

\* ECOLAM

Date revised: 09.07.2020

# 5880007

Version: 1 / GB

Master No. M-401

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

### **1.1. Product identifier**

#### **Trade name**

ECOLAM

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

#### **Use of the substance/mixture**

Resin system used in the production of fibre reinforced plastics or non-reinforced filled products.

### **1.3. Details of the supplier of the safety data sheet**

#### **Address**

BÜFA Composites UK Ltd. / BÜFA House  
 Factory Lane  
 CO11 1NH Brantham, Manningtree  
 Telephone no. +44 77 75 90 17 75  
 Information provided Department product safety / +49 4402 975-415  
 by / telephone  
 E-Mail produktsicherheit-compositesystems@buefa.de

### **1.4. Emergency telephone number**

Giftzentrale Goettingen: +49 551 19240

## **SECTION 2: Hazards identification**

### **2.1. Classification of the substance or mixture**

#### **Classification (Regulation (EC) No. 1272/2008)**

Flam. Liq. 3	H226	
Skin Irrit. 2	H315	
Eye Irrit. 2	H319	
Repr. 2	H361d	
STOT SE 3	H335	
STOT RE 1	H372	Organs: Ear; Route of exposure: inhalative

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008  
 For explanation of abbreviations see section 16.

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

#### **Hazard pictograms**



#### **Signal word**

Danger

#### **Hazard statements**

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure. Ear; Route of exposure: inhalative

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**Sensitising substances**

EUH208 Contains cobalt bis(2-ethylhexanoate)  
May produce an allergic reaction.

**Precautionary statements**

P210.9 Keep away from sparks, open flames and other ignition sources. No smoking.  
P260.8 Do not breathe vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 IF exposed or concerned: Get medical advice/ attention.

**Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

contains Styrene

**2.3. Other hazards**

The product does not contain PBT/vPvB-substances.

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

CAS No.	100-42-5				
EINECS no.	202-851-5				
Registration no.	01-2119457861-32-XXXX				
Concentration	>= 20	<	25	%	
Flam. Liq. 3	H226				
Skin Irrit. 2	H315				
Acute Tox. 4	H332				
Eye Irrit. 2	H319				
STOT SE 3	H335				
STOT RE 1	H372	Organs: Ear; Route of exposure: inhalative			
Asp. Tox. 1	H304				
Repr. 2	H361d				
Aquatic Chronic 3	H412				

**cobalt bis(2-ethylhexanoate)**

CAS No.	136-52-7				
EINECS no.	205-250-6				
Registration no.	01-2119524678-29				
Concentration	>= 0,1	<	0,3	%	
Repr. 1B	H360F				
Skin Sens. 1	H317				
Eye Irrit. 2	H319				
Aquatic Acute 1	H400				
Aquatic Chronic 3	H412				

Repr. 1B H360F > 0,30 %

**N,N-Dimethylaniline**

CAS No.	121-69-7				
EINECS no.	204-493-5				
Registration no.	01-2119950342-44-XXXX				
Concentration	>= 0,1	<	1	%	
Carc. 2	H351				
Acute Tox. 3	H331				
Acute Tox. 3	H311				
Acute Tox. 3	H301				

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Aquatic Chronic 2 H411

**cobalt dihydroxide**

CAS No.	21041-93-0				
EINECS no.	244-166-4				
Concentration	>=	0,01	<	0,1	%
Aquatic Acute 1	H400				
Acute Tox. 1	H330				
Eye Irrit. 2	H319				
Resp. Sens. 1	H334				
Skin Sens. 1	H317				
Carc. 1B	H350i				
Repr. 1B	H360FD				
Acute Tox. 4	H302				
Aquatic Chronic 1	H410				

Aquatic Acute 1 H400 M = 10

**Further ingredients****Titaniumdioxide**

CAS No.	13463-67-7	EINECS no.	236-675-5			
Registration no.	01-2119489379-17-0000					
Concentration	>=	1	<	10	%	[3]

Complete text of hazard statements in chapter 16

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

Adhere to personal protective measures when giving first aid. Remove soiled or soaked clothing immediately, do not allow to dry.

