## SAFETY DATA SHEET

1

in acc. with Regulation (EU) No. 2015/830

# GlassCast

Revision Date: 04/02/2019

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## Tradename: CULR<sup>™</sup> Art Pigment for Epoxy – Leaf Green

SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1.	Product identifier Tradename:	CULR™ Art Pigment for Epoxy – Leaf Green
	Chemical characterisation:	C.I. Pigment Green 7, Yellow 73, Yellow 74, Yellow 42, Red 101, Yellow 3 and Calciumcarbonat in aqueous dispersion, contenting Polyglykol and 1,2-Propandiol.

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

Relevant identified uses of the substance or mixture: Industry sector: Industrial Performance Chemical

Industry sector:	Industrial Performance Chemicals	
	Paints, lacquers and varnishes industry	
	Polymers industry	
	Printing Inks Industry	
Type of use:	Colourant preparation	

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

Identification of the company: Easy Composites Ltd Unit 39 Park Hall Business Village Stoke on Trent, ST3 5XA. United Kingdom. Phone: +44 (0)1782 454499

Information to substance / mixture: Division: Technical E-mail: technical@glasscastresin.com

**1.4. Emergency telephone number** Emergency CONTACT (Office Hours) Phone: +44 (0)1782 454499

## SECTION 2: HAZARDS IDENTIFICATION

## 2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Categoryof danger	Category HazardSymbol	H-Phrases

Not a hazardous substance or mixture.

### 2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended): Not a hazardous substance or mixture.

#### Additional Labelling:

EUH 208 contains mixture of:	1,2-Benzisothiazol-3(2H)-one, mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1).
	May produce an allergic reaction.
EUH210:	Safety data sheet available on request.

### 2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher. No hazards to be specially mentioned.

#### CULR<sup>™</sup> Art Pigment for Epoxy – Leaf Green Tradename:

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#### **SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS**

#### 3.1. Mixtures

Hazardous ingredients:

### Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO)

Concentration:	≥ 9,2 - ≤ 12,1 %	
CAS-Number:	68920-66-1	
EC-Number:	500-236-9	

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 3	H412
M-Factor (Acute aquatic toxicity	)	1

M-Factor (Acute aquatic toxicity)

#### **Rosin amine**

Concentration:	≥ 0,1 - ≤ 0,25 %
CAS-Number:	61790-47-4
EC-Number:	263-139-8
Registrationnumber:	01-2120780340-61-XXXX

GHS classification EC:

Category 4	H302	
Category 2	H315	
Category 1	H317	
Category 1	H318	
Category 1	H400	
Category 1	H410	
M-Factor (Acute aquatic toxicity)		
M-Factor (Chronic aquatic toxicity)		
	Category 2 Category 1 Category 1 Category 1 Category 1	

#### 1-Propanaminium, 3-Amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18-Acylderivate, Hydroxide, inner salts

Concentration:	≥ 1,0 - ≤ 2,5 %
CAS-Number:	97862-59-4
EC-Number:	308-107-7
Registrationnumber:	01-2119488533-30-0011

#### GHS classification EC:

Serious eye damage	Category 1	H318
Chronic aquatic toxicity	Category 3	H412

#### 1,2-Benzisothiazolin-3-on

Concentration:	≥ 0,0025 - ≤ 0,025 %
CAS-Number:	2634-33-5
EC-Number:	220-120-9
INDEX-No.:	613-088-00-6
Registrationnumber:	01-2120761540-60

#### GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

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#### Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1)

 Concentration:
  $\geq 0,0002 - \leq 0,0015 \%$  

 CAS-Number:
 55965-84-9

 EC-Number:
 611-341-5

 INDEX-No.:
 613-167-005

 Registrationnumber:
 01-2120764691-48

**GHS classification EC:** 

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

The text of H-phrases is shown in section 16.

#### **SECTION 4: FIRST AID MEASURES**

#### 4.1. Discription of first aid measures

General information:

Get medical advice/ attention if you feel unwell.

After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:

In case of contact with skin, clean with plenty of soap and water.

After contact with eyes:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion:

If swallowed, seek medical advice immediately and show this container or label.

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

Symptoms:

None known.

<u>Hazards:</u> None known.

## **4.3.** Indication of any immediate medical attention and special treatment needed Treatment:

Treat symptomatically.

#### **SECTION 5: FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

Suitable extinguishing media: Water spray jet Dry powder Carbon dioxide (CO<sub>2</sub>) Alcohol resistant foam

Extinguishing media that must not be used for safety reasons: High volume water jet

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

In case of fires, hazardous combustion gases are formed: Carbon oxides (CO<sub>x</sub>) Nitrogen oxides (NO<sub>x</sub>) Hydrogen chloride (HCI) Sulphur oxides (SO<sub>x</sub>)

### 5.3. Advice for firefighters

<u>Special protective equipment for firefighting:</u> Use self-contained breathing apparatus. <u>Further information:</u>

Wear suitable protective equipment.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Wear suitable personal protective equipment.

