



Version number 30 (replaces version 29) Printing date 09.02.2024 Revision: 09.02.2024

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

· 1.1 Product identifier

· Trade name BRAWO-HT - Komponente A

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

No further relevant information available.

· Application of the substance

/ the mixture Epoxy sealing

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier: BRAWO SYSTEMS GmbH

> Blechhammerweg 13-17 67659 Kaiserslautern Deutschland/Germany

Tel: +49(0)631-205 61 100

Informing department: Technische Abteilung

msds@brawoliner.de

1.4 Emergency telephone

+49 (0) 61 31 - 19 240 (Giftnotruf Mainz) number:

#### **SECTION 2: Hazards identification**

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

· 2.2 Label elements

Labelling according to

Regulation (EC) No 1272/2008 The product is classified and labelled according to the GB CLP regulation.

· Hazard pictograms



GHS07 GHS09

· Signal word Warning

· Hazard-determining components of labelling:

epoxide derivates

Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)] dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl) oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]

dioxirane

Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane

(1:2)

maleic anhydride

methyl toluene-4-sulphonate

oxirane, mono[(C12-14-alkyloxy)methyl] derivs

4-morpholinecarbaldehyde

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· Hazard statements (Contd. of page 1)
· Hazard statements

H319 Causes serious eye irritation. H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements P101 If medical advice is needed, have product

container or label at hand.
P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P261 Avoid breathing dust/fume/gas/mist/vapours/

spray.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face

protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for

several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

If skin irritation or rash occurs: Get medical

advice/attention.

P501 Dispose of contents/container in accordance

with local/regional/national/international

regulations.

• Additional information: EUH205 Contains epoxy constituents. May produce an allergic

reaction.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable. · **vPvB:** Not applicable.

### **SECTION 3: Composition/information on ingredients**

· 3.2 Mixtures

• **Description:** Mixture consisting of the following components.

P333+P313

CAS: 1675-54-3	epoxide derivates	30-60%
EINECS: 216-823-5	Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317, EUH205	
CAS: 9003-36-5 EC number: 701-263-0	Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥10-<25%
CAS: 933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2)  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412	
CAS: 80-48-8	methyl toluene-4-sulphonate	≥0.1-<0.5%
EINECS: 201-283-5	Skin Corr. 1C, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1, H317	

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CAS: 68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs	≥0.1-<0.5%
EINECS: 271-846-8	Skin Irrit. 2, H315; Skin Sens. 1, H317, EUH205	
CAS: 4394-85-8	4-morpholinecarbaldehyde	≥0.1-<0.5%
EINECS: 224-518-3	Skin Sens. 1, H317	
CAS: 108-31-6	maleic anhydride	<0.001%
EINECS: 203-571-6	Resp. Sens. 1, H334; STOT RE 1, H372; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1A, H317, EUH071	
	Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	

· Additional information For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

· 4.1 Description of first aid measures

· After inhalation Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position

for transport.

Instantly wash with water and soap and rinse thoroughly. · After skin contact

· After eye contact Seek medical treatment.

Rinse opened eye for several minutes under running water. If

symptoms persist, consult doctor.

· After swallowing Rinse out mouth and then drink plenty of water.

Seek medical treatment.

#### SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents Use fire fighting measures that suit the environment.

5.2 Special hazards arising from the substance or

mixture

No further relevant information available.

5.3 Advice for firefighters

Protective equipment: No special measures required.

### SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and

emergency procedures

Not required.

· 6.2 Environmental precautions:

Inform respective authorities in case product reaches water or sewage system.

· 6.3 Methods and material for

containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders,

universal binders, sawdust).

· 6.4 Reference to other

sections See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

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See Section 13 for information on disposal.

### SECTION 7: Handling and storage

· 7.1 Precautions for safe

handling Store in cool, dry place in tightly closed containers.

Open and handle container with care.

· Information about protection

against explosions and fires: No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

Storage

· Requirements to be met by

storerooms and containers: No special requirements.

· Information about storage in

one common storage facility: Not required.

· Further information about

**storage conditions:** Keep container tightly sealed.

Storage class 10

#### SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Components with critical values that require monitoring at the workplace:

CAS: 108-31-6 maleic anhydride

WEL Short-term value: 3 mg/m<sup>3</sup>

Long-term value: 1 mg/m3

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· DNELs

CAS: 68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

Oral DNEL 1 mg/kg bw/Tag (ArL)
Dermal DNEL 1.7 mg/kg bw/day (ArL)
Inhalative DNEL 0.98 mg/m³ (ArL)

· PNECs

CAS: 68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

PNEC | 0.00072 mg/l (Mew)

0.0072 mg/l (Freshwater)

PNEC 80.12 mg/kg dwt (Bod)

6.677 mg/kg dwt (Sediment)

66.77 mg/kg dwt (Fresh water sediment)

· Additional information: The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls

Appropriate engineering

controls No further data; see section 7.

