

VA-DOT 4

Revision date: 19.06.2018

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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1.2. Relevant identified uses of the substance or mixture and uses advised against**1.3. Details of the supplier of the safety data sheet**

Company name:	Vierol AG	
Street:	Karlstrasse 19	
Place:	D-26123 Oldenburg	
Telephone:	+49 (0) 441 – 210 20 – 0	Telefax: +49 (0) 441 – 210 20 –111
e-mail:	info@vierol.de	
Internet:	www.vierol.de	
Responsible Department:	Giftinformationszentrum Nord (Göttingen)	
	+49 (0)551/19240	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements**Regulation (EC) No. 1272/2008****Special labelling of certain mixtures**

EUH208	Contains Dihydro-3- (tetrapropenyl) furan-2,5-dione, 2,2'- [[[(5-methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol, 2,2'- [[[(4-Methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol.. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
161907-77-3	Ethanol, 2-butoxy-, manufacture of, by-products from			10-<20 %
	310-287-7		01-2119475115-41	
	Eye Dam. 1; H318			
111-46-6	2,2'-oxybisethanol; diethylene glycol			1-20 %
	203-872-2	603-140-00-6		
	Acute Tox. 4; H302			
111-77-3	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether			<3 %
	203-906-6	603-107-00-6		
	Repr. 2; H361d ***			
26544-38-7	Dihydro-3- (tetrapropenyl) furan-2,5-dione			<0,1 %
	247-781-6		01-2119979080-37	
	Eye Irrit. 2, Skin Sens. 1A, Aquatic Chronic 4; H319 H317 H413			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Never give anything by mouth to an unconscious person or a person with cramps.
Treat symptomatically.
Remove casualty to fresh air and keep warm and at rest.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary. Remove casualty to fresh air and keep warm and at rest.

After contact with skin

Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. After contact with skin, wash immediately with plenty of water and soap.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings. Foam. Carbon dioxide (CO₂). Extinguishing powder
Water mist BC-powder

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Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**Protective clothing
No naked flames.**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sectionsSafe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Keep away from sources of ignition - No smoking.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed.

Hints on joint storage

No special measures are necessary.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
111-46-6	2,2'-Oxydiethanol	23	101		TWA (8 h)	WEL
111-77-3	2-(2-Methoxyethoxy)ethanol	10	50.1		TWA (8 h)	WEL

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
161907-77-3	Ethanol, 2-butoxy-, manufacture of, by-products from		
Worker DNEL, long-term	inhalation	systemic	195 mg/m ³
Worker DNEL, long-term	dermal	systemic	208 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	117 mg/m ³
Consumer DNEL, long-term	dermal	systemic	125 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	12,5 mg/kg bw/day
111-77-3	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether		
Worker DNEL, long-term	dermal	systemic	0,53 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	50,1 mg/m ³
Consumer DNEL, long-term	dermal	systemic	0,27 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	25 mg/m ³
Consumer DNEL, long-term	oral	systemic	1,5 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
161907-77-3	Ethanol, 2-butoxy-, manufacture of, by-products from	
Freshwater	1,8 mg/l	
Marine water	0,18 mg/l	
Marine water (intermittent releases)	18 mg/l	
Freshwater sediment	6,6 mg/kg	
Marine sediment	0,66 mg/kg	
Soil	0,41 mg/kg	

8.2. Exposure controls**Protective and hygiene measures**

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

Eye/face protection

Wear eye protection/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

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Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	colourless
Odour:	-
pH-Value:	7-<11,5

Changes in the physical state

Melting point:	<-50 °C
Initial boiling point and boiling range:	>230 °C
Auto-ignition temperature:	>300 °C
Flash point:	> 100 °C

Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

Oxidizing properties

Not oxidising.	
Vapour pressure:	not determined
Density:	1,07 g/cm ³
Water solubility:	easily soluble

Solubility in other solvents

not determined	
Partition coefficient:	not determined
Viscosity / kinematic: (at 20 °C)	5-10 mm ² /s
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined
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SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

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No known hazardous reactions.

10.4. Conditions to avoid

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
161907-77-3	Ethanol, 2-butoxy-, manufacture of, by-products from				
	oral	LD50 2630 mg/kg	Rat		
	dermal	LD50 3540 mg/kg	Rabbit		
111-46-6	2,2'-oxybisethanol; diethylene glycol				
	oral	ATE 500 mg/kg			
	dermal	LD50 11890 mg/kg	Rabbit		
111-77-3	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether				
	oral	LD50 ca. 6500 mg/kg	Rat		
	dermal	LD50 ca. 6450 mg/kg	Rabbit		
	inhalation (1 h) vapour	LC50 > 200 mg/l	Rat		
26544-38-7	Dihydro-3- (tetrapropenyl) furan-2,5-dione				
	oral	LD50 2900 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
	inhalation (4 h) aerosol	LC50 5,3 mg/l	Rat		

Irritation and corrosivity

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

Sensitising effects

Contains Dihydro-3- (tetrapropenyl) furan-2,5-dione, 2,2'-[[[(5-methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol, 2,2'-[[[(4-Methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol.. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

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STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information**12.1. Toxicity**

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
161907-77-3	Ethanol, 2-butoxy-, manufacture of, by-products from					
	Acute fish toxicity	LC50 >1800 mg/l	96 h	Scophthalmus maximus		OECD 203
	Acute algae toxicity	ErC50 2490 mg/l	72 h	Scenedesmus subspicatus		OECD 201
	Acute crustacea toxicity	EC50 >3200 mg/l	48 h	Daphnia magna (Big water flea)		OECD 202
111-46-6	2,2'-oxybisethanol; diethylene glycol					
	Acute fish toxicity	LC50 > 32000 mg/l	96 h	Gambusia affinis		
111-77-3	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether					
	Acute fish toxicity	LC50 7500 mg/l	96 h	Lepomis macrochirus		
	Acute algae toxicity	ErC50 > 500 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 > 500 mg/l	48 h	Daphnia magna		
26544-38-7	Dihydro-3- (tetrapropenyl) furan-2,5-dione					
	Acute fish toxicity	LC50 >100 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute crustacea toxicity	EC50 >100 mg/l	48 h			
	Acute bacteria toxicity	(800 mg/l)	3 h			

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
26544-38-7	Dihydro-3- (tetrapropenyl) furan-2,5-dione			
	OECD 301D	9,9%	28	
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

The product has not been tested.

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
111-46-6	2,2'-oxybisethanol; diethylene glycol	-1,98 (25°C)
111-77-3	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	-0,68

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Dispose of waste according to applicable legislation.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.

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14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No dangerous good in sense of this transport regulation.

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

Restrictions on use (REACH, annex XVII):

Entry 54: 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether

2010/75/EU (VOC): 2,99 % (31,993 g/l)

2004/42/EC (VOC): 22,98 % (245,886 g/l)

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Abbreviations and acronyms**

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 Harmonized 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

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H361d Suspected of damaging the unborn child.

H413 May cause long lasting harmful effects to aquatic life.

EUH208 Contains Dihydro-3- (tetrapropenyl) furan-2,5-dione, 2,2'-
[[[(5-methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol, 2,2'-
[[[(4-Methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol.. May produce an allergic
reaction.

EUH210 Safety data sheet available on request.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Safety Data Sheet

according to Regulation (EC) No 1907/2006



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(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)