#### 6.2. Environment precautions

The product should not be allowed to enter drains, water courses or the soil.

 6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".

#### 6.4. Reference to other sections

<u>Additional information:</u> Information regarding safe handling, see chapter 7.

#### SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Advice on safe handling:

When used and handled appropriately no special measures are needed.

<u>Hygiene measures:</u> Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

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

<u>Further information on storage conditions:</u> Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from flames and sparks.

Storage stability:

Minimum 36 months.

#### 7.3. Specific end use(s)

No further recommendations.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1. Control parameters

Exposure limit values: Exposure limit values are not available.

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DNEL / DMEL-values: C.I. Pigment Yellow 74 EC-Number: 228-768-4 CAS-Number: 6358-31-2

Route of exposure	End use	Potential health effects	Value	Remarks
Dermal	Workers	Long-term systemic effects	42 mg/kg bw/day	
Inhalation	Workers	Long-term systemic effects	49 mg/m <sup>3</sup>	
Inhalation	Workers	Long-term local effects	3 mg/m <sup>3</sup>	
Dermal	General Population	Long-term systemic effects	25 mg/kg bw/day	
Oral	General Population	Long-term systemic effects	25 mg/kg bw/day	

### C.I. Pigment Green 7

EC-Number: 215-524-7 CAS-Number: 1328-53-6

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m <sup>3</sup>	DNEL
Inhalation	Consumers	Long-term local effects	10 mg/m <sup>3</sup>	DNEL

#### C.I. Pigment Yellow 42

EC-Number: 257-098-5

CAS-Number: 51274-00-1

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m <sup>3</sup>	DNEL

Iron(III)-Oxide

EC-Number: 215-168-2 CAS-Number: 1309-37-1

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m <sup>3</sup>	DNEL, inhalable dust

1,2-Benzisothiazol-3(2H)-one

EC-Number: 220-120-9

CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m <sup>3</sup>	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m <sup>3</sup>	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/day	DNEL

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Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m <sup>3</sup>	DNEL

1-Propanaminium, 3-Amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18-Acylderivate, Hydroxide, inner salts EC-Number: 30-107-7

CAS-Number: 97862-59-4

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	44 mg/m <sup>3</sup>	DNEL
Skin contact	Workers	Long-term systemic effects	12,5 mg/kg bw/day	DNEL
Skin contact	General population	Long-term systemic effects	7,5 mg/kg bw/day	DNEL
Ingestion	General population	Long-term systemic effects	7,5 mg/kg bw/day	DNEL

## Glycerine

EC-Number: 200-289-5 CAS-Number: 56-81-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	56 mg/m <sup>3</sup>	DNEL
Inhalation	General population	Long-term local effects	33 mg/m <sup>3</sup>	DNEL
Ingestion	General population	Long-term systemic effects	229 mg/kg bw/day	DNEL

PNEC-values:

 $\label{eq:2.1} 1 - Propanaminium, \ 3 - Amino-N-(carboxymethyl)-N, N-dimethyl-, \ N-C8-18-Acylderivate,$ 

Hydroxide, inner salts

EC-Number: 30-107-7

CAS-Number: 97862-59-4

Environmental compartment	Value
Fresh water	0,013 mg/l
Salt water	0,001 mg/l
Water (intermittent release)	3000 mg/l
Fresh water sediment	1 mg/kg dry weight (d.w.)
Marine sediment	0,1 mg/kg dry weight (d.w.)
Soil	0,8 mg/kg dry weight (d.w.)

1,2-Benzisothiazol-3(2H)-one

EC-Number: 220-120-9 CAS-Number: 2634-33-5

Environmental compartment	Value
Fresh water	0,00403 mg/l
Marine water	0,000403 mg/l
Intermittend use/release	0,0011 mg/l
Sewage treatment plant	1,03 mg/l

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Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
Marine sediment	0,00499 mg/kg dry weight (d.w.)
Soil	3 mg/kg dry weight (d.w.)

Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Environmental compartment	Value
Secondary poisoning	60.000 mg/kg (food)

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) EC-Nummer: 611-341-5

CAS-Nummer: 55965-84-9

Environmental compartment	Value	
Fresh water	0,049 µg/l	
Marine water	0,0098 µg/l	
Sewage treatment plant	0,045 µg/l	
Soil	0,009 µg/l	

#### Glycerine

EC-Number: 200-289-5 CAS-Number: 56-81-5

Environmental compartment	Value
Fresh water	0,885 mg/l
Marine water	0,088 mg/l
Sewage treatment plant	1000 mg/l
Fresh water sediment	3,33 mg/kg dry weight (d.w.)
Marine sediment	0,33 mg/kg dry weight (d.w.)
Soil	0,141 mg/kg dry weight (d.w.)