**After inhalation**

Remove the casualty into fresh air and keep him calm. Irregular breathing/no breathing: artificial respiration. In the event of symptoms take medical treatment.

**After skin contact**

Wash off immediately with soap and water.

**After eye contact**

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Seek medical advice immediately. Remove contact lenses

**After ingestion**

Rinse mouth thoroughly with water. Summon a doctor immediately. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If individual is drowsy or unconscious place in recovery position (on left side, with head down).

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

The following symptoms may occur: Headache, Dizziness, Nausea

**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**

Alcohol-resistant foam, Dry powder, Carbon dioxide

**Non suitable extinguishing media**

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Full water jet

### 5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible. In the event of fire the following can be released: Carbon monoxide (CO); Nitrogen oxides (NOx); dense black smoke

### 5.3. Advice for firefighters

Use self-contained breathing apparatus.

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Use personal protective clothing. Keep away sources of ignition. Ensure adequate ventilation. Use breathing apparatus if exposed to vapours/dust/aerosol.

### 6.2. Environmental precautions

Do not allow to enter drains or waterways. Do not discharge into the subsoil/soil. Prevent spread over a wide area (e.g. by containment or oil barriers).

### 6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust). When picked up, treat material as prescribed under Section 13 "Disposal".

### 6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Observe the usual precautions for handling chemicals.

Keep away from sources of ignition - No smoking. Take action to prevent static discharges. Vapours can form an explosive mixture with air.

### 7.2. Conditions for safe storage, including any incompatibilities

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

### 7.3. Specific end use(s)

No information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limit values

#### Styrene

List	EH40			
Type	WEL			
Value	430	mg/m <sup>3</sup>	100	ppm(V)
Short term exposure limit	1080	mg/m <sup>3</sup>	250	ppm(V)
Maximum limit value; Skin resorption / sensibilisation: Pregnancy group: Status: 2011				

#### Titaniumdioxide

List	EH40			
Type	WEL			
Value	4	mg/m <sup>3</sup>		
Maximum limit value; Skin resorption / sensibilisation: Pregnancy group: Status: 2011				

#### cobalt bis(2-ethylhexanoate)

List	EH40			
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Type	WEL			
Value	0,1	mg/m <sup>3</sup>		
<b>N,N-Dimethylaniline</b>				
List	EH40			
Type	WEL			
Value	25	mg/m <sup>3</sup>	5	ppm(V)
Short term exposure limit	50	mg/m <sup>3</sup>	10	ppm(V)
Maximum limit value; Skin resorption / sensibilisation: Sk; Pregnancy group; Status: 2011				

**Derived No/Minimal Effect Levels (DNEL/DMEL)****Styrene**

Reference substance	Styrene			
DNEL				
Conditions	Worker	Acute	inhalative	Systemic effects
Concentration	289	mg/m <sup>3</sup>		
DNEL				
Conditions	Worker	Long term	inhalative	Systemic effects
Concentration	85	mg/m <sup>3</sup>		
DNEL				
Conditions	Worker	Acute	inhalative	Local effects
Concentration	306	mg/m <sup>3</sup>		
DNEL				
Conditions	Worker	Long term	dermal	Systemic effects
Concentration	406	mg/kg/d		

**cobalt bis(2-ethylhexanoate)**

DNEL				
Conditions	Worker	Long term	inhalative	Local effects
Concentration	235,1	µg/m <sup>3</sup>		

**Predicted No Effect Concentration (PNEC)****cobalt bis(2-ethylhexanoate)**

Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	1,08	mg/l	
Type	freshwater		
Concentration	0,00149	mg/l	
Type	marine water		
Concentration	0,0069	mg/l	
Type	freshwater sediment		
Concentration	27,8	mg/kg	
Type	marine sediment		
Concentration	17,8	mg/kg	
Type	Soil		
Concentration	23,1	mg/kg	

**8.2. Exposure controls****Appropriate engineering controls**

Use only in well ventilated areas.

