

## Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

### SECTION 1. Identification of the substance/mixture and of the company/undertaking

**1.1. Product identifier**

Product name **RATKILL BLOX**  
Authorization n° **IT/2014/00260/AUT**  
UFI : **T110-00VV-700M-MHD5**

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

Intended use **Ready-to-use rodenticide bait in paraffin-coated block. For professionals and trained professionals.**

Identified Uses	Industrial	Professional	Consumer
Rodenticide	-	✓	✓
Uses Advised Against			

All uses other than those recommended

**1.3. Details of the supplier of the safety data sheet**

Name **COLKIM S.r.l.**  
Full address **Via Piemonte, 50**  
District and Country **40064 OZZANO EMILIA (BO)**  
**Italia**  
**Tel. 051 / 799445**  
**Fax 051 / 797555**

e-mail address of the competent person

responsible for the Safety Data Sheet  
Supplier:

**info@colkim.it**  
**COLKIM S.r.l. - Via Piemonte, 50 - 40064 OZZANO E. (BO)**

**1.4. Emergency telephone number**

For urgent inquiries refer to **118**  
Contact a poison control center:

Nane	City	Address	Zip code	Phone
CAV "Osp. Pediatrico Bambino Gesù"	Roma	P.zza Sant' Onofrio, 4	00165	06 68593726
Az. Osp. Univ. Foggia	Foggia	V.le Luigi pinto, 1	71122	0881 732326
Az. Osp. "A. Cardarelli"	Napoli	Via A. Cardarelli, 9	80131	081 7472870
CAV Policlinico "Umberto I"	Roma	V.le del policlinico, 155	00161	06 49978000
CAV Policlinico "A. Gemelli"	Roma	Largo Agostino Gemelli, 8	00168	06 3054343
Az. Osp. "Careggi" U.O. Tossicologia Medica	Firenze	Largo Brambilla, 3	50134	055 7947819
CAV Centro Nazionale di Informazione Tossicologica	Pavia	Via Salvatore Maugeri, 10	27100	0382 24444
Osp. Niguarda Ca' Granda	Milano	P.zza Ospedale Maggiore,3	20162	02 66101029
Azienda Ospedaliera Papa Giovanni XXII	Bergamo	P.zza OMS, 1	24127	800883300
CAV centro antiveleni Verona	Verona	Piazzale Aristide Stefani,1	37126	800011858

### SECTION 2. Hazards identification

## 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Reproductive toxicity, category 1B

H360D

May damage the unborn child.

Specific target organ toxicity - repeated exposure, category 2

H373

May cause damage to organs through prolonged or repeated exposure.

## 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

**H360D**

May damage the unborn child.

**H373**

May cause damage to organs through prolonged or repeated exposure.  
Restricted to professional users.

Precautionary statements:

**P102**

Keep out of reach of children.

**P202**

Do not handle until all safety precautions have been read and understood.

**P280**

Wear protective gloves / eye protection / face protection.

**P308+P313**

IF exposed or concerned: Get medical advice / attention.

**P501**

Dispose of contents / container to . . .

**Contains:**

DIFENACOU

## 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

# SECTION 3. Composition/information on ingredients

## 3.2. Mixtures

Contains:

**Identification**

**x = Conc. %**

**Classification (EC) 1272/2008 (CLP)**

**2-BROMO-2-NITROPROPAN-1,3-DIOL**

INDEX 603-085-00-8	$0,1 \leq x < 0,15$	Acute Tox. 3 H301, Acute Tox. 3 H331, Acute Tox. 4 H312, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411 LD50 Oral: 211 mg/kg, LD50 Dermal: 1600 mg/kg, LC50 Inhalation mists/powders: 0,588 mg/kg
EC 200-143-0		
CAS 52-51-7		
<b>DIFENACOUM</b>		
INDEX 607-157-00-X	$x = 0,005$	Repr. 1B H360D, Acute Tox. 1 H300, Acute Tox. 1 H310, Acute Tox. 1 H330, STOT RE 1 H372, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=10 Repr. 1B H360D: $\geq 0,003\%$ , STOT RE 1 H372: $\geq 0,02\%$ , STOT RE 2 H373: $\geq 0,002\%$ LD50 Oral: 1,8 mg/kg, LD50 Dermal: 4,99 mg/kg, STA Inhalation mists/powders: 0,005 mg/l
EC 259-978-4		
CAS 56073-07-5		
<b>DENATONIUM BENZOATE</b>		
CAS. 3734-33-6	$x = 0,001$	Skin Irrit.2 H315, Eye Dam.1 H318, Aquatic Chronic.3 H412, Acute Tox.4 H302, Acute Tox.4 H332
CE 223-095-2		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Ingestion of excessive quantities may cause nausea, vomiting, loss of appetite, extreme thirst, lethargy, diarrhea, bleeding

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

If ingested, administer vitamin K1 orally or intramuscularly as indicated in the case of an overdose of bishydroxycoumarin.