#### 8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

#### Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection: Safety glasses

#### Body protection:

Wear suitable protective equipment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Physical state:	liquid
Form:	liquid
Colour:	green
Odour:	not significant
Odour threshold:	not required

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	pH value:	not measured
	Melting point:	not applicable
	Boiling point:	approx. 100 °C
	Flash point:	> 100 °C
	Evaporation rate:	not determined
	Flammability:	not determined
	Lower explosion limit:	not determined
	Upper explosive limit:	not determined
	Combustion number:	not applicable
	Minimum ignition energy:	not determined
	Vapour pressure:	not determined
	Vapour density relative to air:	not determined
	Relative Density:	no data available
	Solubility in water:	miscible
	Octanol/ water partition	
	coefficient (log Pow):	not determined
	Ignition temperature:	not determined
	Thermal decomposition:	> 100 °C
	Viscosity (dynamic):	not tested
	Oxidizing properties:	no data available
9.2.	Other information	
	Density:	1,27 g/cm³ (20 °C)

### SECTION 10: STABILITY AND REACTIVITY

- **10.1. Reactivity** No dangerous reaction known under conditions of normal use.
- **10.2. Chemical Stability** Stable under normal conditions.
- 10.3. Possibility of hazardous reactions No dangerous reaction known under conditions of normal use. Stable.
  10.4. Conditions to avoid

None known.

- **10.5.** Incompatible Materials No data available.
- **10.6. Hazardous decomposition products** No decomposition if stored and applied as directed.

### **SECTION 11: TOXICOLOGIC INFORMATION**

#### 11.1. Information on toxicological effects

Acute toxicity

Informations related to the product:	
Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Informations related to the component Rosin amine:	
Acute oral toxicity:	LD50 (Rat, male and female):

LD50 (Rat, male and female): 300 - 2.000 mg/kg Method: OECD Test Guideline 423

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Acute inhalation toxicity: Acute dermal toxicity:	Assessment: The component/mixture is moderately toxic after single ingestion. Remarks: no data available LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity Remarks: Not applicable
Information related to the component N-dimethyl-, N-C8-18 acyl derivs., hyc Acute oral toxicity:	<u>1-Propanaminium, 3-amino-N-(carboxymethyl)-N,</u> <u>Iroxides, inner salts:</u> LD50 (Rat):> 5.000 mg/kg
Informations related to the component Acute oral toxicity:	LD50 (Rat, male and female): 670 - 784 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity:	GLP: yes LC50 (Rat, male and female): 0,5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300
Acute dermal toxicity:	GLP: yes LD50 (Rat, male and female): > 2.000 mg/kg GLP: yes Assessment: The substance or mixture has no acute dermal toxicity.
2-methyl-2H-isothiazol-3-one (3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Acute oral toxicity:	LD50 (Rat): 64 mg/kg
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,171 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity:	LD50 (Rabbit): 92,4 mg/kg
Skin corrosion/irritation Informations related to the product:	
Species:	EPISKIN Human Skin Model Test Method: OECD Test Guideline 439 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.
Species:	Rabbit Method: OECD Test Guideline 404 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.
Informations related to the component	t Rosin amine:
Species:	In Vitro Membrane Barrier Test Method for Skin Corrosion – CORROSITEX Method: OECD Test Guideline 431 Result: Irritating to skin.
Informations related to the component	Alcohols, C16-18 and C18-unsaturated, ethoxylated:
Result:	Irritating to skin.
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Species:	Rabbit Exposure time: 4 h

	Result: Irritating to skin. GLP: yes
Informations related to the component 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Species:	Rabbit Result: Causes burns.
Serious eye damage/eye irritation Informations related to the product:	
	Povino corpos
Species: Species:	Bovine cornea Method: OECD Test Guideline 437 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition. rabbit eye Method: OECD Test Guideline 405 Result: No eye irritation
	Remarks: The toxicological data has been taken from products of similar composition.
Informations related to the component	<u>nt Rosin amine:</u>
Method:	OECD Test Guideline 437 Result: Risk of serious damage to eyes.
Informations related to the componer	nt 1.2-Benzisothiazol-3(2H)-one:
Species:	rabbit eye
	Exposure time: 2,9 h - 11 d
	Result: Risk of serious damage to eyes. GLP: yes
Informations related to the component	
	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1)</u> : Species:	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and rabbit eye Result: Risk of serious damage to eyes.
<u>2-methyl-2H-isothiazol-3-one(3:1):</u> Species: Respiratory or skin sensitisation	rabbit eye
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product:	rabbit eye Result: Risk of serious damage to eyes.
<u>2-methyl-2H-isothiazol-3-one(3:1):</u> Species: Respiratory or skin sensitisation	rabbit eye
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product:	rabbit eye Result: Risk of serious damage to eyes. no data available
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks:	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks: Informations related to the component	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks: Informations related to the componen Test Type:	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse Result: The product is a skin sensitiser, sub-category 1A.
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks: Informations related to the component	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse Result: The product is a skin sensitiser, sub-category 1A.
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks: Informations related to the componen Test Type:	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse Result: The product is a skin sensitiser, sub-category 1A. <u>nt 1,2-Benzisothiazol-3(2H)-one:</u> Guinea pig maximization test Exposure routes: Dermal Guinea pig
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks: Informations related to the componen Test Type: Informations related to the componen Test Type:	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse Result: The product is a skin sensitiser, sub-category 1A. <u>nt 1,2-Benzisothiazol-3(2H)-one:</u> Guinea pig maximization test Exposure routes: Dermal Guinea pig Method: Other
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks: Informations related to the componen Test Type: Informations related to the componen Test Type:	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse Result: The product is a skin sensitiser, sub-category 1A. <u>nt 1,2-Benzisothiazol-3(2H)-one:</u> Guinea pig maximization test Exposure routes: Dermal Guinea pig
2-methyl-2H-isothiazol-3-one(3:1): Species: Respiratory or skin sensitisation Informations related to the product: Remarks: Informations related to the componen Test Type: Informations related to the componen Test Type: Species:	rabbit eye Result: Risk of serious damage to eyes. no data available <u>nt Rosin amine:</u> Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse Result: The product is a skin sensitiser, sub-category 1A. <u>nt 1,2-Benzisothiazol-3(2H)-one:</u> Guinea pig maximization test Exposure routes: Dermal Guinea pig Method: Other Result: May cause sensitisation by skin contact.

