

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

Version number 1

Revision: 23/10/2024

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

- 1.1 Product identifier

- Trade name: **BRODITEC G-29**

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

Ready for use rodenticide (biocidal product-PT14)

- 1.3 Details of the supplier of the safety data sheet

- GB Supplier:

Pelsis Ltd.
 Sterling House
 Grimbold Crag Close
 HG5 8PJ Knaresborough
 United Kingdom
 T +44 (0) 800 988 5359, F +44 (0) 1423 863 497
 info@pelsis.com

E-mail address of the competent person responsible for the SDS: info@pelsis.com

- Further information obtainable from: Pelsis Ltd.

- 1.4 Emergency telephone number:

+44 (0) 800 988 5359
 NHS In England and Wales: NHS 111 - dial 111
 In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture

- Classification according to GB CLP

STOT RE 2 H373 May cause damage to the blood through prolonged or repeated exposure.

- 2.2 Label elements

- Labelling according to GB CLP

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms



GHS08

- Signal word Warning

- Hazard-determining components of labelling:

brodifacoum

- Hazard statements

H373 May cause damage to the blood through prolonged or repeated exposure.

- Precautionary statements

P260 Do not breathe dust.
 P314 Get medical advice/attention if you feel unwell.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local regulation.

(Contd. on page 2)

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

Version number 1

Revision: 23/10/2024

Trade name: **BRODITEC G-29**

(Contd. of page 5)

- Melting point/freezing point:	No data available.
- Boiling point or initial boiling point and boiling range	Not applicable (solid).
- Flammability	Not flammable
- Lower and upper explosion limits:	
Lower:	No data available.
Upper:	No data available.
- Flash point:	Not applicable (solid).
- Auto-ignition temperature:	Product is not selfigniting.
- Decomposition temperature:	No data available.
- pH:	6.61 (CIPAC MT 75.3 - 1% aq.)
- Viscosity:	
Kinematic viscosity:	Not applicable.
Dynamic viscosity:	Not applicable.
- Solubility	
water:	Insoluble.
- Partition coefficient: n-octanol/water (log value):	No data available.
- Vapour pressure:	Not applicable.
- Density and/or relative density:	
- Density:	1.188 g/ml (CIPAC MT 186)
- Relative density	No data available.
- Vapour density	Not applicable.
- Particle characteristics	See section 3.
- 9.2 Other information	
- Appearance:	
- Form:	Solid
- Information with regard to physical hazard classes	
- Explosives	Not explosive
- Flammable gases	Not applicable
- Aerosols	Not applicable
- Oxidising gases	Not applicable
- Gases under pressure	Not applicable
- Flammable liquids	Not applicable
- Flammable solids	Not flammable
- Self-reactive substances and mixtures	Not self-reactive
- Pyrophoric liquids	Not applicable
- Pyrophoric solids	Not pyrophoric
- Self-heating substances and mixtures	Not self-heating
- Substances and mixtures, which emit flammable gases in contact with water	Not applicable
- Oxidising liquids	Not applicable
- Oxidising solids	Not oxidising
- Organic peroxides	Not applicable

(Contd. on page 7)

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

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Revision: 23/10/2024

Trade name: **BRODITEC G-29**

(Contd. of page 6)

- Corrosive to metals	Not applicable
- Desensitised explosives	Not applicable

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Under standard handling and storing conditions, the product does not show any dangerous reaction.
- **10.2 Chemical stability** Stable at room temperature and if used as recommended.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid**
Under standard handling and storing conditions, the product does not show any dangerous reaction.
- **10.5 Incompatible materials:**
Store only in original container.
Given the lack of information about possible incompatibilities with other substances, it is recommended not to use it in combination with other products.
- **10.6 Hazardous decomposition products:**
No dangerous decomposition products known under normal conditions of storage and use.

