Safety Data Sheet
Murin Forte Pasta
Safety Data Sheet dated 21/08/2023 version 10
In accordance with Regulation (UE) 2020/878

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

1.1. Product identifier

Mixture identification:

Trade name: Murin Forte Pasta

Authorization of Ministry of Health n° :

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

Recommended use: rodenticide

Uses advised against: All uses not listed in the Recommended uses

1.3. Details of the supplier of the safety data sheet

Company: VEBI ISTITUTO BIOCHIMICO SRL
Via Desman, 43 - 35010 Borgoricco (PD)
Tel. +39 049 9337111 - www.vebi.it

Responsable: regulatory@vebi.it

1.4. Emergency telephone number

United Kingdom Emergency number: 111

Ireland National Poisons Information Centre: 353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week). Healthcare Professionals: +353 (1) 809 2566 (24 hour service)

VEBI ISTITUTO BIOCHIMICO customer service: Tel. +39 49 9337111 8:00-12:00- 13:00- 17:00

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Repr. 1B	May damage the unborn child.
STOT RE 1	Causes damage to organs (blood) through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word

Danger

Hazard statements

H360D	May damage the unborn child.
H372	Causes damage to organs (blood) through prolonged or repeated exposure.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves.
P308+P313	IF exposed or concerned: Get medical advice.
P501	Dispose of contents and container in accordance with national regulation.

Contains

bromadiolone (ISO); 3-[3-(4'-

bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one

Special provisions according to Annex XVII of REACH and subsequent amendments:

Restricted to professional users.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: Murin Forte Pasta

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number	Material Properties
≥ 7 - < 10 %	sucrose	CAS:57-50-1 EC:200-334-9	Not classified as hazardous		
≥ 1 - < 2,5 %	Sorbic acid; (2E,4E)-hexa-2,4-dienoic acid	CAS:110-44-1 EC:203-768-7	3.2/2 Skin Irrit. 2, H315; 3.3/2 Eye Irrit. 2, H319; 3.8/3 STOT SE 3, H335		
0.05 %	bronopol (INN); 2-bromo-2-nitropropane-1,3-diol	CAS:52-51-7 EC:200-143-0 Index:603-085-00-8	3.8/3 STOT SE 3, H335; 3.2/2 Skin Irrit. 2, H315; 3.3/1 Eye Dam. 1, H318; 4.1/A1 Aquatic Acute 1, H400; 3.1/4/Oral Acute Tox. 4, H302; 3.1/4/Dermal Acute Tox. 4, H312, M:10	01-2119980938-15-XXXX	
50 ppm	bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one	CAS:28772-56-7 EC:249-205-9 Index:607-716-00-8	3.1/1/Dermal Acute Tox. 1, H310 3.7/1B Repr. 1B, H360D 3.1/1/Inhal Acute Tox. 1, H330 3.9/1 STOT RE 1, H372 4.1/A1 Aquatic Acute 1, H400 4.1/C1 Aquatic Chronic 1, H410 3.1/1/Oral Acute Tox. 1, H300, M:1 Specific Concentration Limits: 0.0005% ≤ C < 0.005%: STOT RE 2 H373 0.003% ≤ C < 100%: Repr. 1B H360 C ≥ 0.005%: STOT RE 1 H372		PBT
10 ppm	Denatonium Benzoate	CAS:3734-33-6 EC:223-095-2	3.1/4/Oral Acute Tox. 4, H302; 3.1/2/Inhal Acute Tox. 2, H330; 3.3/1 Eye Dam. 1, H318		
2.45 ppm	2,3-Butanedione	CAS:431-03-8 EC:207-069-8	2.6/2 Flam. Liq. 2, H225; 3.1/3/Inhal Acute Tox. 3, H331; 3.1/4/Oral Acute Tox. 4, H302; 3.9/2 STOT RE 2, H373; 3.3/1 Eye Dam. 1, H318; 3.2/2 Skin Irrit. 2, H315; 3.4.2/1 Skin Sens. 1, H317		
0.495 ppm	propionic acid	CAS:79-09-4 EC:201-176-3 Index:607-089-00-0	3.2/1B Skin Corr. 1B, H314 Specific Concentration Limits: 25% ≤ C < 100%: Skin Corr. 1B H314 10% ≤ C < 25%: Skin Irrit. 2 H315 10% ≤ C < 25%: Eye Irrit. 2 H319 10% ≤ C < 100%: STOT SE 3 H335		

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediatley and dispose off safely.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Active ingredient is a so-called second generation anticoagulant rodenticide, which like other Coumarin derivatives, is a vitamin K antagonist. It disrupts the normal blood clotting mechanisms resulting in profuse internal haemorrhage and death.

