

**FUSILADE FORTE**

Version 9.0      Revision Date: 18.04.2025      SDS Number: S165026034      Date of last issue: -  
Date of first issue: 18.04.2025

---

**Section 1: Identification**

Product name : FUSILADE FORTE

Design code : A12715A

**Manufacturer or supplier's details**

Company : Syngenta Crop Protection Limited

Address : Level 4, 60 Parnell Road, Parnell  
Auckland  
New Zealand

Telephone : 09 306 1500 (weekdays)

Emergency telephone number : 0800 POISON (0800 764766) (National Poisons & Hazchem  
Information Centre)  
0800 734 607(Syngenta - 24 hours)

Telefax : None

**Recommended use of the chemical and restrictions on use**

Recommended use : Herbicide

---

**Section 2: Hazard identification****GHS Classification**

Flammable liquids : Category 4

Skin sensitisation : Category 1

Specific target organ toxicity -  
repeated exposure : Category 2

Hazardous to the aquatic  
environment - chronic hazard : Category 2

Hazardous to the environment : Hazardous to soil organisms

**GHS label elements**

Hazard pictograms : 

Signal word : Warning

## FUSILADE FORTE

Version 9.0      Revision Date: 18.04.2025      SDS Number: S165026034      Date of last issue: -  
Date of first issue: 18.04.2025

- Hazard statements** :
- H227 Combustible liquid.
  - H317 May cause an allergic skin reaction.
  - H373 May cause damage to organs (Liver) through prolonged or repeated exposure if swallowed.
  - H411 Toxic to aquatic life with long lasting effects.
  - H421 Very toxic to the soil environment.
- Precautionary statements** :
- Prevention:**
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P260 Do not breathe mist or vapours.
  - P272 Contaminated work clothing should not be allowed out of the workplace.
  - P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
- Response:**
- P302 + P352 IF ON SKIN: Wash with plenty of water.
  - P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
  - P362 + P364 Take off contaminated clothing and wash it before reuse.
  - P314 Get medical advice/ attention if you feel unwell.
  - P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
  - P391 Collect spillage.
- Storage:**
- P403 Store in a well-ventilated place.
- Disposal:**
- P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

### Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
(E)-18-ethoxyoctadec-3-ene	68920-66-1	>= 25 -< 30
Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil — unspecified	64742-65-0	>= 10 -< 20
fluazifop-P-butyl (ISO)	79241-46-6	>= 10 -< 20
octan-1-ol	111-87-5	>= 10 -< 20
calcium dodecylbenzenesulphonate	26264-06-2	>= 1 -< 2.5
2-methylpropan-1-ol	78-83-1	>= 1 -< 10
toluene	108-88-3	>= 0.25 -< 1

## FUSILADE FORTE

Version 9.0	Revision Date: 18.04.2025	SDS Number: S165026034	Date of last issue: - Date of first issue: 18.04.2025
----------------	------------------------------	---------------------------	--

### Section 4: First-aid measures

- |   |   |   |
|---|---|---|
| General advice  | : | Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.                                      |
| If inhaled  | : | Move the victim to fresh air.<br>If breathing is irregular or stopped, administer artificial respiration.<br>Keep patient warm and at rest.<br>Call a physician or poison control centre immediately. |
| In case of skin contact                                     | : | Take off all contaminated clothing immediately.<br>Wash off immediately with plenty of water.<br>If skin irritation persists, call a physician.<br>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.<br>Remove contact lenses.<br>Immediate medical attention is required.  |
| If swallowed  | : | If swallowed, seek medical advice immediately and show this container or label.<br>Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.                                   |
| Most important symptoms and effects, both acute and delayed | : | Aspiration may cause pulmonary oedema and pneumonitis.<br>May cause an allergic skin reaction.<br>May cause damage to organs through prolonged or repeated exposure if swallowed.                     |
| Notes to physician  | : | There is no specific antidote available.<br>Treat symptomatically.<br>Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.  |