(Contd. on page 8)

Safety data sheet
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SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

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Revision: 23/10/2024

Trade name: **BRODITEC G-29**

(Contd. of page 7)

SECTION 11: Toxicological information

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

- **Acute toxicity** Based on available data, the classification criteria are not met.

- LD/LC50 values relevant for classification:

57-55-6 propane-1,2-diol		
Oral	LD50	22000 mg/kg bw (rat)
Dermal	LD50	>2000 mg/kg bw (rabbit)
Inhalative	LC50/2h	>317042 mg/m ³ (rabbit)
57-50-1 sucrose		
Oral	LD50	29700 mg/kg bw (rat)
128-37-0 2,6-di-tert-butyl-p-cresol (BHT)		
Oral	LD50	>2930 mg/kg bw (rat)
Dermal	LD50	>2000 mg/kg bw (rat) (OECD 402)
Inhalative	RD50	59.7 ppm (mouse) 30 min.
56073-10-0 brodifacoum		
Oral	LD50	0.4 mg/kg bw (male rat and mouse)
Dermal	LD50	3.16 mg/kg bw (rat)
Inhalative	LC50/4h	3.05 mg/m ³ (rat)

- Skin corrosion/irritation

57-55-6 propane-1,2-diol

skin irritation	Not irritating (OECD 404). Prolonged skin contact may cause temporary irritation.
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Based on available data, the classification criteria are not met.

- Serious eye damage/irritation

57-55-6 propane-1,2-diol

eye irritation	Not irritating (OECD 405). May cause temporary eye irritation.
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Based on available data, the classification criteria are not met.

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

- Additional toxicological information:

57-55-6 propane-1,2-diol

Inhalation	High concentrations of gases or vapours may irritate the respiratory tract.
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- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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

- Reproductive toxicity

128-37-0 2,6-di-tert-butyl-p-cresol (BHT)

Oral	NOAEL - developmental toxicity	100 mg/kg bw/d (rat)
	NOAEL	500 mg/kg bw (rat)

56073-10-0 brodifacoum

developmental toxicity	Clear developmental toxicity was not observed in rabbits or rats. However, as a precaution, Brodifacoum should be considered teratogenic to humans because it contains the same chemical moiety responsible for the teratogenicity of warfarin, a known human teratogenic agent, and it has the same mode of action that is a known mechanism of teratogenicity in humans.
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(Contd. on page 9)

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

Version number 1

Revision: 23/10/2024

Trade name: BRODITEC G-29

(Contd. of page 8)

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

- **STOT-single exposure** Based on available data, the classification criteria are not met.**- STOT-repeated exposure****128-37-0 2,6-di-tert-butyl-p-cresol (BHT)**

Oral	NOAEL	25 mg/kg bw/d (rat) Long-term exposure to BHT can result in functional and histological changes of lung, liver, kidneys and thyroid. In case of chronic oral exposure, liver is the main target and thyroid is a indirect target. Doses above the NOAEL value result in thyroid iperactivity, enlargement of the liver, induction of several liver enzymes. Since the NOAEL derived from the chronic study is 25 mg/kg bw/d, the substance is not classified as "Specific target organ toxicity - repeated exposure".
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56073-10-0 brodifacoum

Oral	NOAEL	0.04 mg/kg bw/d (rat) The study reveals that repeated oral exposure results in toxic effects: prothrombin time prolongation, kaolin-caphalin time prolongation, haemorrhage. Based on the results of the acute dermal and inhalation toxicity studies and route-to-route extrapolation, it is justified to assume a similar concern for serious damage to health by prolonged exposure through dermal and inhalation routes also.
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May cause damage to the blood through prolonged or repeated exposure.

- **Aspiration hazard** Based on available data, the classification criteria are not met.- **Additional toxicological information:** No further relevant information available**- 11.2 Information on other hazards****- Endocrine disrupting properties**

The mixture does not contain substances with endocrine disrupting properties in concentration equal to or greater than 0.1% by weight.