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#### CULR<sup>™</sup> Art Pigment for Epoxy – Leaf Green Tradename: page 11/25 Assessment: Toxic if swallowed, Fatal in contact with skin, Fatal ifinhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Germ cell mutagenicity Informations related to the product: Genotoxicity in vitro: Remarks: no data available Germ cell mutagenicity-Assessment: No information available. Informations related to the component Rosin amine: Genotoxicity in vitro: Test Type: Ames test Result: negative Germ cell mutagenicity-Assessment: In vitro tests did not show mutagenic effects Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Genotoxicity in vitro: Test Type: Mouse lymphoma assay Test system: mouse lymphoma cells Concentration: 0,1 - 12,8 µg/ml Metabolic activation: with and without metabolic Method: OECD Test Guideline 476 activation: Result: negative GLP: yes Test Type: Ames test Test system: Salmonella typhimurium Concentration: 0,064 - 200 µg/plate Metabolic activation: with and without metabolic activation: Method: OECD Test Guideline 471 **Result:** negative GLP: ves Test Type: Chromosome aberration test in vitro Test system: Human lymphocytes Concentration: 1 - 40 µg/ml Metabolic activation: with and without metabolic Method: OECD Test Guideline 473 activation: Result: positive GLP: yes Test Type: Other Genotoxicity in vivo: Species: Rat (male) Strain: wistar Cell type: Liver cells Application Route: Ingestion Exposure time: single dose Dose: 560 - 1400 mg/kg Method: OECD Test Guideline 486 Result: negative GLP: yes Test Type: Micronucleus test Species: Mouse (male and female) Strain: CD1 Cell type: Bone marrow Application Route: Ingestion

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	Exposure time: single dose Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity- Assessment:	Did not show mutagenic effects in animal experiments.
	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	
Genotoxicity in vitro: Metabolic activation: with and without metabolic	Test Type: In vitro study
activation:	Result: Conflicting results have been seen in different studies.
Genotoxicity in vivo:	Test Type: Micronucleus test Species: Rat Cell type: Bone marrow Application Route: Oral Exposure time: $\leq 5$ d Dose: 1-5 x $\leq 28$ mg/kg Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Oral Exposure time: $\leq 5$ d Dose: 1-5 x $\leq 20$ - 30 mg/kg Result: negative
Germ cell mutagenicity- Assessment:	In vivo tests did not show mutagenic effects
Carcinogenicity Informations related to the product:	
Carcinogenicity - Assessment:	No information available.
Informations related to the compone Carcinogenicity –	ent Rosin amine:
Assessment:	No information available.
Informations related to the compone	nt 1,2-Benzisothiazol-3(2H)-one:
Carcinogenicity - Assessment:	Not applicable
Informations related to the compone 2-methyl-2H-isothiazol-3-one(3:1): Carcinogenicity -	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Assessment:	No evidence of carcinogenicity in animal studies.
Reproductive toxicity	
Informations related to the product:	
Reproductive toxicity - Assessment:	No information available.
Informations related to the compone	nt Rosin amine:
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