### Section 5: Fire-fighting measures

- |                                       |   |   |
|---------------------------------------|---|---|
| Suitable extinguishing media          | : | Extinguishing media - small fires<br>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.<br>Extinguishing media - large fires<br>Alcohol-resistant foam  |
| Unsuitable extinguishing media        | : | Do not use a solid water stream as it may scatter and spread fire.  |
| 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).<br>Exposure to decomposition products may be a hazard to health.<br>Flash back possible over considerable distance. |
| Hazardous combustion products         | : | Carbon oxides<br>Nitrogen oxides (NO <sub>x</sub> )<br>Fluorine compounds<br>Sulphur oxides   |

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

---

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

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

Hazchem Code : 3Z

---

**Section 6: Accidental release measures**

Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.  
Keep people away from and upwind of spill/leak.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
Remove all sources of ignition.  
Pay attention to flashback.

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

---

**Section 7: Handling and storage**

Advice on safe handling : Avoid contact with skin and eyes.  
When using do not eat, drink or smoke.  
Use only in an area containing flame proof equipment.  
Take precautionary measures against static discharges.  
For personal protection see section 8.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.  
Keep out of the reach of children.  
Keep away from combustible material.  
Keep in an area equipped with sprinklers.  
Keep away from food, drink and animal feedingstuffs.  
No smoking.

---

**Section 8: Exposure controls/personal protection****Components with workplace control parameters**

## FUSILADE FORTE

Version 9.0      Revision Date: 18.04.2025      SDS Number: S165026034      Date of last issue: -  
Date of first issue: 18.04.2025

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil — unspecified	64742-65-0	WES-TWA (Mist)	5 mg/m <sup>3</sup>	NZ OEL
	Further information: Sampled by a method that does not collect vapour.			
		WES-STEL (Mist)	10 mg/m <sup>3</sup>	NZ OEL
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH
fluazifop-P-butyl (ISO)	79241-46-6	TWA	0.1 mg/m <sup>3</sup>	Syngenta
2-methylpropan-1-ol	78-83-1	WES-TWA	50 ppm 152 mg/m <sup>3</sup>	NZ OEL
		TWA	50 ppm	ACGIH
toluene	108-88-3	WES-TWA	20 ppm 75 mg/m <sup>3</sup>	NZ OEL
	Further information: Ototoxin, Exposure can also be estimated by biological monitoring, Skin absorption			
		WES-STEL	100 ppm 377 mg/m <sup>3</sup>	NZ OEL
	Further information: Ototoxin, Exposure can also be estimated by biological monitoring, Skin absorption			
		TWA	20 ppm	ACGIH

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
toluene	108-88-3	Toluene	Urine	End of exposure or end of shift	0.03 mg/l	NZ BEI
		o-Cresol	Urine	End of exposure or end of shift	0.3 mg/g creatinine	NZ BEI
		Toluene	In blood	Prior to last shift of work-week	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As	0.3 mg/g creatinine	ACGIH BEI

## FUSILADE FORTE

Version 9.0	Revision Date: 18.04.2025	SDS Number: S165026034	Date of last issue: - Date of first issue: 18.04.2025
----------------	------------------------------	---------------------------	--

				soon as possible after exposure ceases)		
--	--	--	--	---	--	--

**Engineering measures** : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

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

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

#### 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.

**Eye protection** : No special protective equipment required.  
**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.

## FUSILADE FORTE

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

---

Protective measures : Wear as appropriate:  
Impervious clothing  
The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

Personal protective equipment should comply with relevant national standards

---

### Section 9: Physical and chemical properties

Appearance	:	clear to slightly turbid, liquid
Colour	:	light brown to dark brown
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	4 - 8 Concentration: 1 %w/v
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	86 °C  Method: Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
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	:	0.948 g/cm <sup>3</sup> (25 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available

## FUSILADE FORTE

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	265 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	54.1 - 54.8 mPa,s ( 20 °C)
		22.1 - 22.4 mPa,s ( 40 °C)
Viscosity, kinematic	:	22 mm <sup>2</sup> /s ( 40 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Surface tension	:	32.4 mN/m, 20 °C
Particle characteristics		
Particle size	:	No data available

### Section 10: Stability and reactivity

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	No decomposition if used as directed.
Incompatible materials	:	None known.
Hazardous decomposition products	:	No hazardous decomposition products are known.