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Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### General protective and hygiene measures

Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid contact with skin and eyes. Do not inhale gases/vapours/aerosols. Personal protective equipment must comply with the Council Directive 89/686/EEC and the resulting CEN standards.

### Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Short term: filter apparatus, Filter A; The respiratory protection must comply with the relevant CEN standards.

### Hand protection

Chemical resistant gloves  
 Appropriate Material Butyl rubber  
 Material thickness 0,7 mm  
 Breakthrough time = 30 min  
 Hand protection must comply with EN 374.

### Eye protection

Tightly fitting safety glasses; Eye protection must comply with EN 166.

### Body protection

Clothing as usual in the chemical industry. Personal protective clothing must comply with the relevant CEN standards.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Form</b>	liquid	
<b>Colour</b>	white	
<b>Odour</b>	characteristic	
<b>Odour threshold</b>		
Remarks	No data available	
<b>pH value</b>		
Remarks	No data available	
<b>Melting point</b>		
Remarks	No data available	
<b>Freezing point</b>		
Remarks	No data available	
<b>Boiling point</b>		
Remarks	No data available	
<b>Flash point</b>		
Value	31	°C
Method	ISO 3679-B	
<b>Evaporation rate</b>		
Remarks	No data available	
<b>Efflux time</b>		
Value	59	s
Temperature	23	°C
Method	DIN EN ISO 2431 - 6 mm	
<b>Flammability</b>		
Remarks	No data available	
<b>Explosion limits</b>		
Remarks	No data available	
<b>Vapour pressure</b>		

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Remarks No data available

**Vapour density**

Remarks No data available

**Density**

Value	1,1		g/cm <sup>3</sup>
Temperature	20	°C	

**Solubility in water**

Remarks No data available

**Solubility in other solvents**

Remarks No data available

**Octanol/water partition coefficient (log Pow)**

Remarks No data available

**Ignition temperature**

Remarks No data available

**Auto-ignition temperature**

Remarks No data available

**Thermal decomposition**

Remarks No data available

**Explosive properties**

evaluation no data

**Oxidising properties**

Remarks No data available

**9.2. Other information**

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reactions when stored and handled according to prescribed instructions.

**10.2. Chemical stability**

The product is stable.

**10.3. Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4. Conditions to avoid**

Protect from heat and direct sunlight.

**10.5. Incompatible materials**

Reactions with peroxides and other radical components.

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

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

ATE	>	10.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		
Based on available data, the classification criteria are not met.			

**Acute oral toxicity (Components)****Styrene**

Species rat

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LD50 &gt; 5000 mg/kg

**N,N-Dimethylaniline**Species rat  
LD50 951 mg/kg**Acute dermal toxicity**ATE > 10.000 mg/kg  
Method calculated value (Regulation (EC) No. 1272/2008)  
Based on available data, the classification criteria are not met.**Acute dermal toxicity (Components)****Styrene**Species rat  
LD50 > 5000 mg/kg**N,N-Dimethylaniline**Species rabbit  
LD50 1770 mg/kg**Acute inhalational toxicity**ATE 48,02 mg/l  
Administration/Form Vapors  
Method calculated value (Regulation (EC) No. 1272/2008)  
ATE 6,13 mg/l  
Administration/Form Dust/Mist  
Method calculated value (Regulation (EC) No. 1272/2008)  
Based on available data, the classification criteria are not met.**Acute inhalative toxicity (Components)****Styrene**Species rat  
LC50 11,8 mg/l  
Duration of exposure 4 h  
Administration/Form Vapors**Skin corrosion/irritation**evaluation irritant  
The classification criteria are met.**Serious eye damage/irritation**evaluation irritant  
The classification criteria are met.**Sensitization**

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

**Sensitization (Components)****Styrene**

evaluation non-sensitizing

**Mutagenicity**

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

**Mutagenicity****N,N-Dimethylaniline**Route of exposure intraperitoneal  
Species rat  
Dose 485 mg/kg  
evaluation DNA Damage**Carcinogenicity**

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

**Reproductive toxicity**

evaluation Suspected of damaging the unborn child.



