





Version: 3 / GB

Replaces Version: 2 / GB

Date revised: 25.04.2022

Print date: 20.01.23

	sources. No smoking.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
	lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	Dispose only when container is empty and closed. For disposal of product
	residues, refer to safety data sheet.

2.3. Other hazards

No special hazards have to be mentioned.

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients

propan-1-ol CAS No. EINECS no. Registration no. Concentration Classification (Regulat	71-23-8 200-746-9 01-21194867(>= tion (EC) No. 1 Flam. Liq. 2 Eye Dam. 1 STOT SE 3	1	< H225 H318 H336	10	%
citric acid CAS No. EINECS no. Registration no. Concentration Classification (Regulat	77-92-9 201-069-1 01-211945702 >= tion (EC) No. 1 Eye Irrit. 2 STOT SE 3	1	< H319 H335	10	%
ethanol CAS No. EINECS no. Registration no. Concentration Classification (Regulat	64-17-5 200-578-6 01-21194576 >= tion (EC) No. 1 Flam. Liq. 2	50	H225		%
Further ingredients					
glycerol CAS No. EINECS no. Concentration Advice: [3]	56-81-5 200-289-5 >=	1	<	10	%
Note					

[3] Substance with occupational exposure limits



Version: 3 / GB

Replaces Version: 2 / GB

Date revised: 25.04.2022

Print date: 20.01.23

Other information

Complete text of hazard statements in chapter 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated clothing immediately and dispose of safely. In case of persistent symptoms consult doctor.

After inhalation

Ensure supply of fresh air. In the event of symptoms take medical treatment.

After skin contact

No special measures required.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical advice immediately.

After ingestion

Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Take medical treatment.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

4.2. Most important symptoms and effects, both acute and delayed Until now no symptoms known so far.

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

Hints for the physician / hazards

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Dry powder, Foam, Carbon dioxide, Water spray jet

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture In case of combustion evolution of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away sources of ignition. Ensure adequate ventilation. Use personal protective clothing.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.



triformin s	afeDIS				
Version: 3 / GB	Replaces Ver	rsion: 2/GB	Date revise	ed: 25.04.2022	Print date: 20.01.23
		bent materials	s. Containers in v		tance has been collected
6.4. Reference to Refer to prote	other sections ective measures lis	-	ns 7 and 8.		
SECTION 7: Hand	ling and storag	ge			
aerosols. Kee Advice on pro	e handling I ventilation of work ep container tightly otection against	king area (loca closed. fire and exp	olosion		ry). Avoid formation of event static discharges.
7.2. Conditions f		-	-	-	-
Recommende Value	d storage tempe >	erature -20	< 40	°C	
Keep in origin Hints on stora	for storage roo nal packaging, tigh age assembly with strong oxidizir	tly closed. Sto		st be properly v	entilated.
Storage class	-	3	Flammable liqu	id	
	nation on storag er tightly closed. K			entilated place.	Protect from heat and direct
7.3. Specific end no data	use(s)				
SECTION 8: Expo	sure controls/	personal p	rotection		
8.1. Control para Exposure limi					
propan-1-ol	t values				
List Type Value Short term ex	xposure limit on / sensibilisation:	625 r	ng/m³ ng/m³ <s: sk<="" td=""><td>200 250</td><td>ppm(V) ppm(V)</td></s:>	200 250	ppm(V) ppm(V)
ethanol List Type Value		EH40 WEL 1920 r	ng/m³	1000	ppm(V)
Glycerol List Type Value		EH40 WEL 10 r	ng/m³		
Other informa	tion				



triformin sa	feDIS				
Version: 3 / GB	Replaces Version: 2 /	' GB	Date revised:	25.04.2022	Print date: 20.01.23
There are not k	nown any further control	paramete	rs.		
8.2. Exposure cont	trols				
	ive and hygiene meas	sures			
Do not smoke o	during work time. Do not i mmediately all contamina	nhale gas			
Respiratory pro	tection hits are exceeded, a respi	ratory pro	tection approv	ed for this particula	ar job must be worn.
Hand protection	ı				
Not necessary.					
Body protection	1 Ial in the chemical industr	٦V.			
	al and chemical pro				
9.1 Information or	n basic physical and	I chemi	cal nronorti	85	
Physical state	liquid		cai properti	63	
Colour	colourle	ess			
Odour	alcohol-	-like			
Melting point					
Remarks	not dete	ermined			
Freezing point					
Remarks	not dete	ermined			
Boiling point or	initial boiling point a	nd boilin	ig range		
Value	>	70		°C	
Flammability					
evaluation	not dete	ermined			
Upper and lowe	r explosive limits				
Remarks	not dete	ermined			
Flash point					
Value		23		°C	
Method	Regulat	tion (EC) I	No. 440/2008,	Annex, A.9	
Ignition tempera Remarks	ature not dete	ermined			
Decomposition	temperature				
Remarks Remarks	not dete	ermined			
pH value					
Value Temperature	appr.	3,4 20	°C		
Viscosity					
dynamic Value Temperature	<	10 20	°C	mPa.s	
Solubility(ies)					
Remarks	not dete	ermined			
Partition coeffic	ient n-octanol/water (log valu	e)		
Remarks	not dete	ermined			