Individual protection measures, such as personal protective equipment

· General protective and

hygienic measures Keep away from foodstuffs, beverages and food.

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Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

· Hand protection Protective gloves.

Selection of the glove material on consideration of the penetration

times, rates of diffusion and the degradation

After use of gloves apply skin-cleaning agents and skin cosmetics. · Material of gloves The selection of the suitable gloves does not only depend on the

material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product 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.

· Penetration time of glove

material

The exact breakthrough time must be obtained from the protective

glove manufacturer and must be observed.

· Eye/face protection

Not required.

· Body protection: Protective work clothing.

#### **SECTION 9: Physical and chemical properties**

· 9.1 Information on basic physical and chemical properties

· General Information

· Colour: Green · Smell: Characteristic · Melting point/freezing point: Not determined

· Boiling point or initial boiling point and

boiling range >200 °C (CAS: 25068-38-6 Propyl -2,2-diphenyl-

4,4'dipropyloxirane polymers and homologues

molecular weight < 700)

· Flash point: >93 °C

Auto-ignition temperature: 460 °C (CAS: 9003-36-5 2,2'-[methylenebis(p-

phenyleneoxymethylene)]bisoxirane polymers

and homologues, molecular weight < 700)

Not applicable.

Not determined.

· Viscosity:

· pH

· Kinematic viscosity Not determined. · dynamic: Not determined.

· Solubility

· Water: Not miscible or difficult to mix

· Steam pressure at 20 °C: <0.1 hPa (CAS: 25068-38-6 Propyl -2,2-diphenyl-

4,4'dipropyloxirane polymers and homologues

molecular weight < 700)

· Density and/or relative density

· Density at 20 °C 1.41 g/cm<sup>3</sup>

· 9.2 Other information

· Appearance:

· Form: Viscous

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Important information on protection of health

and environment, and on safety.

• Self-inflammability: Product is not selfigniting. • Explosive properties: Product is not explosive.

· Information with regard to physical hazard

classes

· Explosives Void · Flammable gases Void · Aerosols Void · Oxidising gases Void · Gases under pressure Void · Flammable liquids Void · Flammable solids Void · Self-reactive substances and mixtures Void Void · Pyrophoric liquids Void · Pyrophoric solids Self-heating substances and mixtures Void · Substances and mixtures, which emit Void flammable gases in contact with water · Oxidising liquids Void Oxidising solids Void Void · Organic peroxides

#### SECTION 10: Stability and reactivity

• 10.1 Reactivity No further relevant information available.

10.2 Chemical stability

· Corrosive to metals

Desensitised explosives

Thermal decomposition /

conditions to be avoided: No decomposition if used according to specifications.

Void Void

· 10.3 Possibility of hazardous

reactions No dangerous reactions known

• 10.4 Conditions to avoid No further relevant information available. • 10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous

decomposition products: No dangerous decomposition products known

#### **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 that are relevant for classification:

CAS: 1675-54-3 epoxide derivates

Dermal LD50 23000 mg/kg (rabbit)

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Oral	[1116	l 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2' ethylenebis(2,1-phenyleneoxymethylene)]dioxirane		
	LD50	>2000 mg/kg (rat)		
Dermal	LD50	>2000 mg/kg (rabbit)		
CAS: 80-48-8 methyl toluene-4-sulphonate				
Oral	LD50	341 mg/kg (rat)		
CAS: 6860	9-97-2 ox	cirane, mono[(C12-14-alkyloxy)methyl] derivs		
Oral	LD50	17100 mg/kg (rat)		
Inhalative	LC50/4 h	0.206 mg/l (rat)		
CAS: 108-31-6 maleic anhydride				
Oral	LD50	1090 mg/kg (rat)		
Dermal	LD50	2620 mg/kg (rat)		
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity STOT-single exposure STOT-repeated exposure Aspiration hazard		May cause an allergic skin reaction.  May cause an allergic skin reaction.  icity Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.		