SECTION 12: Ecological information**- 12.1 Toxicity****- Aquatic and/or terrestrial toxicity:****57-55-6 propane-1,2-diol**

EC50/96h	19000 mg/l (pseudokirchneriella subcapitata) 19100 mg/l (skeletonema costatum)
LC50/96h	40613 mg/l (oncorhynchus mykiss)
NOEC/18h	>20000 mg/l (pseudomonas putida)
NOEC/14d	15000 mg/l (pseudokirchneriella subcapitata) <5300 mg/l (skeletonema costatum)
NOEC/14d	15000 mg/kg (pseudokirchneriella subcapitata)
NOEC/7d	13020 mg/l (ceriodaphnia)
EC50/48h	18340 mg/l (ceriodaphnia dubia)

128-37-0 2,6-di-tert-butyl-p-cresol (BHT)

EC50/21d	0.096 mg/l (daphnia magna) (OECD 211)
EC50/3h	>10000 mg/l (activated sludge)
EC50/72h	>0.24 mg/l (pseudokirchneriella subcapitata) (OECD 201)
EC50/24h	1.7 mg/l (Tetrahymena pyriformis) Based on growth inhibition.
IC50/72h	>0.4 mg/l (desmodesmus subspicatus)
LC0/96h	≥0.57 mg/l (danio rerio)
LC50/96h	1.1 mg/l (oryzias latipes)
NOEC/30d	0.053 mg/l (oryzias latipes) (OECD 210)
LOEC/30d	0.14 mg/l (oryzias latipes) (OECD 210)
NOEC/21d	0.069 mg/l (daphnia magna) (OECD 211)
NOEC/72h	0.24 mg/l (pseudokirchneriella subcapitata)
EC50/48h	0.48 mg/l (daphnia magna) (OECD 202)

56073-10-0 brodifacoum

LC50/14d	(eisenia foetida) >994 mg/kg dry weight >879.6 mg/kg wet weight
ErC50/72h	0.04 mg/l (senastrum capricornutum)

(Contd. on page 10)

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

Version number 1

Revision: 23/10/2024

Trade name: BRODITEC G-29

(Contd. of page 11)

EC10/3h	>0.058 mg/l (activated sludge) Based on water solubility at pH 7 and T=20°C.
EC10/6h	>0.0038 mg/l (pseudomonas putida) Based on water solubility at pH 5.2 and T=20°C.
LC50/96h	0.042 mg/l (oncorhynchus mykiss)
LC50 (diet)	0.72 mg/kg food (laughing gull)
NOEC (reproductive toxicity)	0.0038 mg/kg food (bird)
NOEL (reproductive toxicity)	0.000385 mg/kg bw/d (bird)
LD50	0.31 mg/kg bw (mallard duck)
EC50/48h	0.25 mg/l (daphnia magna)
- 12.2 Persistence and degradability	
57-55-6 propane-1,2-diol	
biodegradability	81% (> 28 days; OECD 301F) 96% (64 days) Readily biodegradable.
128-37-0 2,6-di-tert-butyl-p-cresol (BHT)	
Biodegradation in water	4,5% (28 days, OECD 301C - Ready biodegradability: Modified MITI test). Not readily biodegradable.
56073-10-0 brodifacoum	
biodegradability	Not easily biodegradable. Brodifacoum will probably partition into sewage sludge/sediment due to its high log Kow and poor water solubility.
photolytic half-life	0.083 days. Degrades rapidly by photolysis.
Hydrolytic half-life	> 1 year. Stable at pH 5, 7 and 9.
- 12.3 Bioaccumulative potential	
57-55-6 propane-1,2-diol	
bioconcentration factor	BCF: < 0.09 The substance is not bioaccumulable.
octanol-water partition coefficient	Log Kow = -1.07
128-37-0 2,6-di-tert-butyl-p-cresol (BHT)	
bioaccumulation	An appreciable bioaccumulation potential is foreseeable.
56073-10-0 brodifacoum	
bioconcentration factor	BCF fish = 35645 (calculated according to TGD eq. 75, using log Kow = 6.12). BCF earthworm = 15820 (calculated according to TGD ed. 82d, using log Kow = 6.12).
octanol-water partition coefficient	log Kow = 6.12 (estimated from measured Koc).
- 12.4 Mobility in soil	
57-55-6 propane-1,2-diol	
Henry's law constant	0.00566 atm m ³ /mol (12°C)
56073-10-0 brodifacoum	
DT50	157 days. Persistent.
organic carbon partition coefficient	Koc = 9155 l/kg (pH 7,1-7.6). Immobile in soil.
soil mobility	Under basic conditions (high pH), Brodifacoum is not likely to be adsorbed onto soils or sewage sludge due to the ionisation of the molecule. Under acidic conditions (low pH), Brodifacoum is likely to be adsorbed onto soils or sewage sludge as the molecule is in its neutral or non-ionised form.