triformin safeDIS Print date: 20.01.23 Replaces Version: 2 / GB Date revised: 25.04.2022 Version: 3 / GB Vapour pressure Value < 57 hPa °C Temperature 20 Density and/or relative density Value 0.87 g/cm³ Temperature 20 °C **Relative vapour density** Remarks not determined 9.2. Other information **Odour threshold** not determined Remarks Evaporation rate (ether = 1): Remarks not determined Solubility in water Remarks Completely miscible **Explosive properties** evaluation not determined **Oxidising properties** evaluation None known Other information None known SECTION 10: Stability and reactivity 10.1. Reactivity No hazardous reactions when stored and handled according to prescribed instructions. 10.2. Chemical stability No hazardous reactions known. 10.3. Possibility of hazardous reactions No hazardous reactions known. 10.4. Conditions to avoid Protect from heat and direct sunlight. Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting. 10.5. Incompatible materials Reactions with strong oxidising agents. 10.6. Hazardous decomposition products No hazardous decomposition products known. **SECTION 11: Toxicological information** 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Acute oral toxicity Species rat ATE 2000 mg/kg calculated value (Regulation (EC) No. 1272/2008) Method Based on available data, the classification criteria are not met. Remarks Acute oral toxicity (Components)



riformin sa	afeDIS					
ersion: 3/GB	Replaces	Version:	2 / GB	Date revised:	25.04.2022	Print date: 20.01.2
propan-1-ol						
Species		rat				
LD50		appr.	5400		mg/kg	
citric acid						
Species LD50		rat	11700		malka	
			11700		mg/kg	
citric acid Species		mouse				
LD50		mouse	5040		mg/kg	
Acute dermal	toxicity		0010			
Remarks	loxicity	Based	on availah	le data, the classi	ification criteria	are not met
Acute dermal	toxicity (Con					are not met.
		nponen	15)			
propan-1-ol Species		rabbit				
LD50		Tabbit	4032		mg/kg	
Duration of ex	kposure		24	h	iiig/ikg	
Method	•	OECD				
Acute inhalation	onal toxicitv					
Remarks	· · · · · ,	Based	on availab	le data, the classi	ification criteria	are not met.
Acute inhalativ	ve toxicity (C			,		
		ompon	ontoj			
propan-1-ol Species		rat				
LC50		>	33,8		mg/l	
Duration of ex	kposure		4	h	0	
Administration	n/Form	Vapors				
Method		OECD	403			
Skin corrosior	n/irritation					
Remarks		Based	on availab	le data, the classi	ification criteria	are not met.
Serious eye da	amage/irritat	ion				
evaluation		irritant				
Method			method	the second second		
Remarks		i est co		ith a similar form	นเลแงก.	
Sensitization		. .				
Remarks	_			le data, the classi	itication criteria	are not met.
Subacute, sub	chronic, chr		•			
Remarks		Based	on availab	le data, the classi	ification criteria	are not met.
Mutagenicity						
Remarks		Based	on availab	le data, the classi	ification criteria	are not met.
Reproductive	toxicity					
Remarks	-	Based	on availab	le data, the classi	ification criteria	are not met.
Carcinogenici	ty					
Remarks	-	Based	on availab	le data, the classi	ification criteria	are not met.
Specific Targe	t Organ Toxi			,		
	•		/			
Single expos	sure	Deeed		lo doto the alacsi	ification oritori-	ara not mot
Remarks		Dased	un avallaD	le data, the classi	meation criteria	are not met.
Repeated ex	posure	Dess			dia ati ana anita at	
Remarks		Based	on availab	le data, the classi	incation criteria	are not met.



/ersion: 3/GB	Replaces Vers	ion: 2/GB	Dat	e revised:	25.04.2022	Print date: 20.01.2
Aspiration ha	azard vailable data, the clas	sification crite	ria are	not met.		
11.2 Information	n on other hazard	ls				
	srupting propertie t does not contain a s	=			srupting propertie	es with respect to
Other inform There is no	ation data available on the	product apart	from th	ne informat	ion given in this	subsection.
SECTION 12: Eco	ological informat	ion				
12.1. Toxicity						
General infor not determin						
Fish toxicity	(Components)					
propan-1-ol						
Species LC50	Fat	head minnow 4555	(Pimep	hales pron	nelas) mg/l	
Duration of Method		96 CD 203	h		mg/i	
citric acid						
Species LC50	golo	den orfe (Leuc 440	to	dus) 706	mg/l	
Duration of	exposure	96	h			
Daphnia toxi	city (Components)					
propan-1-ol	5					
Species EC50	Dap	ohnia magna 3644			mg/l	
Duration of	exposure	48	h		ing/i	
Method	DIN	l 38412 / Part	11			
citric acid		hnia maana				
Species EC50	Dap	ohnia magna 120			mg/l	
Duration of	exposure	72	h			
Algae toxicit	y (Components)					
propan-1-ol						
Species	Sel	enastrum capi	ricornut	um		
EC50 Duration of	exposure	9170 48	h		mg/l	
Duration of Bacteria toxi	city (Components)		П			
		1				
propan-1-ol Species	acti	vated sludge				
IĊ50	>	1000			mg/l	
Duration of	exposure	3	h		-	
Method	OE	CD 209				