## **SECTION 12: Ecological information**

CAS: 128-37-0 2,6-Di-tert-butyl-p-cresol

#### · 12.1 Toxicity

· Aquatic to	· Aquatic toxicity:			
CAS: 1675-	CAS: 1675-54-3 epoxide derivates			
IC50	>42.6 mg/l (Bak)			
LC50/96h	2 mg/l (Oncorhynchus mykiss)			
EC50/48h	1.8 mg/l (Daphnia magna)			
ErC50/72h	11 mg/l (Selenastrum capricornutum)			
CAS: 9003-	CAS: 9003-36-5 Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'- [methylenebis(2,1-phenyleneoxymethylene)]dioxirane			
LC50/96h	>100 mg/l (Daphnia magna)			
EC50/96h	EC50/96h >100 mg/l (Leucidus idus)			
CAS: 6860	CAS: 68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs			
EbC50/72h	843 mg/l (Pseudokirchneriella subcapitata)			
LC50/96h	>5000 mg/l (Oncorhynchus mykiss)			
	1800 mg/l (Lepomis macrochirus)			
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EC50 >100 mg/l (BEL)

NOEC 500 mg/l (Pseudokirchneriella subcapitata)

· 12.2 Persistence and

degradability No further relevant information available.

12.3 Bioaccumulative

potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

• 12.5 Results of PBT and vPvB assessment
• PBT:
• vPvB:
Not applicable.
Not applicable.

· 12.6 Endocrine disrupting

properties For information on endocrine disrupting properties see section 11.

12.7 Other adverse effects

· Remark: Toxic for fish

· Additional ecological information:

• General notes: Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Do not allow product to reach ground water, water bodies or

sewage system.

Danger to drinking water if even small quantities leak into soil.

#### SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

• Recommendation Must not be disposed of together with household garbage. Do not

allow product to reach sewage system.

· Uncleaned packagings:

• Recommendation: Disposal must be made according to official regulations.

## SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	UN3082
14.2 UN proper shipping name	
· ADR, IATA	ENVIRONMENTALLY HAZARDOUS
	SUBSTANCE, LIQUID, N.O.S. (epoxide derivates)
·IMDG	ENVIRONMENTALLY HAZARDOUS
	SUBSTANCE, LIQUID, N.O.S. (epoxide derivates),
	MARINE POLLUTANT
· 14.3 Transport hazard class(es)	
· ADR	
· Class	9 (M6) Miscellaneous dangerous substances and
	articles.
· Label	9
· IMDG, IATA	
· Class	9 Miscellaneous dangerous substances and
	articles.
	(0.11

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# Safety data sheet according to 1907/2006/EC, Article 31

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Label	(Contd. of page
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14.4 Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards: Marine pollutant:	Yes Symbol (fish and tree)
Special marking (ADR): Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances an articles.
Kemler Number:	90
EMS Number:	F-A,S-F
Stowage Category	A
14.7 Maritime transport in bulk accordi IMO instruments	i <b>ng to</b> Not applicable.
Transport/Additional information:	
ADR Limited quantities (LQ) Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 100 ml
Transport category	3
Tunnel restriction code	(-)
IMDG	5L
Limited quantities (LQ) Excepted quantities (EQ)	Code: E1  Maximum net quantity per inner packaging: 30 ml  Maximum net quantity per outer packaging: 100  ml
UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOU SUBSTANCE, LIQUID, N.O.S. (EPOXID DERIVATES), 9, III

### **SECTION 15: Regulatory information**

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Poisons Act
- · Regulated explosives precursors

None of the ingredients is listed.

· Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

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#### · Reportable poisons

None of the ingredients is listed.

- · Directive 2012/18/EU
- Qualifying quantity (tonnes) for the application of lower-

tier requirements 200 t

Qualifying quantity (tonnes) for the application of uppertier requirements

500 t

· 15.2 Chemical safety

assessment: A Chemical Safety Assessment has not been carried out.

### **SECTION 16: Other information**

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH07	1 Corrosive to the respiratory tract.
EUH20	5 Contains epoxy constituents. May produce an allergic
	H314 H315 H317 H318 H319 H334 H372 H411 H412 EUH07

 Department issuing data specification sheet:

Environment protection department.

Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises

reaction.

dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international 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 (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Acute Tox. 4: Acute toxicity – Category 4 Skin Corr. 1B: Skin corrosion/irritation – Category 1B Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 Resp. Sens. 1: Respiratory sensitisation – Category 1 Skin Sens. 1: Skin sensitisation – Category 1 Skin Sens. 1A: Skin sensitisation – Category 1A

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

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

\* Data compared to the previous version altered.

- GB