- General notes:

Hazardous to wildlife.

Do not allow the product to reach ground water, water course or sewage system.

(Contd. on page 11)

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

Version number 1

Revision: 23/10/2024

Trade name: **BRODITEC G-29**

(Contd. of page 10)

- 12.5 Results of PBT and vPvB assessment

- PBT:	
56073-10-0 brodifacoum	
PBT	Brodifacoum fulfils the P, B and T criteria.
- vPvB:	
56073-10-0 brodifacoum	
vPvB	Brodifacoum fulfils the vP criterion.
- 12.6 Endocrine disrupting properties	
The mixture does not contain substances with endocrine disrupting properties in concentration equal to or greater than 0.1% by weight.	
- 12.7 Other adverse effects	
56073-10-0 brodifacoum	
.	The major environmental concern of Brodifacoum is primary and secondary poisoning of non-target animals.

SECTION 13: Disposal considerations**- 13.1 Waste treatment methods****- Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system. At the end of the treatment, dispose of uneaten bait and the packaging in accordance with local requirements. In the UK waste bait should be double bagged in plastic bags and disposed of in a household waste bin with a secure lid to prevent access of wildlife or pets or taken to a civic amenity site. For information on civic amenity sites contact the local authority.

- Uncleaned packaging:

- Recommendation: Dispose of in accordance with local requirements.

SECTION 14: Transport information

- 14.1 UN-Number or ID number	
- ADR, ADN, IMDG, IATA	Not applicable
- 14.2 UN proper shipping name	
- ADR, ADN, IMDG, IATA	Not applicable
- 14.3 Transport hazard class(es)	
- ADR, ADN, IMDG, IATA	
- Class	Not applicable
- 14.4 Packing group	
- ADR, IMDG, IATA	Not applicable
- 14.5 Environmental hazards:	Not applicable.
- 14.6 Special precautions for user	Not applicable.
- 14.7 Maritime transport in bulk according to IMO instruments	
	Not applicable.
- UN "Model Regulation":	Not applicable

SECTION 15: Regulatory information**- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****- Directive 2012/18/EU**

- Named dangerous substances - ANNEX I None of the ingredients is listed.

- Seveso category This product is not subject to Seveso directive dispositions.

- REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

The mixture does not contain substances identified as POP.

- LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

The product does not contain any substance included in annex XIV.

(Contd. on page 12)

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

Version number 1

Revision: 23/10/2024

Trade name: BRODITEC G-29

(Contd. of page 11)

- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 30, 75
- **Regulation (EU) No 649/2012 (PIC)** There are no substances listed in this regulation.
- **REGULATION (EU) 2019/1148 - Explosive precursors**
The mixture does not contain explosives precursors in concentrations equal to or greater than 1%.
- **National regulations:** No further information available.
- **Other regulations, limitations and prohibitive regulations**
Authorisation holder: ARROW REGULATORY LIMITED - 149-155 CANAL STREET, NOTTINGHAM, NG1 7HR, UK
Authorisation n° GB-2015-0895-0002
- **Substances of very high concern (SVHC) according to REACH, Article 59**
The mixture does not contain SVHC substances in concentration equal to or greater than 0.1% by weight.
- **Regulation (EU) n. 2024/590: substances that deplete the ozone layer**
The mixture does not contain substances that deplete the ozone layer.
- **Regulation (EC) n. 850/2004: persistent organic pollutants** None.
- **15.2 Chemical safety assessment:**
A Chemical Safety Assessment according to Regulation (EC) No. 1907/2006 has not been carried out for the mixture.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Any responsibility derived from misuse of the product or in case of violation of current regulations is refused.

- **Relevant phrases**
H300 Fatal if swallowed.
H310 Fatal in contact with skin.
H330 Fatal if inhaled.
H360D May damage the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Classification according to Regulation (EC) No 1272/2008**
Physico-chemical hazards: the classification of the mixture is based on the criteria established by annex I, part 2, of Regulation (EC) No. 1272/2008. If relevant, the methods are reported in section 9.
Health and environmental hazards: the classification of the mixture is based on the calculation method stated in annex I, parts 3 and 4, of Regulation (CE) No. 1272/2008, using components data.
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
NOELR: No Observed Effect Loading Rate
RD50: Respiratory Decrease, 50 percent
LC0: Lethal concentration, 0 percent
NOEC: No Observed Effect Concentration
IC50: Inhibitory concentration, 50 percent
NOAEL: No Observed Adverse Effect Level
EC50: Effective concentration, 50 percent
EC10: Effective concentration, 10 percent
AEC: Acceptable Exposure Concentration
LL0: Lethal Load, 0 percent
AEL: Acceptable Exposure Limit
LL50: Lethal Load, 50 percent
EL0: Effective Load, 0 percent
EL50: Effective Load, 50 percent
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 1: Acute toxicity - oral – Category 1
Repr. 1A: Reproductive toxicity – Category 1A

(Contd. on page 13)

Safety data sheet
according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulation
SI 2019/758, SI 2019/858 and SI 2019/1144

Printing date 23/10/2024

Version number 1

Revision: 23/10/2024

Trade name: BRODITEC G-29

(Contd. of page 12)

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

- References

- Biocidal Products Committee (BPC) opinion June 2016 on the active substance;
- Assessment Report on the active substance (available at ECHA website);

- Sources

1. The E-Pesticide Manual 2.1 Version (2001)
2. Regulation (EC) 1907/2006 and following amendments
3. Regulation (EC) 1272/2008 and following amendments
4. Regulation (EU) 2020/878
5. Regulation (EU) 528/2012
6. Regulation (EC) 790/2009 (1st ATP CLP)
7. Regulation (EU) 286/2011 (2nd ATP CLP)
8. Regulation (EU) 618/2012 (3rd ATP CLP)
9. Regulation (EU) 487/2013 (4th ATP CLP)
10. Regulation (EU) 944/2013 (5th ATP CLP)
11. Regulation (EU) 605/2014 (6th ATP CLP)
12. Regulation (EU) 2015/1221 (7th ATP CLP)
13. Regulation (EU) 2016/918 (8th ATP CLP)
14. Regulation (EU) 2016/1179 (9th ATP CLP)
15. Regulation (EU) 2017/776 (10th ATP CLP)
16. Regulation (EU) 2018/669 (11th ATP CLP)
17. Regulation (EU) 2019/521 (12th ATP CLP)
18. Regulation (EU) 2018/1480 (13th ATP CLP)
19. Regulation (EU) 2020/217 (14th ATP CLP)
20. Regulation (EU) 2020/1182 (15th ATP CLP)
21. Regulation (EU) 2021/643 (16th ATP CLP)
22. Regulation (EU) 2021/849 (17th ATP CLP)
23. Directive 2012/18/EU (Seveso III)
24. ECHA web site