There is no data available on the product apart from the information given in this subsection.



triformin safeDIS Print date: 20.01.23 Replaces Version: 2 / GB Date revised: 25.04.2022 Version: 3 / GB **Biodegradability** Readily biodegradable (according to OECD criteria) evaluation Ready degradability (Components) citric acid 12.3. Bioaccumulative potential **General information** There is no data available on the product apart from the information given in this subsection. Partition coefficient n-octanol/water (log value) Remarks not determined 12.4. Mobility in soil **General information** For this subsection there is no ecotoxicological data available on the product as such. 12.5. Results of PBT and vPvB assessment **General information** Not applicable Results of PBT and vPvB assessment The product contains no PBT substances The product contains no vPvB substances. 12.6 Endocrine disrupting properties Endocrine disrupting properties with respect to the envrionment The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms. 12.7. Other adverse effects General information not determined General information / ecology Do not discharge product unmonitored into the environment. **SECTION 13: Disposal considerations** 13.1. Waste treatment methods Disposal recommendations for the product 18 01 06* EWC waste code chemicals consisting of or containing dangerous substances EWC waste code 20 01 29* detergents containing dangerous substances The listed waste code numbers, according to the European Waste Catalogue (EWC), are to be understood as a recommendation. A final decision must be made in agreement with the regional waste disposal company. **Disposal recommendations for packaging** 15 01 02 EWC waste code plastic packaging Completely emptied packagings can be given for recycling. EWC waste code 15 01 10* packaging containing residues of or contaminated by dangerous substances Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

SECTION 14: Transport information



Version: 3 / GB

Replaces Version: 2 / GB

Date revised: 25.04.2022

Print date: 20.01.23

kg

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	D/E		
IMDG-Code segregation group		0 Not applicable	
14.1. UN number or ID number	1987	1987	1987
14.2. UN proper shipping name	ALCOHOLS, N.O.S. (propan-1-ol, ethanol)	ALCOHOLS, N.O.S. (propan-1-ol, ethanol)	ALCOHOLS, N.O.S. (propan-1-ol, ethanol)
14.3. Transport hazard class(es)	3	3	3
Label	3	3	8
14.4. Packing group		III	
Limited Quantity	51	51	
Transport category	3		
14.5. Environmental hazards		no	

14.6. Special precautions for user

See Sections 6 to 8

Other information

14.7 Maritime transport in bulk according to IMO instruments Not applicable

SECTION 15: Regulatory information

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

Major-accident categories acc. 2012/18/EU

		Category	P5c	FLAMMABLE LIQUID	5.000.000	kg	50.000.000
--	--	----------	-----	------------------	-----------	----	------------

VOC (EU)

0

%

Other information

The product does not contain substances of very high concern (SVHC).

Other information

All components are contained in the TSCA inventory or exempted.

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.



Version: 3 / GB

Replaces Version: 2 / GB

Date revised: 25.04.2022

Print date: 20.01.23

SECTION 16: Other information

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

Classification (Regulation (EC) No. 1272/2008) Flam. Liq. 3 H Eve Irrit. 2 H

́ H226 H319

Hazard statements listed in Chapter 2/3

H225Highly flammable liquid and vapour.H226Flammable liquid and vapour.H318Causes serious eye damage.H319Causes serious eye irritation.H335May cause respiratory irritation.H336May cause drowsiness or dizziness.

CLP categories listed in Chapter 2/3

Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
STOT SÉ 3	Specific target organ toxicity - single exposure, Category 3

Abbreviations

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route RID: Règlement concernant le transport international ferroviaire de marchandises dangereuses IMDG: International Maritime Code for Dangerous Goods ICAO: International Civil Aviation Organization IATA: International Air Transport Association MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (MARPOL: Marine Pollution) IBC: Intermediate Bulk Container CAS: Chemical Abstracts Service VOC: Volatile Organic Compound LD: Lethal dose LC: Lethal concentration PBT: Persistent, Bioaccumulative and Toxic vPvB: Very persistent and very bioaccumulative

SVHC: Substances of very high concern

EU: European Union

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: *** This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.