Repeat as needed based on monitoring of prothrombin times

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

#### SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

### 5.2. Special hazards arising from the substance or mixture

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

### 5.3. Advice for firefighters

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

**SECTION 6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

**SECTION 7. Handling and storage****7.1. Precautions for safe handling**

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

**7.2. Conditions for safe storage, including any incompatibilities**

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Regulatory References:

ITA

Italia

Decreto Legislativo 9 Aprile 2008, n.81

**2-BROMO-2-NITROPROPAN-1,3-DIOL**

Predicted no-effect concentration - PNEC		
Normal value in fresh water	1	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	41	mg/kg
Normal value for marine water sediment	3	mg/kg
Normal value for water, intermittent release	3	mg/l
Normal value for the terrestrial compartment	5	mg/kg

Health - Derived no-effect level - DNEL / DMEL								
Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		0.5 mg/kg bw/d		0.18 mg/kg bw/d				
Inhalation	0.6 mg/m3		0.6 mg/m3	0.6 mg/m3	2.5 mg/m3	10.5 mg/m3	2.5 mg/m3	3.5 mg/m3
Skin	0.004 mg/cm2	2.1 mg/kg bw/d	0.004 mg/cm2	0.7 mg/kg bw/d	0.008 mg/cm2	6 mg/kg bw/d	0.008 mg/cm2	2 mg/kg bw/d

DIFENACOU M Threshold Limit Value					
Type	Country	TWA/8h	STEL/15min	Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm
VLEP	ITA	5			






Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,32	mg/l
Normal value in marine water	0,032	mg/l
Normal value for fresh water sediment	1,7	mg/kg
Normal value for marine water sediment	0,17	mg/kg

Legend: (C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

## 8.2. Exposure controls

8.2.1 APPROPRIATE ENGINEERING CONTROLS	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.	
	General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.	
	Type of Contaminant:	Air Speed:
	solvent, vapours, degreasing etc., evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min)
	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas	1-2.5 m/s

	discharge (active generation into zone of rapid air motion)	(200-500 f/min)
	grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)
	Within each range the appropriate value depends on:	
	Lower end of the range	Upper end of the range
	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
	2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
	3: Intermittent, low production.	3: High production, heavy use
	4: Large hood or large air mass in motion	4: Small hood - local control only
	Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.	
8.2.2 PERSONAL PROTECTION	    	
Eye and face protection	Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]	
Skin protection	See Hand protection below	
Hands/feet protection	<p>Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> <li>- frequency and duration of contact</li> <li>- chemical resistance of glove material</li> <li>- glove thickness</li> <li>- dexterity.</li> </ul> <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> <li>- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.</li> <li>- Contaminated gloves should be replaced.</li> </ul> <p>As defined in ASTM F-739-96 in any application, gloves are rated as:</p> <ul style="list-style-type: none"> <li>- Excellent when breakthrough time &gt; 480 min.</li> <li>- Good when breakthrough time &gt; 20 min.</li> <li>- Fair when breakthrough time &lt; 20 min.</li> <li>- Poor when glove material degrades</li> </ul> <p>For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.</p> <p>It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the</p>	

	<p>manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:</p> <ul style="list-style-type: none"> <li>-Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.</li> <li>-Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.</li> </ul> <p>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p>
Body protection	See Other protection below
Other protection	Overalls.P.V.C apron. Barrier cream. Skin cleansing cream. Eye wash unit.
Environmental exposure controls	Emissions from manufacturing processes, including those from ventilation equipment, should be controlled for compliance with environmental protection legislation. Product residues must not be discharged without control into wastewater or water courses.

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	solid	Method:OPPTS 830.6303
Colour	blue	Method:OPPTS 830.6302
Odour	characteristic	Method:OPPTS 830.6304
Melting point / freezing point	not determined	Reason for missing data: Determination not necessary for safe use of the product
Initial boiling point	not determined	Reason for missing data: Determination not necessary for safe use of the product
Flammability	not applicable	Reason for missing data: Not applicable to solids
Lower explosive limit	not applicable	Reason for missing data: Not applicable to solids
Upper explosive limit	not applicable	Reason for missing data: Not applicable to solids
Flash point	not applicable	Reason for missing data: Not applicable to solids
Auto-ignition temperature	not applicable	Reason for missing data: Not applicable to solids
Decomposition temperature	not applicable	Reason for missing data: Not applicable to solids
pH	6,72	Method:OECD test 122
Kinematic viscosity	not applicable	Reason for missing data: Not applicable to solids
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not applicable	Reason for missing data: Not determinable for mixtures
Vapour pressure	not available	Reason for missing data: Determination not necessary for safe use of the product
Density and/or relative density	1,08 kg/l	Method:OECD test 109
Relative vapour density	not determined	Reason for missing data: Determination not necessary for safe use of the product
Particle characteristics		The product comes in a single compact block

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Information not available

#### 9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU)	0,86 %	-	9,29	g/litre
VOC (volatile carbon)	0,41 %	-	4,39	g/litre

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

2-BROMO-2-NITROPROPAN-1,3-DIOL

Decomposes on contact with: water,metals,strong bases.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

### 10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

2-BROMO-2-NITROPROPAN-1,3-DIOL

Avoid exposure to: light,UV rays,moisture.