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<u>Informations related to the componen</u> Effects on fertility:	t 1,2-Benzisothiazol-3(2H)-one: Species: Rat, male Application Route: oral (fed) Dose: 18,5 - 97,8 mg/kg General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight Method: Other GLP: yes
	Species: Rat, female Application Route: oral (feed) Dose: 27,0 - 114,8 mg/kg General Toxicity - Parent: NOAEL: 27 mg/kg body weight General Toxicity F1: NOAEL: 56,6 mg/kg body weight Method: Other GLP: yes
Effects on foetal development:	Species: Rat, female Application Route: oral (gavage) Dose: 10 - 40 - 100 mg/kg General Toxicity Maternal: NOAEL: 10 mg/kg body weight Teratogenicity: NOAEL: 40 mg/kg body weight Method: Directive 67/548/EEC, Annex V, B.31. GLP: yes
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. Embryotoxicity classification not possible from current data.
	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
2-methyl-2H-isothiazol-3-one(3:1):	
Effects on fertility:	Species: Rat, male and female Application Route: Drinking water Dose: 25 - 75 - 225 ppm General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight Method: Other GLP: yes
	Species: Rat, male and female Application Route: Drinking water Dose: 30 - 100 - 300 ppm General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight Method: OECD Test Guideline 416 GLP: yes
Effects on foetal development:	Species: Rat, male and female Application Route: oral (gavage) Dose: ≤ 15 mg/kg
Developmental Toxicity:	NOAEL: 15 mg/kg body weight Method: Other