### Section 11: Toxicological information

Exposure routes	:	Ingestion Inhalation Skin contact Eye contact
-----------------	---	--

#### Acute toxicity

Not classified due to lack of data.

#### **Product:**

Acute oral toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity
Acute dermal toxicity	:	LD50 (Rat, male and female): > 4,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

**Components:****fluazifop-P-butyl (ISO):**

- Acute oral toxicity : LD50 (Rat, female): 2,451 mg/kg  
Assessment: The component/mixture is minimally toxic after single ingestion.
- Acute inhalation toxicity : LC50 (Rat, male and female): > 5.2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,110 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**octan-1-ol:**

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 5.6 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**2-methylpropan-1-ol:**

- Acute oral toxicity : LD50 (Rat): 2,830 - 3,350 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 24.6 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 - 2,460 mg/kg

**toluene:**

- Acute oral toxicity : LD50 (Rat, male): 5,580 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male): 25.7 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Assessment: The substance or mixture has no acute inhalation toxicity

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

---

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

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Product:**

Species : Rabbit  
Result : Mild skin irritation

**Components:****(E)-18-ethoxyoctadec-3-ene:**

Species : Rabbit  
Result : Irritating to skin.

**fluazifop-P-butyl (ISO):**

Species : Rabbit  
Result : No skin irritation

**octan-1-ol:**

Species : Rabbit  
Result : No skin irritation

**calcium dodecylbenzenesulphonate:**

Result : Irritating to skin.

**2-methylpropan-1-ol:**

Result : Irritating to skin.

**toluene:**

Species : Rabbit  
Result : Irritating to skin.

**Serious eye damage/eye irritation**

Based on available data, the classification criteria are not met.

**Product:**

Species : Rabbit  
Result : No eye irritation

**Components:****fluazifop-P-butyl (ISO):**

Species : Rabbit  
Result : No eye irritation

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

---

**octan-1-ol:**

Species	: Rabbit
Result	: Irritation to eyes, reversing within 21 days

**calcium dodecylbenzenesulphonate:**

Result	: Irreversible effects on the eye
--------	-----------------------------------

**2-methylpropan-1-ol:**

Result	: Risk of serious damage to eyes.
--------	-----------------------------------

**toluene:**

Species	: Rabbit
Result	: No eye irritation

**Respiratory or skin sensitisation****Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified due to lack of data.

**Product:**

Test Type	: Buehler Test
Species	: Guinea pig
Result	: May cause sensitisation by skin contact.

**Components:****fluazifop-P-butyl (ISO):**

Species	: Mouse
Result	: May cause sensitisation by skin contact.

**octan-1-ol:**

Species	: Guinea pig
Result	: Does not cause skin sensitisation.

**2-methylpropan-1-ol:**

Species	: Guinea pig
Result	: Does not cause skin sensitisation.
Remarks	: Information given is based on data obtained from similar substances.

**toluene:**

Species	: Guinea pig
Result	: Does not cause skin sensitisation.

## FUSILADE FORTE

Version 9.0	Revision Date: 18.04.2025	SDS Number: S165026034	Date of last issue: - Date of first issue: 18.04.2025
----------------	------------------------------	---------------------------	--

### Chronic toxicity

#### Germ cell mutagenicity

Not classified due to lack of data.

#### Components:

##### (E)-18-ethoxyoctadec-3-ene:

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

##### fluazifop-P-butyl (ISO):

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

##### octan-1-ol:

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

##### toluene:

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

### Carcinogenicity

Not classified due to lack of data.

#### Components:

##### fluazifop-P-butyl (ISO):

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

##### octan-1-ol:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

##### toluene:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

### Reproductive toxicity

Suspected of damaging fertility or the unborn child.