- Harmful to skin contact; could be absorbed and cause internal hemorrhage.
- Harmful if swallowed; serious risk of internal hemorrhage
- Harmful if inhaled; serious risk of internal hemorrhage
- Soil and water could be contaminated.
- Symptoms may be associated to increased bleeding tendency.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment: The anticoagulant rodenticide active substances work by blocking the regeneration of vitamin K 2,3-epoxide to vitamin K hydroquinone. Since, the amount of vitamin K in the body is finite, the progressive block of the regeneration of vitamin K will lead to an increasing probability of a fatal hemorrhage.

1.To check the prothrombinic activity many times, also after a few days, particularly if the quantity swallowed is high. Diagnosis: changes in prothrombin time (symptoms and clotting tests)

2.Treatment: vitamin K1.

3. In animals and particularly in pets, vitamin K1 can be given even in absence of alterations of the coagulation, because of the gravity of the hemorrhage which can appear in case of ingestion.

Other Medical data:

No significant effects caused by active ingredient in personnel with occupational exposure have been observed.

Vitamin K. Antidote

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water. Carbon dioxide (CO_2). CO_2 or Dry chemical fire extinguisher

Extinguishing media which must not be used for safety reasons:

direct water jets

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases. Burning produces heavy smoke

Hazardous combustion products:

Carbon monoxide; Inorganic acid gases

5.3. Advice for firefighters

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment. See protective measures under point 7 and 8. Remove persons to safety

For emergency responders:

Fist-gloves. Evacuate the danger area

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it

6.3. Methods and material for containment and cleaning up

For cleaning up:

Wet clean or vacuum up solids.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas. Wash hands after use; Do not eat, drink or smoke when using this product

7.2. Conditions for safe storage, including any incompatibilities

Avoid temperatures > 40°C; Avoid light and sunlight exposure

Incompatible materials:

None in particular. Keep away from water or from damp surroundings

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

sucrose

CAS: 57-50-1	OEL Type	ACGIH	Long Term: 10 mg/m3 Notes: A4 - Dental erosion

2,3-Butanedione

CAS: 431-03-8	OEL Type	ACGIH	Long Term: 0.01 ppm; Short Term: 0.02 ppm Notes: A4 - Lung dam (Bronchiolitis obliterans-like illness)
	OEL Type	EU	Long Term: 0.07 mg/m3 - 0.02 ppm; Short Term: 0.36 mg/m3 - 0.1 ppm

propionic acid

CAS: 79-09-4	OEL Type	ACGIH	Long Term: 10 ppm Notes: Eye, skin and URT irr
	OEL Type	EU	Long Term: 31 mg/m3 - 10 ppm; Short Term: 62 mg/m3 - 20 ppm

Predicted No Effect Concentration (PNEC) values

Sorbic acid; (2E,4E)-hexa-2,4-dienoic acid

CAS: 110-44-1	Exposure Route: Fresh Water; PNEC Limit: 0.129 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.013 mg/l
	Exposure Route: Occasional emission; PNEC Limit: 0.0241 mg/l
	Exposure Route: sewage treatment plants; PNEC Limit: 10 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 0.465 mg/kg/Sediment dw
	Exposure Route: Marine water sediments; PNEC Limit: 0.046 mg/kg/Sediment dw
	Exposure Route: Soil; PNEC Limit: 5 g/kg soil dw
	Exposure Route: soil

Derived No Effect Level (DNEL) values

Sorbic acid; (2E,4E)-hexa-2,4-dienoic acid

CAS: 110-44-1	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Industry: 17.63 mg/kg/day; Consumer: 52.17 mg/kg/day
	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Industry: 40 mg/kg bw/day; Consumer: 20 mg/kg bw/day
	Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 2 mg/kg bw/day

8.2. Exposure controls

For the choice of personal protection equipment, refer to the risk assessment carried out by the user in compliance with the national legislation on safety in the workplace.

Eye protection:

Not needed for normal use.

Protection for skin:

Wear category III professional long-sleeved work clothes and safety footwear (ref. Reg. (EU) 2016/425 and EN ISO 20344 standard). In the event that large quantities of product are used, type 6 (or greater) protective overalls (ref. UNI EN13034) are recommended.

Protection for hands:

UNI EN 374 (PF 3); NBR (nitrile rubber). PVC (polyvinyl chloride)

Respiratory protection:

N.A.

Thermal Hazards:

N.A.

Environmental exposure controls:

Do not get into drains, soil or any water body; Place the product out of the reach of children, birds, pets, farm animals and other non-target animals

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Solid (Visual assessment)

Colour: red (Visual assessment)

Odour: butter (OPPTS 830.6302 OPPTS 830.6303 OPPTS 830.6304)

Odour threshold: Not Relevant

pH: 8.100 (Cipac MT 75.3 - The measurement of the pH of a 1% w/v aqueous suspension is not considered relevant due to either nature and use of the product (ready to-use solid,not intended for dissolution/ emulsion/ dispersion in water).)