body weight Method: Other Reproductive toxicity – Assessment: Weight of evidence does not support classification reproductive toxicity Embryotoxicity classification not possible from cu- data. STOT - single exposure Informations related to the component product: Remarks: no data available Informations related to the component Rosin amine: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1): Assessment: The substance or mixture is not classified as spe target organ toxicant, single exposure. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1): Assessment: The substance or mixture is not classified as spe target organ toxicant, single exposure. Informations related to the component product: Remarks: no data available Informations related to the component product: Remarks: no data available Informations related to the component Rosin amine: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Informations related to the component Rosin amine: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Informations related to the component 1.2-Benzisothiazol-3(2H)-one: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Informations related to the component 1.2-Benzisothiazol-3(2H)-one: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Informations related to the component 1.2-Benzisothiazol-3(2H)-one: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):	ame: CULR <sup>™</sup> Art Pigme	nt for Epoxy – Leaf Green page 14
Informations related to the component product:         Remarks:       no data available         Informations related to the component Rosin amine:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, single exposure.         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:         Assessment:       The substance or mixture is not classified as spetarget organ toxicant, single exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spetarget organ toxicant, single exposure.         STOT - repeated exposure       Informations related to the component product:         Remarks:       no data available         Informations related to the component product:       Remarks:         Remarks:       no data available         Informations related to the component fosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one 2-methyl-2H-isothiazol-3-one(3:1);	Reproductive toxicity – Assessmer	Application Route: oral (gavage) General Toxicity Maternal: NOAEL: ≤ 3,95 mg/kg body weight Method: Other t: Weight of evidence does not support classification for reproductive toxicity Embryotoxicity classification not possible from current
Remarks:       no data available         Informations related to the component Rosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, single exposure         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, single exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, single exposure.         Informations related to the component product:       Remarks:         Remarks:       no data available         Informations related to the component Rosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one       2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informat	STOT - single exposure	
Informations related to the component Rosin amine:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, single exposure.         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:         Assessment:       The substance or mixture is not classified as spe target organ toxicant, single exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one 2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spe target organ toxicant, single exposure.         Informations related to the component product:       Remarks:         Remarks:       no data available         Informations related to the component Rosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component nuixture of: 5-chloro-2-methyl-2H-isothiazol-3-one       Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one         Assessment:       The substance or mixture is not classified as spe target organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one       2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spe target organ toxicant, repeated exposure.         Informations related to the component Rosin amine:		
Assessment:       The substance or mixture is not classified as specific target organ toxicant, single exposure         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:       The substance or mixture is not classified as spe target organ toxicant, single exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):       Assessment:         Assessment:       The substance or mixture is not classified as spe target organ toxicant, single exposure.         Informations related to the component product:       Remarks:         Remarks:       no data available         Informations related to the component Rosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one       2-methyl-2H-isothiazol-3-one         Assessment:       The substance or mixture is not classified as specare target organ toxicant, repeated exposure. <td>Remarks:</td> <td>no data available</td>	Remarks:	no data available
Assessment:       The substance or mixture is not classified as spetarget organ toxicant, single exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):       Assessment:         Assessment:       The substance or mixture is not classified as spetarget organ toxicant, single exposure.         STOT - repeated exposure       Informations related to the component product:         Remarks:       no data available         Informations related to the component Rosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:       Assessment:         Assessment:       The substance or mixture is not classified as spetarget organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one       2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spetarget organ toxicant, repeated exposure.         Informations related to the product:       The substance or mixture is not classified as spetarget organ toxicant, repeated exposure.         Repeated dose toxicity       Informations is not available.         Informations related to the product:       Remarks:         Remarks:       This information is not available.         Informations related	•	
2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spetarget organ toxicant, single exposure.         STOT - repeated exposure       Informations related to the component product: Remarks:         Informations related to the component Rosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one         2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spetarget organ toxicant, repeated exposure.         Informations related to the product:         Repeated dose toxicity         Informations related to the product:         Remarks:       This information is not available.         Informations related to the component Rosin amine:         Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day         Application Route: oral (feed)         Method: OECD Test Guideline 422         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:         Species:	-	The substance or mixture is not classified as specific
Assessment:       The substance or mixture is not classified as spetarget organ toxicant, single exposure.         STOT - repeated exposure       Informations related to the component product: Remarks:         Informations related to the component Rosin amine:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated expose         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:       Assessment:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated expose         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one (3:1):       Assessment:         Assessment:       The substance or mixture is not classified as spectarget organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one (3:1):       Assessment:         Assessment:       The substance or mixture is not classified as spectarget organ toxicant, repeated exposure.         Repeated dose toxicity       Informations related to the product:         Remarks:       This information is not available.         Informations related to the component Rosin amine:       Species:         Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day       Application Route: oral (feed)         Method: OECD Test Guideline 422       Informations related to		
STOT - repeated exposure         Informations related to the component product:         Remarks:       no data available         Informations related to the component Rosin amine:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated expose         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:         Assessment:       The substance or mixture is not classified as specific target organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spectarget organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):         Assessment:       The substance or mixture is not classified as spectarget organ toxicant, repeated exposure.         Repeated dose toxicity       Informations related to the product:         Remarks:       This information is not available.         Informations related to the component Rosin amine:         Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day         Application Route: oral (feed)         Method: OECD Test Guideline 422         Informations related to the component 1.2-Benzisothiazol-3(2H)-one:         Species:       Dog, male and female <td< td=""><td></td><td>The substance or mixture is not classified as specific</td></td<>		The substance or mixture is not classified as specific
Assessment:       The substance or mixture is not classified as spettarget organ toxicant, repeated exposure.         Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one(3:1):       Assessment:         Assessment:       The substance or mixture is not classified as spettarget organ toxicant, repeated exposure.         Repeated dose toxicity       Informations related to the product:         Remarks:       This information is not available.         Informations related to the component Rosin amine:       Species:         Rat, male and female       NOAEL: 107,7 mg/kg bw/day         Application Route: oral (feed)       Method: OECD Test Guideline 422         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:       Species:         Dog, male and female       NOAEL: 5 mg/kg         LOAEL: 20 mg/kg       Application Route: oral (gavage)	Remarks: Informations related to the compon	no data available nent Rosin amine:
2-methyl-2H-isothiazol-3-one(3:1):       Assessment:       The substance or mixture is not classified as spectra target organ toxicant, repeated exposure.         Repeated dose toxicity       Informations related to the product:       Remarks:       This information is not available.         Informations related to the component Rosin amine:       Species:       Rat, male and female       NOAEL: 107,7 mg/kg bw/day         Application Route: oral (feed)       Method: OECD Test Guideline 422       Informations related to the component 1,2-Benzisothiazol-3(2H)-one:         Species:       Dog, male and female       NOAEL: 5 mg/kg         LOAEL: 20 mg/kg       Application Route: oral (gavage)	· · · · · ·	The substance or mixture is not classified as specific
Assessment:       The substance or mixture is not classified as spectarget organ toxicant, repeated exposure.         Repeated dose toxicity       Informations related to the product:         Remarks:       This information is not available.         Informations related to the component Rosin amine:       Species:         Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day       Application Route: oral (feed)         Method: OECD Test Guideline 422       Informations related to the component 1,2-Benzisothiazol-3(2H)-one:         Species:       Dog, male and female         NOAEL: 5 mg/kg       LOAEL: 20 mg/kg         Application Route: oral (gavage)       Application Route: oral (gavage)		
Informations related to the product:       This information is not available.         Informations related to the component Rosin amine:       Rat, male and female         Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day       Application Route: oral (feed)         Method: OECD Test Guideline 422         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:         Species:       Dog, male and female         NOAEL: 5 mg/kg         LOAEL: 20 mg/kg         Application Route: oral (gavage)		The substance or mixture is not classified as specific
Remarks:       This information is not available.         Informations related to the component Rosin amine:       Species:         Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day       Application Route: oral (feed)         Method: OECD Test Guideline 422         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:         Species:       Dog, male and female         NOAEL: 5 mg/kg         LOAEL: 20 mg/kg         Application Route: oral (gavage)	Repeated dose toxicity	
Informations related to the component Rosin amine:         Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day         Application Route: oral (feed)         Method: OECD Test Guideline 422         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:         Species:       Dog, male and female         NOAEL: 5 mg/kg         LOAEL: 20 mg/kg         Application Route: oral (gavage)		-
Species:       Rat, male and female         NOAEL: 107,7 mg/kg bw/day         Application Route: oral (feed)         Method: OECD Test Guideline 422         Informations related to the component 1,2-Benzisothiazol-3(2H)-one:         Species:       Dog, male and female         NOAEL: 5 mg/kg         LOAEL: 20 mg/kg         Application Route: oral (gavage)		
Species: Dog, male and female NOAEL: 5 mg/kg LOAEL: 20 mg/kg Application Route: oral (gavage)		Rat, male and female NOAEL: 107,7 mg/kg bw/day Application Route: oral (feed)
Number of exposures: daily		Dog, male and female NOAEL: 5 mg/kg LOAEL: 20 mg/kg Application Route: oral (gavage) Exposure time: 90 d

