

Revision: 31.05.2019 Printing date 31.05.2019 Rev. 1

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

- · 1.1 Product identifier
- · Trade name: Starlike EVO (comp 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 mortar
- · 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:

LITOKOL S.p.A.

Via G.Falcone, 13/1 42048 Rubiera (RE) - ITALY

Tel. +39 0522 626391 - Fax. +39 0522 620150

· Further information obtainable from: LITOKOL S.p.A. - Email: laboratorio@litokol.it

· 1.4 Emergency telephone number:

UNITED KINGDOM

• National Poisons Information Service (NPIS) - Tel: +44 844 8920111

ITALY - POISON CONTROL CENTERS (24h / 365d):

- Milano Ospedale Niguarda Ca' Granda Tel. +39 02 66101029
- Pavia Centro Nazionale di Informazione Tossicologica IRCCS Fondazione S. Maugeri Tel. +39 0382 24444
- Firenze Azienda Ospedaliero-Universitaria "Careggi" U.O. Tossicologia Medica Tel. +39 055 7947819
 Bergamo Azienda Ospedaliera Papa Giovanni XXIII Tel. +39 800 883300
- Roma CAV Policlinico "Umberto I" Tel. 06 49978000
- Roma CAV Policlinico "A. Gemelli" Tel. 06 3054343
- Roma CAV "Ospedale Pediatrico Bambino Gesù" Tel. +39 06 68593726
 Foggia Azienda Ospedaliero-Universitaria Foggia Tel. +39 0881 732326
- Napoli Azienda Ospedaliera "A. Cardarelli" Tel. +39 081 7472870

Technical support: Tel. +39 0522 622852 (Monday - Friday: 8.30-12.30 AM, 2.00-6.00 PM)

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 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07

· Signal word Warning

· Hazard-determining components of labelling:

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

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

bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

methyl 1,2,2,6,6-pentamethyl-4-piperidylsebacate

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P102 Keep out of reach of children.

Printing date 31.05.2019 Rev. 1 Revision: 31.05.2019

Trade name: Starlike EVO (comp A)

(Contd. of page 1)

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

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 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 of substances listed below with nonhazardous additions.

· Dangerous components:		
CAS: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8 Reg.nr.: 01-2119456619-26-XXXX	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) Aquatic Chronic 2, H411; ♦ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	10-15%
CAS: 9003-36-5 NLP: 500-006-8 Reg.nr.: 01-2119454392-40-XXXX	formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	2.5-5%
CAS: 68609-97-2 EINECS: 271-846-8 Index number: 603-103-00-4 Reg.nr.: 01-2119485289-22-XXXX	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs Skin Irrit. 2, H315; Skin Sens. 1, H317	2.5-5%
CAS: 41556-26-7 EINECS: 255-437-1	bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	≥0.25-<1%
CAS: 82919-37-7 EINECS: 280-060-4	methyl 1,2,2,6,6-pentamethyl-4-piperidylsebacate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	≥0.1-<0.25%

[•] 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
- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

- · After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: Do not induce vomiting; call for medical help immediately.
- · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
 - · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray. Use fire extinguishing methods suitable to surrounding conditions.

• 5.2 Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

Printing date 31.05.2019 Rev. 1 Revision: 31.05.2019

Trade name: Starlike EVO (comp A)

(Contd. of page 2)

- 5.3 Advice for firefighters
- · Protective equipment: Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- · 6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course 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). Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Store in a cool place.