Kinematic viscosity: N.A.

Melting point / freezing point: Not Relevant

Initial boiling point and boiling range: Not Relevant

Flash point: Not Relevant

Upper/lower flammability or explosive limits: Not Relevant

Vapour density: Not Relevant

Vapour pressure: Not Relevant

Relative density: 1.082 g/ml (OECD 109)

Solubility in water: slightly soluble

Solubility in oil: Not Relevant

Partition coefficient (n-octanol/water): Not Relevant

Auto-ignition temperature: 292.000 °C (Regulation (EC) No. 440/2008, Annex A.15)

Decomposition temperature: Not Relevant

Flammability: N.A.

Particle characteristics:

Particle size: N.A.

VOC (Dir. 2010/75/CE): Not Relevant

VOC (volatile carbon): Not Relevant

9.2. Other information

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

Oxidizing properties: Not oxidant (CHETAH 7.3 (ASTM 2002))

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

Under normal storage and use conditions, no hazardous reactions occur.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
	LD50 Skin Rat > 2000 mg/kg
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
	Skin Irritant Skin Rabbit Negative
c) serious eye damage/irritation	Not classified
	Based on available data, the classification criteria are not met
	Eye Irritant Rabbit Negative
d) respiratory or skin sensitisation	Not classified
	Based on available data, the classification criteria are not met
	Skin Sensitization Skin Guinea-pig Negative
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	The product is classified: Repr. 1B(H360)
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	The product is classified: STOT RE 1(H372)
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

Sorbic acid; (2E,4E)-hexa-2,4-dienoic acid

CAS: 110-44-1	a) acute toxicity	LD50 Skin Rabbit = 2000 mg/kg
	b) skin corrosion/irritation	Eye Corrosive Rabbit Positive
	g) reproductive toxicity	NOAEL Rat = 1000 mg/kg
	i) STOT-repeated exposure	Respiratory Tract Irritant Positive

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7	a) acute toxicity	LD50 Oral Rat = 307 mg/kg bw
		LD50 Skin Rat > 2000 mg/kg bw
		LC50 Inhalation Rat > 0.588 mg/l 4h
	b) skin corrosion/irritation	Eye Corrosive Eyes Rabbit Positive
		Skin Irritant Skin Rabbit Positive
	e) germ cell mutagenicity	Mutagenesis Negative
	f) carcinogenicity	Carcinogenicity Negative
	g) reproductive toxicity	Reproductive Toxicity Negative

bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one

CAS: 28772-56-7	a) acute toxicity	LD50 Oral Rat = 0.56
		LD50 Skin Rabbit = 1.71
		LC50 Inhalation Rat = 0.43 ug/l 4h
	b) skin corrosion/irritation	Skin Corrosive Rabbit Negative
	c) serious eye damage/irritation	Eye Corrosive Rabbit Negative
	d) respiratory or skin sensitisation	Respiratory Sensitization Negative
	e) germ cell mutagenicity	Mutagenesis Negative

Denatonium Benzoate

CAS: 3734-33-6	a) acute toxicity	LD50 Oral Rat = 749
		LD50 Inhalation Rat = 0.2 mg/l
		LD50 Skin Rat > 2000
	c) serious eye damage/irritation	Eye Irritant Eyes Positive

2,3-Butanedione

CAS: 431-03-8	a) acute toxicity	LD50 Skin Rabbit > 5 mg/kg
		LD50 Oral Rat = 1580 mg/kg

propionic acid

CAS: 79-09-4	Generic information:	LD50 (RABBIT) SKIN: 500 MG/KG
	a) acute toxicity	LD50 Oral Rat = 3500 mg/kg
	b) skin corrosion/irritation	Skin Corrosive Skin Rabbit Positive
	c) serious eye damage/irritation	Eye Corrosive Oral Rabbit Positive

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Sorbic acid; (2E,4E)-hexa-2,4-dienoic acid

CAS: 110-44-1	b) Aquatic chronic toxicity:	LC50 Fish = 75 mg/L
	b) Aquatic chronic toxicity:	EC50 Daphnia = 70 mg/L
	b) Aquatic chronic toxicity:	EC50 = 24.1 mg/L