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Dose: 5 - 20 - 50 mg/kg Group: yes Method: 88/302/EC GLP: yes

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Species:

Rat, male and female NOAEL: 16,3 - 24,7 mg/kg ApplicationRoute: Drinking water Exposure time: 90 d Number of exposures: daily Dose: 25 - 75 - 225 ppm Group: yes Method: Other GLP: yes

#### Aspiration toxicity

Informations related to the product:

no data available

Informations related to the component Rosin amine: No aspiration toxicity classification

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

No aspiration toxicity classification

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): No aspiration toxicity classification

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Toxicity:

Informations related to the product:	
Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other	
aquatic invertebrates:	Remarks: no data available
Toxicity to algae:	Remarks: no data available
Toxicity to fish (Chronic toxicity):	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available
Informations related to the componen	t Rosin amine:
Toxicity to fish:	LC50 (Brachydanio rerio (zebrafish)): 0,66 mg/l Exposure time: 96 h
	Method: OECD Test Guideline 203
	Remarks: WAF (Water accommodated fraction)
Toxicity to daphnia and other	
aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,23 mg/l Exposure time: 48 h
	Method: OECD Test Guideline 202
	Remarks: WAF (Water accommodated fraction)
Toxicity to algae/aquatic plants:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,071 mg/l
	Exposure time: 72 h
	Method: OECD Test Guideline 201
	Remarks: WAF (Water accommodated fraction)
	NOEC (Pseudokirchneriella subcapitata (green algae)): 0,011 mg/l
	Exposure time: 72 h

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	Method: OECD Test Guideline 201 Remarks: WAF (Water accommodated fraction)
M-Factor (Acute aquatic toxicity): Toxicity to microorganisms: Toxicity to fish	10 Remarks: no data available
(Chronic toxicity): Toxicity to daphnia and other	Remarks: no data available
aquatic invertebrates (Chronic toxicity): M-Factor	Remarks: no data available
(Chronic aquatic toxicity):	1
M-Factor	at Alcohols, C16-18 and C18-unsaturated, ethoxylated:
(Acute aquatic toxicity): Ecotoxicology Assessment Acute aquatic toxicity:	1 Very toxic to aquatic life.
Chronic aquatic toxicity:	Harmful to aquatic life with long lasting effects.
Informations related to the componer Toxicity to fish :	<u>at 1,2-Benzisothiazol-3(2H)-one:</u> LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
	LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16,7 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: No information available. GLP: yes
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 2,94 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
	EC0 (Daphnia magna (Water flea)): 0,643 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
	EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water
	NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l Exposure time: 96 h Test Type: static test

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Toxicity to algae:	Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water EC50 (Selenastrum capricornutum (green algae)): 0,155 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
M Footor	NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity): Toxicity to microorganisms:	1 EC50 (activated sludge of a predominantly domestic sewage): 23 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	EC50: > 811,5 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 263,7 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to fish (Chronic toxicity):	NOEC: 0,21 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Analytical monitoring: yes Method: OECD Test Guideline 215 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 1,2 mg/l End point: Reproduction rate

Tradename: COLR	Art Fightent for Epoxy	– Leal Green pa	ge	18/.
	Analytical mo	hnia magna (Water flea)		
	Exposure tim Species: Dap Analytical mo	production rate e: 21 d hnia magna (Water flea)		
Toxicity to soil dwel	ng			
organisms:	Test Type: ar LC50: > 410, Exposure tim End point: mo Species: Eise Method: OEC GLP:yes Remarks: Tho nominal co	6 mg/kg e: 14 d ortality enia fetida (earthworms) CD Test Guideline 207 e details of the toxic effect relate to oncentration.	the	
	Method: OEC GLP:yes Remarks: The	i mg/kg e: 14 d	the	
Plant toxicity:	Analytical mo Method: OEC GLP:yes Remarks: The	e: 20 d owth seolus vulgaris	the	
	Analytical mo Method: OEC GLP:yes Remarks: The	e: 20 d owth seolus vulgaris	the	
	Analytical mo	e: 19 d owth cum aestivm (wheat)		

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	Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 51 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
Sediment toxicity:	Remarks: not available
Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Informations related to the compor 2-methyl-2H-isothiazol-3-one(3:1):	ent mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Toxicity to fish:	EC50 (Oncorhynchus mykiss (rainbow trout)): 0,22 mg Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,1 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae:	EC50 (Skeletonema costatum (marine diatom)): 0,0052 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201
	NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity): Toxicity to microorganisms:	100 EC50 (activated sludge): 7,92 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to fish (Chronic toxicity):	NOEC: 0,098 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 215
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0,004 mg/l
	Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
M-Factor (Chronic aquatic toxicity):	10
Toxicity to soil dwelling organisms:	LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d