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The classification criteria are met.

### Specific Target Organ Toxicity (STOT)

#### Single exposure

The classification criteria are met.

evaluation May cause respiratory irritation.

#### Repeated exposure

The classification criteria are met.

evaluation Causes damage to organs through prolonged or repeated exposure

#### Aspiration hazard

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

#### Other information

Inhalation of the vapours causes irritation of the respiratory tract and mucous membrane, headaches, nausea, giddiners, vomiting.

## **SECTION 12: Ecological information**

### 12.1. Toxicity

#### Fish toxicity

##### Styrene

LC/EC/IC50 > 1,0 to 10 mg/l

##### N,N-Dimethylaniline

Species Fathead minnow (*Pimephales promelas*)

LC50 65,6 mg/l

Duration of exposure 96 h

#### Daphnia toxicity

##### Styrene

Species Daphnia magna

LC/EC/IC50 > 1,0 to 10 mg/l

##### N,N-Dimethylaniline

Species Daphnia magna

EC50 5 mg/l

Duration of exposure 48 h

#### Algae toxicity

##### Styrene

LC/EC/IC50 > 1,0 to 10 mg/l

#### Bacteria toxicity

No toxicological data are available.

### 12.2. Persistence and degradability

For this subsection there is no ecotoxicological data available on the product as such.

#### Biodegradability

##### Styrene

evaluation Readily biodegradable (according to OECD criteria)

### 12.3. Bioaccumulative potential

For this subsection there is no ecotoxicological data available on the product as such.

#### Octanol/water partition coefficient (log Pow)

Remarks No data available

### 12.4. Mobility in soil

For this subsection there is no ecotoxicological data available on the product as such.

### 12.5. Results of PBT and vPvB assessment

The product does not contain PBT/vPvB-substances.

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**12.6. Other adverse effects**

For this subsection there is no ecotoxicological data available on the product as such.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

EWC waste code 07 02 08\* other still bottoms and reaction residues  
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**

Packaging that cannot be cleaned should be disposed off as product waste.

**SECTION 14: Transport information****Land transport ADR/RID****14.1. UN number**

UN number 1866

**14.2. UN proper shipping name**

RESIN SOLUTION

**14.3. Transport hazard class(es)**

Class 3

**14.4. Packing group**

Packing group III

Tunnel restriction code D/E

**Marine transport IMDG/GGVSee****14.1. UN number**

UN number 1866

**14.2. UN proper shipping name**

RESIN SOLUTION

**14.3. Transport hazard class(es)**

Class 3

**14.4. Packing group**

Packing group III

EmS F-E, S-E

**Information for all modes of transport****14.6. Special precautions for user**

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

Not applicable

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

VOC (EU) 0,42 %

**Major-accident categories acc. 2012/18/EU**

Category P5c FLAMMABLE LIQUID

**Other information**

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

**15.2. Chemical safety assessment**

No information available

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## **SECTION 16: Other information**

### **Hazard statements listed in Chapter 3**

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H350i	May cause cancer by inhalation.
H351	Suspected of causing cancer.
H360F	May damage fertility.
H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.

### **Abbreviations**

CAS: Chemical Abstracts Service  
 EAK: Europäischer Abfallkatalog  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: Very persistent and very bioaccumulative  
 VOC: Volatile Organic Compound

### **CLP categories listed in Chapter 3**

Acute Tox. 1	Acute toxicity, Category 1
Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Resp. Sens. 1	Respiratory sensitization, Category 1
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 1	Specific target organ toxicity - repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

### **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.

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