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7	a) Aquatic acute toxicity:	EC50 Algae = 0.068 mg/L 72 h - Anabaena flos aqua
	a) Aquatic acute toxicity:	EC50 Daphnia = 1.04 mg/L 48 h - Daphnia magna
	a) Aquatic acute toxicity:	LC50 Fish = 3 mg/L 96 h - Oncorhynchus mykiss
	b) Aquatic chronic toxicity:	NOEC Algae = 0.0025 mg/L 72 h - Anabaena flos aqua
	b) Aquatic chronic toxicity:	NOEC Fish = 2.61 mg/L 672h - Oncorhynchus mykiss
	b) Aquatic chronic toxicity:	NOEC Daphnia = 0.06 mg/L 504h - Daphnia magna

bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one

CAS: 28772-56-7	a) Aquatic acute toxicity:	LC50 Daphnia = 2 mg/L 48 h - Daphnia magna
	a) Aquatic acute toxicity:	LC50 Fish > 8 mg/L 96 h - Trota iridea
	a) Aquatic acute toxicity:	ErC50 Algae = 1.14 mg/L 72 h - Pseudokirchneriella subcapitata
	f) Effects in sewage plants:	EC50 = 31.6 mg/L 3 h
	d) Terrestrial toxicity:	LC50 earthworm > 8.4 mg/kg 336 - Eisenia foetida
	d) Terrestrial toxicity:	LD50 birds = 134 - Japanese quail

propionic acid

CAS: 79-09-4	a) Aquatic acute toxicity:	LC50 Fish = mg/L 96 h - 51-72.2
	a) Aquatic acute toxicity:	EC50 Daphnia = 21 mg/L 48 h

12.2. Persistence and degradability

Sorbic acid; (2E,4E)-hexa-2,4-dienoic acid

CAS: 110-44-1	Readily biodegradable	Test: OECD 301

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7		Test: CO_2 production; Value: 70

Notes: (OECD 301 B (mod. -Sturm- Test))

Test: OECD 314 ; Value: 63.5

bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one

CAS: 28772-56-7 Non-readily biodegradable

12.3. Bioaccumulative potential

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 Test: BCF - Bioconcentrantion factor; Value: 3.16
Notes: calculated (EPIWIN)

Test: Kow - Partition coefficient; Value: 0.38
Notes: (Log Kow n-octanol/water OECD 107)

bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one

CAS: 28772-56-7 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 575
Notes: log Kow=4.07 (Lepomis macrochirus)

12.4. Mobility in soil

bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one

CAS: 28772-56-7 Not mobile

12.5. Results of PBT and vPvB assessment

List of Eco-Toxicological properties of the components

bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one

CAS: 28772-56-7 50 ppm PBT

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Additional disposal information:

Dispose of unused product and packaging as hazardous waste.

Notes (Irish Regulation):

In case of rodenticides: At the end of the treatment, dispose of uneaten bait and the packaging in accordance with EPA requirements for the disposal of hazardous waste. Use of gloves is recommended.

Professional and Trained Professional users: dispose of dead rodents in accordance with local requirements, using one of the following methods of disposal (in order of preference): via an on-site or on-farm small carcass incinerator; with the site's or farm's domestic waste; in the site's or farm's normal non-hazardous waste; or by burial on-site, but away from sensitive areas.

Rodents can be disease carriers. Do not touch dead rodents with bare hands, use gloves or use tools such as tongs when disposing them.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N.A.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

ADR-Class: NA N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

N.A.

Road and Rail (ADR-RID):

N.A.

Air (IATA):

N.A.

Sea (IMDG):

N.A.

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EU) n. 2020/878

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: None.

Restrictions related to the substances contained: 30, 40, 75

Regulation (EU) n. 528/2012

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 3: extremely hazardous.

SVHC Substances:

Substances in candidate list (Art. 59 Reg. 1907/2006, REACH):

Component	Ident. Numb.	Quantity	Material Properties
bromadiolone (ISO); 3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-chromen-2-one	CAS: 28772-56-7	50 ppm	SVHC - PBT
	EINECS: 249-205-9		Repr. Cat. 3.7/1B;
	Index: 607-716-00-8		Specific target organ toxicity - repeated exposure

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H225	Highly flammable liquid and vapour.
H300	Fatal if swallowed.

H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H372	Causes damage to organs (blood) through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
3.1/1/Dermal	Acute Tox. 1	Acute toxicity (dermal), Category 1
3.1/1/Inhal	Acute Tox. 1	Acute toxicity (inhalation), Category 1
3.1/1/Oral	Acute Tox. 1	Acute toxicity (oral), Category 1
3.1/2/Inhal	Acute Tox. 2	Acute toxicity (inhalation), Category 2
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.7/1B	Repr. 1B	Reproductive toxicity, Category 1B
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Repr. 1B, H360D	Calculation method
STOT RE 1, H372	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ATE: Acute Toxicity Estimate
ATEmix: Acute toxicity Estimate (Mixtures)
BCF: Biological Concentration Factor
BEI: Biological Exposure Index
BOD: Biochemical Oxygen Demand
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CAV: Poison Center
CE: European Community
CLP: Classification, Labeling, Packaging.
CMR: Carcinogenic, Mutagenic and Reprotoxic
COD: Chemical Oxygen Demand
COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: KAFH
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- Safety Data Sheet
- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients

- SECTION 8: Exposure controls/personal protection
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 14: Transport information
- SECTION 15: Regulatory information