#### Components:

##### fluazifop-P-butyl (ISO):

Reproductive toxicity - Assessment : Embryo/foetoxic effects have been reported in rats. , Developmental neurotoxicity has been observed in the absence of maternal toxicity. , Some evidence of adverse effects on development, based on animal experiments.

##### octan-1-ol:

Reproductive toxicity - Assessment : No toxicity to reproduction, No effects on or via lactation

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

**toluene:**

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

**STOT - single exposure**

Not classified due to lack of data.

**Components:****octan-1-ol:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

**2-methylpropan-1-ol:**

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

**toluene:**

Exposure routes : Inhalation  
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

**STOT - repeated exposure**

Not classified due to lack of data.

**Components:****fluazifop-P-butyl (ISO):**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**octan-1-ol:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**toluene:**

Exposure routes : Inhalation  
Target Organs : Central nervous system  
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

**Aspiration toxicity**

Not classified due to lack of data.

## FUSILADE FORTE

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

### Components:

#### **Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil — unspecified:**

May be fatal if swallowed and enters airways.

#### **2-methylpropan-1-ol:**

May be harmful if swallowed and enters airways.

#### **toluene:**

May be fatal if swallowed and enters airways.

---

## Section 12: Ecological information

### Ecotoxicity

#### Product:

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 1.2 mg/l  
Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.13 mg/l  
End point: Growth rate  
Exposure time: 72 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.42 mg/l  
End point: Growth rate  
Exposure time: 72 h

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg  
Exposure time: 14 d

EC50 (Eisenia fetida (earthworms)): Calculated value > 100 mg/kg  
Exposure time: 14 d

Toxicity to terrestrial organisms : LD50 (Apis mellifera (bees)): > 839 µg/bee  
Exposure time: 48 h  
End point: Acute oral toxicity

LD50 (Apis mellifera (bees)): 708 µg/bee  
Exposure time: 48 h  
End point: Acute contact toxicity

### Components:

#### **(E)-18-ethoxyoctadec-3-ene:**

Toxicity to fish : LC50 (Fish): > 1 - < 10 mg/l

## FUSILADE FORTE

Version 9.0	Revision Date: 18.04.2025	SDS Number: S165026034	Date of last issue: - Date of first issue: 18.04.2025
----------------	------------------------------	---------------------------	--

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Invertebrates): > 1 - < 10 mg/l
- Toxicity to algae/aquatic plants : EC50 (algae): > 1 - < 10 mg/l  
Exposure time: 72 h  
Remarks: Information taken from reference works and the literature.
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 0.1 - < 1 mg/l  
Exposure time: 30 d  
Remarks: Information taken from reference works and the literature.
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 0.01 - < 0.1 mg/l  
Exposure time: 21 d
- fluazifop-P-butyl (ISO):**
- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.41 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 mg/l  
Exposure time: 48 h
- EC50 (Americamysis): 0.54 mg/l  
Exposure time: 96 h
- Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 1.8 mg/l  
Exposure time: 96 h
- NOEC (Raphidocelis subcapitata (freshwater green alga)): 1.8 mg/l  
End point: Growth rate  
Exposure time: 96 h
- ErC50 (Navicula pelliculosa (Freshwater diatom)): 1.4 mg/l  
Exposure time: 72 h
- NOEC (Navicula pelliculosa (Freshwater diatom)): 0.34 mg/l  
End point: Growth rate  
Exposure time: 72 h
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.077 mg/l  
Exposure time: 32 d  
Test Type: Early-life Stage
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.25 mg/l  
Exposure time: 21 d

## FUSILADE FORTE

Version 9.0	Revision Date: 18.04.2025	SDS Number: S165026034	Date of last issue: - Date of first issue: 18.04.2025
----------------	------------------------------	---------------------------	--

NOEC (Americamysis): 0.048 mg/l  
Exposure time: 28 d

- M-Factor (Chronic aquatic toxicity) : 1
- Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg  
Exposure time: 14 d
- EC50 (Eisenia fetida (earthworms)): Calculated value > 100 mg/kg  
Exposure time: 14 d
- Toxicity to terrestrial organisms : LD50 (Colinus virginianus (Bobwhite quail)): > 2,000 mg/kg  
End point: Acute oral toxicity
- LD50 (Apis mellifera (bees)): > 200 µg/bee  
Exposure time: 48 h  
End point: Acute oral toxicity
- LD50 (Apis mellifera (bees)): > 200 µg/bee  
Exposure time: 48 h  
End point: Acute contact toxicity

### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

#### octan-1-ol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 13.3 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 20 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 14 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1 mg/l  
Exposure time: 21 d

#### calcium dodecylbenzenesulphonate:

### Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

#### 2-methylpropan-1-ol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,430 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other : EC50 (Daphnia pulex (Water flea)): 1,100 mg/l

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

- aquatic invertebrates Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC50 (Raphidocelis subcapitata (freshwater green alga)): 1,799 mg/l  
Exposure time: 72 h
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 20 mg/l  
Exposure time: 21 d
- toluene:**
- Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 3.78 mg/l  
Exposure time: 48 h
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus kisutch (coho salmon)): 1.39 mg/l  
Exposure time: 40 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (Water flea)): 0.74 mg/l  
Exposure time: 7 d

**Persistence and degradability****Components:****(E)-18-ethoxyoctadec-3-ene:**

Biodegradability : Result: Readily biodegradable.

**fluazifop-P-butyl (ISO):**

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 1.5 - 1.7 h  
Remarks: Product is not persistent.

**octan-1-ol:**

Biodegradability : Result: Readily biodegradable.

**2-methylpropan-1-ol:**

Biodegradability : Result: Readily biodegradable.

**toluene:**

Biodegradability : Result: Readily biodegradable.

**FUSILADE FORTE**

Version 9.0      Revision Date: 18.04.2025      SDS Number: S165026034      Date of last issue: -  
Date of first issue: 18.04.2025

---

**Bioaccumulative potential****Components:****fluazifop-P-butyl (ISO):**

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: > 5.3 (25 °C)

**toluene:**

Bioaccumulation : Remarks: Does not bioaccumulate.

**Mobility in soil****Components:****fluazifop-P-butyl (ISO):**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: < 2 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

**Other adverse effects****Components:****(E)-18-ethoxyoctadec-3-ene:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

**fluazifop-P-butyl (ISO):**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

**octan-1-ol:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

**2-methylpropan-1-ol:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

**toluene:**

Results of PBT and vPvB : Substance is not persistent, bioaccumulative, and toxic (PBT).



## FUSILADE FORTE

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

Packing group : III  
 Labels : Miscellaneous  
 Packing instruction (cargo aircraft) : 964  
 Packing instruction (passenger aircraft) : 964  
 Environmentally hazardous : yes  
 Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

### IMDG-Code

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUAZIFOP-P-BUTYL)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 EmS Code : F-A, S-F  
 Marine pollutant : yes  
 Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### NZS 5433

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUAZIFOP-P-BUTYL)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 Hazchem Code : 3Z  
 Marine pollutant : no

### 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.

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

**Section 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****HSNO Approval Number**

HSR007852

ACVM Registration No. P7695

Tolerable Exposure Limits (TEL)

Not applicable

Environmental Exposure Limits (EEL)

Not applicable

**HSW Controls**

Certified handler certificate not required.

Tracking hazardous substance not required.

Record keeping is required

Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

**Section 16: Other information**

Revision Date : 18.04.2025

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

Date format : dd.mm.yyyy

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

NZ BEI : New Zealand. Biological Exposure Indices

NZ OEL : New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

Syngenta : Syngenta Occupational Exposure Limit

ACGIH / TWA : 8-hour, time-weighted average

NZ OEL / WES-TWA : Workplace Exposure Standard - Time Weighted average

NZ OEL / WES-STEL : Workplace Exposure Standard - Short-Term Exposure Limit

Syngenta / TWA : Time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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

**FUSILADE FORTE**

Version	Revision Date:	SDS Number:	Date of last issue: -
9.0	18.04.2025	S165026034	Date of first issue: 18.04.2025

---

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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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.

NZ / 6N