

according to the Hazardous Products Regulations

Clanobutin Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04/04/2023
1.10	09/30/2023	3667483-00011	Date of first issue: 11/09/2018

SECTION 1. IDENTIFICATION

Product name	:	Clanobutin Formulation
Other means of identification	:	No data available

Manufacturer or supplier's details

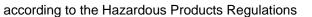
Company name of supplier	:	Merck & Co., Inc
Address	:	126 E. Lincoln Avenue
		Rahway, New Jersey U.S.A. 07065
Telephone	:	908-740-4000
Emergency telephone	:	1-908-423-6000
E-mail address	:	EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use

Recommended use	:	Veterinary product
Restrictions on use	:	Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations						
Skin Initation	·	Category 2				
Eye irritation	:	Category 2B				
GHS label elements						
Hazard pictograms	:					
Signal Word	:	Warning				
Hazard Statements	:	H315 + H320 Causes skin and eye irritation.				
Precautionary Statements	:	Prevention: P264 Wash skin thoroughly after handling. P280 Wear protective gloves.				
		Response: P302 + P352 IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332 + P313 If skin irritation occurs: Get medical attention. P337 + P313 If eye irritation persists: Get medical attention. P362 + P364 Take off contaminated clothing and wash it before reuse.				





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Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

 Common Name/Svnonvm	CAS-No.	Concentration (% w/w)
No data availa- ble		>= 10 - < 30 *

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In case of eye contact	:	
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	Causes skin and eye irritation.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	
Specific hazards during fire	:	Vapors may form explosive mixtures with air.



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	fighting	I		Exposure to comb	oustion products may be a hazard to health.
	Hazard ucts	lous combustion prod-	:	Carbon oxides Nitrogen oxides (I	NOx)
	Specific ods	c extinguishing meth-	:	cumstances and t Use water spray t	measures that are appropriate to local cir- he surrounding environment. o cool unopened containers. ged containers from fire area if it is safe to do
		l protective equipment fighters	:	In the event of fire	e, wear self-contained breathing apparatus. ective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	:	Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation Advice on safe handling		Use only with adequate ventilation. Do not get on skin or clothing. Avoid inhalation of vapor or mist. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling.
		Handle in accordance with good industrial hygiene and safety



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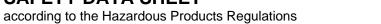
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	itions for safe storage rials to avoid	assessment Take care to pr environment. : Keep in proper Store in accord	I on the results of the workplace exposure revent spills, waste and minimize release to the ly labeled containers. ance with the particular national regulations. th the following product types: g agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Clanobutin	30544-61-7	TWA	0.3 mg/m3 (OEB 2)	Internal

Engineering measures :	Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip- less quick connections). All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Laboratory operations do not require special containment.
Personal protective equipmen	t
Respiratory protection :	If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Filter type : Hand protection	Particulates type
Material :	Chemical-resistant gloves
Eye protection :	Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.
Skin and body protection : Hygiene measures :	 Work uniform or laboratory coat. If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.





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OF OT			- 6410		
		PHYSICAL AND CHI			
А	Appeara	nce	:	liquid	
C	Color		:	No data available	9
C	Odor		:	No data available)
C	Odor Th	reshold	:	No data available	9
р	ъН		:	No data available	9
N	Melting p	ooint/freezing point	:	No data available)
	nitial bo ange	iling point and boiling	:	No data available	
F	-lash po	int	:	93.4 °C	
E	Evapora	tion rate	:	No data available)
F	lammal	oility (solid, gas)	:	Not applicable	
F	lammal	oility (liquids)	:	Not applicable	
		cplosion limit / Upper ility limit	:	No data available	
		plosion limit / Lower ility limit	:	No data available	
V	/apor pr	essure	:	No data available	9
F	Relative	vapor density	:	No data available)
R	Relative	density	:	No data available)
C	Density		:	No data available)
S	Solubility Wate	r(ies) r solubility	:	soluble	
	Solub	pility in other solvents	:	No data available)
		coefficient: n-	:	Not applicable	
	octanol/v Autoignit	vater ion temperature	:	No data available	9
C	Decomp	osition temperature	:	No data available)
V	/iscosity Visco	, sity, kinematic	:	No data available	9





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Explo	sive properties	: Not explosive	e
Oxidizing properties		: The substan	ce or mixture is not classified as oxidizing.
Molecular weight		: No data avai	lable
Particle size :		: Not applicab	le

SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability Possibility of hazardous reac- tions	:	Not classified as a reactivity hazard. Stable under normal conditions. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid Incompatible materials Hazardous decomposition products	:	None known. Oxidizing agents No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Product:

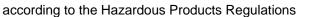
Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Components:		
Clanobutin: Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg
Acute toxicity (other routes of administration)	:	LD50 (Rat): 570 mg/kg Application Route: Intravenous
Skin corrosion/irritation		

Causes skin irritation.

Components:

Clanobutin:

Result : irritating





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Serious eye damage/eye irritation

Causes eye irritation.

Components:

Clanobutin:

Result

: Severe irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

Clanobutin:

Effects on fetal development : Test Type: Development Species: Rat Application Route: Oral Developmental Toxicity: NOAEL: 250 mg/kg body weight

Test Type: Development Species: Rabbit Application Route: Oral Developmental Toxicity: NOAEL: 250 mg/kg body weight

STOT-single exposure

Not classified based on available information.

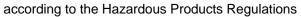
Components:

Clanobutin:

Routes of exposure	:	Inhalation
Assessment	:	May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.





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Repe	ated dose toxicity			
Com	ponents:			
Clane	obutin:			
Expo	EL cation Route sure time et Organs	:	Dog 500 mg/kg Oral 4 Weeks Central nervous Tremors, Disori	
NOAI LOAE Applic Expo	Species NOAEL LOAEL Application Route Exposure time Target Organs		Rat 300 mg/kg 500 mg/kg Oral 6 Months Kidney, Liver, T	⁻ hyroid
Species NOAEL LOAEL Application Route Exposure time Target Organs		:	Dog 300 mg/kg 600 mg/kg Oral 6 Months Kidney, Liver, T	-hyroid

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity			
Components:			
Clanobutin:			
Ecotoxicology Assessment Acute aquatic toxicity	:	Toxic effects cannot be excluded	
Chronic aquatic toxicity	:	Toxic effects cannot be excluded	
Persistence and degradabilit No data available Bioaccumulative potential No data available Mobility in soil No data available Other adverse effects No data available	ty		



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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues	:	Do not o

Waste from residues	: Do not dispose of waste into sewer.
	Dispose of in accordance with local regulations.
Contaminated packaging	 Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG Not regulated as a dangerous good

IATA-DGR Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

TDG Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:				
AICS	:	not determined		
DSL	:	not determined		
IECSC	:	not determined		

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

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;

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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 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

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/
Revision Date Date format	:	09/30/2023 mm/dd/yyyy

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