components:

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Species : Rabbit
Result : No skin irritation

Tristyrylphenol ethoxylates:

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

Formic acid:

Result : Corrosive after 3 minutes or less of exposure
Remarks : Based on national or regional regulation.

Serious eye damage/eye irritation

Product:

Species : Rabbit
Result : Irritation to eyes, reversing within 7 days

Components:

Fosetyl-aluminium:

Result : Irreversible effects on the eye
Remarks : Based on national or regional regulation.

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

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Species : Rabbit
Result : Irreversible effects on the eye

Tristyrylphenol ethoxylates:

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

Formic acid:

Result : Irreversible effects on the eye
Remarks : Based on skin corrosivity.

Respiratory or skin sensitisation

Product:

Exposure routes : Skin contact
Species : Guinea pig
Result : negative

Components:

Formic acid:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative

Germ cell mutagenicity

Components:

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Tristyrylphenol ethoxylates:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

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Formic acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in *Drosophila melanogaster* (in vivo)
Application Route: Ingestion
Method: OECD Test Guideline 477
Result: negative

Carcinogenicity

Components:

Fosetyl-aluminium:

Species : Dog
Application Route : Ingestion
Exposure time : 2 Years
Result : negative

Formic acid:

Species : Rat
Application Route : Ingestion
Exposure time : 104 weeks
Result : negative
Remarks : Based on data from similar materials

Reproductive toxicity

Components:

Fosetyl-aluminium:

Effects on fertility : Test Type: Four-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat

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Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Formic acid:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

STOT - single exposure

Components:

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Components:

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Assessment : No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Repeated dose toxicity

Components:

Fosetyl-aluminium:

Species : Rat
NOAEL : 500 mg/kg
Application Route : Ingestion
Exposure time : 13 Weeks

Species : Rat
NOAEL : 1,050 mg/kg
Application Route : Skin contact
Exposure time : 28 Days

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Species : Rat

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NOAEL : 100 mg/kg
LOAEL : 300 mg/kg
Application Route : Ingestion
Exposure time : 36 - 52 Days
Method : OECD Test Guideline 422

Species : Rat
NOAEL : 0.004 mg/l
LOAEL : 0.01 mg/l
Application Route : inhalation (dust/mist/fume)
Exposure time : 90 Days
Method : OECD Test Guideline 413

Formic acid:

Species : Rat
NOAEL : 400 mg/kg
Application Route : Ingestion
Exposure time : 52 Weeks
Remarks : Based on data from similar materials

11.2 Information on other hazards

Endocrine disrupting properties

Product:

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

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 500 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 43.50 mg/l
Exposure time: 72 h

Components:

Fosetyl-aluminium:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 122 mg/l
Exposure time: 96 h

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- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 29.6 mg/l
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): 2.715 mg/l
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOEC: \geq 100 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 215
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 17 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

- Chronic aquatic toxicity : No toxicity at the limit of solubility

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 200 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- NOEC (Raphidocelis subcapitata (freshwater green alga)): 12.5 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- Toxicity to microorganisms : NOEC (activated sludge): 0.16 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Tristyrylphenol ethoxylates:

- Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 21 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Formic acid:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 130 mg/l
Exposure time: 96 h

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Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 365 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 1,240 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): 295 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC : 72 mg/l
Exposure time: 13 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 100 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

12.2 Persistence and degradability

Components:

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 29 d
Method: OECD Test Guideline 301B

Tristyrylphenol ethoxylates:

Biodegradability : Result: Not readily biodegradable.
Remarks: Based on data from similar materials

Formic acid:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

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12.3 Bioaccumulative potential

Components:

Fosetyl-aluminium:

Partition coefficient: n-octanol/water : log Pow: -2.11

2-Propanol, reaction products with naphthalene, sulfonated, sodium salts:

Partition coefficient: n-octanol/water : log Pow: -0.27

Formic acid:

Partition coefficient: n-octanol/water : log Pow: -2.1

12.4 Mobility in soil

No data available

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.

12.6 Endocrine disrupting properties

Product:

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

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in

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- discussion with the waste disposal authorities.
Do not dispose of waste into sewer.
- Contaminated packaging : Follow advice on product label and/or leaflet.
Empty containers retain residue and can be dangerous.
Do not re-use empty containers.
- Waste Code : The following Waste Codes are only suggestions:
- used product
02 01 08, agrochemical waste containing hazardous substances
- unused product
02 01 08, agrochemical waste containing hazardous substances
- uncleaned packagings
15 01 10, packaging containing residues of or contaminated by hazardous substances
-

SECTION 14: Transport information

14.1 UN number or ID number

- ADN : Not regulated as a dangerous good
- ADR : Not regulated as a dangerous good
- RID : Not regulated as a dangerous good
- IMDG : Not regulated as a dangerous good
- IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

- ADN : Not regulated as a dangerous good
- ADR : Not regulated as a dangerous good
- RID : Not regulated as a dangerous good
- IMDG : Not regulated as a dangerous good
- IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

- ADN : Not regulated as a dangerous good
- ADR : Not regulated as a dangerous good
- RID : Not regulated as a dangerous good
- IMDG : Not regulated as a dangerous good
- IATA : Not regulated as a dangerous good

14.4 Packing group

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ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 75
If you intend to use this product as tattoo ink, please contact your vendor.

Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the conditions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.

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

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REACH - List of substances subject to authorisation : Not applicable
(Annex XIV)

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

Active substance : 60 %
Fosetyl-aluminium

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Other regulations:

European Communities (Prohibition of Certain Active Substances in Plant Protection Products) Regulations 1981 (SI No 320/1981)

European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations 2003 (SI No 83/2003)

European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001)

2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (SI No 619/2001)

Landfill Directive

Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H226 : Flammable liquid and vapour.
H302 : Harmful if swallowed.
H314 : Causes severe skin burns and eye damage.
H318 : Causes serious eye damage.
H331 : Toxic if inhaled.
H332 : Harmful if inhaled.
H335 : May cause respiratory irritation.
H412 : Harmful to aquatic life with long lasting effects.
EUH071 : Corrosive to the respiratory tract.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Dam. : Serious eye damage
Flam. Liq. : Flammable liquids
Skin Corr. : Skin corrosion

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STOT SE : Specific target organ toxicity - single exposure
2006/15/EC : Europe. Indicative occupational exposure limit values
IE OEL : List of Chemical Agents and Carcinogens with Occupational
Exposure Limit Values - Code of Practice, Schedule 1 and 2
2006/15/EC / TWA : Limit Value - eight hours
IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals 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

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

Eye Irrit. 2 H319

Classification procedure:

Based on product data or assessment

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for

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safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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