### 10.5. Incompatible materials

Information not available

### 10.6. Hazardous decomposition products

2-BROMO-2-NITROPROPAN-1,3-DIOL

May develop: nitric oxide,carbon oxides,hydrobromic acid.

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

DIFENACOU  
Oral LD50 (rat): 1,8 mg/Kg.

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

Metabolism, toxicokinetics, mechanism of action and other information



Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - mists / powders) of the mixture:	> 5 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	Not classified (no significant component)

2-BROMO-2-NITROPROPAN-1,3-DIOL

LD50 (Dermal):	1600 mg/kg Ratto
LD50 (Oral):	211 mg/kg Ratto maschio
LC50 (Inhalation mists/powders):	0,588 mg/l/4h (Ratto, maschio e femmina)

DIFENACOU

LD50 (Dermal):	4,99 mg/kg Rat - male and female -
LD50 (Oral):	1,8 mg/kg
LC50 (Inhalation vapours):	0,00364 mg/l Rat - male and female - 4h

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

May damage the unborn child

#### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

#### STOT - REPEATED EXPOSURE

May cause damage to organs

#### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

#### **11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

### **SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

#### **12.1. Toxicity**

##### DIFENACOU

LC50 - for Fish	0,064 mg/l/96h Oncorhynchus mykiss (rainbow trout)
EC50 - for Crustacea	0,52 mg/l/48h Daphnia magna (Water flea)
EC50 - for Algae / Aquatic Plants	0,8 mg/l/72h Pseudokirchneriella subcapitata

##### 2-BROMO-2-NITROPROPAN-1,3-DIOL

LC50 - for Fish	412 mg/l/96h (Oncorhynchus mykiss (Trota iridea)):
EC50 - for Crustacea	1,4 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	37 mg/l/72h (Pseudokirchneriella subcapitata (alghe cloroficee)):
Chronic NOEC for Fish	215 mg/l Oncorhynchus mykiss (Trota iridea)
Chronic NOEC for Crustacea	27 mg/l Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	8 mg/l Skeletonema costatum

#### **12.2. Persistence and degradability**

##### DIFENACOU

NOT rapidly degradable

##### 2-BROMO-2-NITROPROPAN-1,3-DIOL

Solubility in water	286000 mg/l
Rapidly degradable	

#### **12.3. Bioaccumulative potential**

##### DIFENACOU

Partition coefficient: n-octanol/water	7,6 Log Kow
--	-------------

BCF 35645

2-BROMO-2-NITROPROPAN-1,3-DIOL

Partition coefficient: n-octanol/water 0,22

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

**SECTION 13. Disposal considerations****13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

not applicable

**14.2. UN proper shipping name**

not applicable

**14.3. Transport hazard class(es)**

not applicable

**14.4. Packing group**

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**

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point	3
-------	---

Contained substance

Point	75
-------	----

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

## 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

This safety data sheet contains one or more Exposure Scenarios in an integrated form. Contents have been included in sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Repr. 1B</b>	Reproductive toxicity, category 1B
<b>Acute Tox. 1</b>	Acute toxicity, category 1
<b>Acute Tox. 3</b>	Acute toxicity, category 3
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>STOT RE 1</b>	Specific target organ toxicity - repeated exposure, category 1
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Aquatic Acute 1</b>	Hazardous to the aquatic environment, acute toxicity, category 1
<b>Aquatic Chronic 1</b>	Hazardous to the aquatic environment, chronic toxicity, category 1
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>H360D</b>	May damage the unborn child.
<b>H300</b>	Fatal if swallowed.
<b>H310</b>	Fatal in contact with skin.
<b>H330</b>	Fatal if inhaled.
<b>H301</b>	Toxic if swallowed.
<b>H331</b>	Toxic if inhaled.
<b>H312</b>	Harmful in contact with skin.
<b>H372</b>	Causes damage to organs through prolonged or repeated exposure.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H318</b>	Causes serious eye damage.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H400</b>	Very toxic to aquatic life.
<b>H410</b>	Very toxic to aquatic life with long lasting effects.
<b>H411</b>	Toxic to aquatic life with long lasting effects.

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)

- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

#### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

#### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

#### CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of

chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 05 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16.