Store in dry conditions

Keep container tightly sealed.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

CAS: 250	68-38-6 Reaction product: bisphenol-A-(epich weight ≤ 700)	lorhydrin) epoxy resin (number average molecular
Oral	DNEL / Long term exposure - Systemic effects	0.75 mg/Kg bw/d (general population)
	DNEL / Short term exposure - Systemic effects	0.75 mg/Kg (general population)
Dermal	DNEL / Long term exposure - Systemic effects	3.6 mg/Kg bw/d (general population)
		8.33 mg/Kg bw/d (workers)
	DNEL / Short term exposure - Systemic effects	3.6 mg/Kg (general population)
		8.33 mg/Kg (workers)
Inhalative	DNEL / Long term exposure - Systemic effects	12.25 mg/m³ (workers)
	DNEL / Short term exposure - Systemic effects	12.25 mg/m³ (workers)
CAS: 686	09-97-2 Oxirane, mono[(C12-14-alkyloxy)meth	yl] derivs
Dermal	DNEL / Long term exposure - Systemic effects	2.35 mg/Kg bw/d (general population)
		3.9 mg/Kg bw/d (workers)
	DNEL / Long term exposure - Local effects	1 mg/Kg (general population)
		1.7 mg/Kg (workers)
	DNEL / Short term exposure - Systemic effects	10 mg/Kg (general population)

Revision: 31.05.2019 Printing date 31.05.2019 Rev. 1

Trade name: Starlike EVO (comp A)

		(Contd. of page	e 3)
		17 mg/Kg (workers)	
	DNEL / Short term exposure - Local effects	40 mg/Kg (general population)	
		68 mg/Kg (workers)	
Inhalative	DNEL / Long term exposure - Systemic effects	4.1 mg/m³ (general population)	
		13.8 mg/m³ (workers)	
	DNEL / Long term exposure - Local effects	1.46 mg/m³ (general population)	
		0.98 mg/m³ (workers)	
	DNEL / Short term exposure - Systemic effects	7.6 mg/m³ (general population)	
		29 mg/m³ (workers)	
	DNEL / Short term exposure - Local effects	2.9 mg/m³ (general population)	
		9.8 mg/m³ (workers)	

·PNECs		
CAS: 25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular	
	weight ≤ 700)	
PNEC / aqua	6 mg/l (freshwater)	
	0.0006 mg/l (marine water)	
PNEC / sediment	0.996 mg/Kg dw (freshwater)	
	0.0996 mg/Kg dw (marine water)	
PNEC / soil	0.196 mg/Kg dw	
PNEC / STP	10 mg/l (sewage treatment plant)	
CAS: 9003-36-5 f	ormaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	
PNEC / aqua	0.003 mg/l (freshwater)	
	0.0254 mg/l (intermittent releases)	
	0.0003 mg/l (marine water)	
PNEC / sediment	0.249 mg/Kg dw (freshwater)	
	0.0294 mg/Kg dw (marine water)	
PNEC / soil	237 mg/Kg dw	
PNEC / STP	10 mg/l (sewage treatment plant)	
CAS: 68609-97-2 Oxirane, mono[(C12-14-alkyloxy)methyl] derivs		
PNEC / aqua	0.0072 mg/l (freshwater)	
	0.00072 mg/l (marine water)	

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

6.677 mg/Kg dw (marine water)

· 8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

PNEC / sediment 66.77 mg/Kg dw (freshwater)

The usual precautionary measures are to be adhered to when handling chemicals.

Do not eat or drink while working.

Keep away from tobacco products.

Avoid close or long term contact with the skin.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Ensure that washing facilities are available at the work place.

Respiratory protection:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Filter A/P2

Protection of hands:



Printing date 31.05.2019 Rev. 1 Revision: 31.05.2019

Trade name: Starlike EVO (comp A)

(Contd. of page 4)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

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

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

· Body protection: Light weight protective clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic phy-	sical and chemical properties
· General Information	
· Appearance:	
F	D4.

· Form: Pasty

Colour: Different according to colouring
Odour: Odourless

· Odour threshold: Not determined. · pH-value: Not determined.

· Change in condition

Melting point/freezing point: Undetermined.
 Initial boiling point and boiling range: Undetermined.

· Flash point:	Not applicable.
· Flammability (solid, gas):	Not applicable.
D	Alatalata and

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.
 Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

· Lower: Not determined.
· Upper: Not determined.

· Vapour pressure: Not determined.

Density at 20 °C: 1.6 g/cm³

Relative density
 Vapour density
 Evaporation rate
 Not determined.
 Not determined.

· Solubility in / Miscibility with

· water: Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic: Not determined.
Kinematic: Not determined.

• **9.2 Other information** No further relevant information available.

(Contd. on page 6)

Printing date 31.05.2019 Rev. 1 Revision: 31.05.2019

Trade name: Starlike EVO (comp A)

(Contd. of page 5)

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions Reacts with strong acids and oxidising agents.
- · 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 toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · LD/LC50 values relevant for classification:

 CAS: 25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

 Oral | LD50 | >2,000 mg/kg (rat)

Dermal LD50 >2,000 mg/kg (rabbit)

CAS: 9003-36-5 formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

 Oral
 LD50
 >2,000 mg/kg (rat)

 Dermal
 LD50
 >2,000 mg/kg (rat)

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

Oral LD50 26,800 mg/kg (rat)
Dermal LD50 4,000 mg/kg (rat)

- · Primary irritant effect:
- · Skin corrosion/irritation

Causes skin irritation.

- Serious eye damage/irritation Causes serious eye irritation.
- · Respiratory or skin sensitisation

May cause an allergic skin reaction.

- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- 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.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

No further relevant information available.

CAS: 25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecula	r
weight ≤ 700)	

EC50 / 48h | 1.8 mg/l (crustacea - Daphnia magna) LC50 / 96h | 2 mg/l (fish - Oncorhyncus mykiss)

ErC50 / 72h 11 mg/l (algae - Scenedesmus capricornutum)

CAS: 9003-36-5 formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

EC50 / 48h | 1.6 mg/l LC50 / 96h | 0.55 mg/l (fish) EC50 / 72h | 1.8 mg/l (algae) NOEC / 21d | 0.3 mg/l

LC50 / 48h 0.73 mg/l (fish)

(Contd. on page 7)

Printing date 31.05.2019 Rev. 1 Revision: 31.05.2019

Trade name: Starlike EVO (comp A)

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

(Contd. of page 6)

EC50 / 48h | 6.07 mg/l (crustacea - Daphnia magna) >500 mg/l (fish) LC50 / 96h

EC50 / 72h 843 mg/l (algae)

· 12.2 Persistence and degradability

No further relevant information available.

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

Ready Biodegradability / 28d 87 %

- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
 - · Ecotoxical effects:
 - · Remark: Harmful to fish
 - · Additional ecological information:
 - · General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

· 12.5 Results of PBT and vPvB assessment

- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- Recommendation

Disposal must be made according to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
 - · Recommendation:

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information		
· 14.1 UN-Number · ADR, ADN, IMDG, IATA	Void	
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class	Void	
· 14.4 Packing group · ADR, IMDG, IATA	Void	
· 14.5 Environmental hazards: · Marine pollutant:	No	
· 14.6 Special precautions for user	Not applicable.	
· 14.7 Transport in bulk according to Annex II and the IBC Code	l of Marpol Not applicable.	
· UN "Model Regulation":	Void	

(Contd. on page 8)

Printing date 31.05.2019 Rev. 1 Revision: 31.05.2019

Trade name: Starlike EVO (comp A)

(Contd. of page 7)

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Regulation (EC) No 1907/2006 (REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals) Regulation (EC) No 1272/2008 (CLP - Classification, Labelling and Packaging of substances and mixtures) Compilation of Safety Data Sheet: Reg.UE n. 830/2015 (amending Reg.EC n.1907/2006, Annex II)
- Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- REACH
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

Classification according to Regulation (EC) No 1272/2008

Skin corrosion/irritation

Serious eye damage/eye irritation

Skin sensitization

Hazardous to the aquatic environment - chronic hazard

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

Contact: LITOKOL S.p.A.

Abbreviations and acronyms:

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Classification, Labelling and Packaging

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 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 (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category

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