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	Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207		
	NOEC: 8,83 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) OECD Test Guideline 207		
	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effec	cts.	
<b>12.2. Persistence and degradability</b> <u>Informations related to the product:</u> Biodegradability:	no data available		
Informations related to the component Biodegradability:	<u>Rosin amine:</u> Test Type: aerobic Inoculum: activated sludge Result: Not readily biodegradable. Biodegradation: 9 % Exposure time: 28 d Method: OECD Test Guideline 301B		
	<u>1,2-Benzisothiazol-3(2H)-one:</u> Test Type: aerobic Inoculum: activated sludge Concentration: 1 mg/l Result: Partially biodegradable. Exposure time: 63 d Method: OECD Test Guideline 301C GLP: yes		
Stability in water:	Remarks: Biodegradable Test Type: abiotic Degradation half life: 219 d pH: 4 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes		
	Test Type: abiotic Degradation half life: > 200 d pH: 7 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes		
Photodegradation:	Test Type: abiotic Degradation half life: 145 d pH: 9 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes Test Type: water Light source: Xenon lamp Light spectrum: 290 - 400 nm Degradation (direct photolysis): < 1,5 % GLP: yes Test Type: air Method: calculated		

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		GLP: no Remarks: Decomposes rapidly in contact with light.
	Informations related to the compone	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	2-methyl-2H-isothiazol-3-one(3:1):	
	Biodegradability: Photodegradation:	Test Type: aerobic Inoculum: activated sludge Result: Not rapidly biodegradable Method: OECD Test Guideline 301B Test Type: water
	i notodegradation.	Light source: Sunlight
12.3.	Bioaccumulative potential Informations related to the product:	
	Bioaccumulation:	no data available
	Informations related to the compone	nt Rosin amine:
	Bioaccumulation:	Remarks: no data available
	Informations related to the compone	nt 1,2-Benzisothiazol-3(2H)-one:
	Bioaccumulation:	Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 56 d Concentration: 0,1 mg/l Bioconcentration factor (BCF): 6,62 Method: OECD Test Guideline 305 GLP: no Remarks: Due to the distribution coefficient n-octanol/water,accumulation in organisms is
	Informations related to the sources	not expected.
	2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	Bioaccumulation:	Bioconcentration factor (BCF): 3,6 Method: calculated Remarks: Does not accumulate in organisms.
	Partition coefficient	Nemarka. Does not accumulate in organisms.
	n-octanol/water:	log Pow: -0,71 - 0,75 Method: OECD Test Guideline 107
12.4.	Mobility in soil	
	Informations related to the compone	nt Rosin amine:
	Distribution among environmental compartments:	adsorption Medium: water – soil Remarks: The product is insoluble and floats on water
	Informations related to the compone	nt 1,2-Benzisothiazol-3(2H)-one:
	Distribution among	
	environmental compartments:	Adsorption/Soil Medium: water – soil Koc: 235 – 566 Method: Other
12.5.	Results of PBT and vPvB assessme	ent
	Informations related to the product:	
		components considered to be either persistent, very persistent and very bioaccumulative (vPvB) at level
	Informations related to the compone	nt Pasin amina:

Assessment:

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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	Informations related to the componer	nt 1,2-Benzisothiazol-3(2H)-one:
	Assessment:	The substance is not identified as a PBT or as a vPvB substance.
	Informations related to the componer	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	
	Assessment:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
12.6.	Other adverse effects	
	Informations related to the product:	
	Environmental fate and pathways:	no data available
	Additional ecological information:	no data available
	Informations related to the componer	nt Rosin amine <u>:</u>
	Environmental fate and pathways:	no data available
	Additional ecological information:	The product should not be allowed to enter drains, water courses or the soil.
	Informations related to the componer	nt 1,2-Benzisothiazol-3(2H)-one:
	Environmental fate andpathways:	not available
	Additional ecological information:	Do not allow to enter ground water, waterways or waste water.
	Informations related to the componer	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	2-methyl-2H-isothiazol-3-one(3:1):	· · · · · · · · · · · · · · · · · · ·
	Additional ecological information:	The product should not be allowed to enter drains, watercourses or the soil.

## SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

Uncleaned packaging:

This material and its container must be disposed of in a safe way.

## **SECTION 14: TRANSPORT INFORMATION**

#### 14.1. to 14.5.

ADR:	not restricted
ADN:	not restricted
RID:	not restricted
IATA:	not restricted
IMDG:	not restricted

- **14.6.** Special precautions for users See sections 6 to 8 of this Safety Data Sheet.
- **14.7.** Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No transport as bulk according IBC-Code.

#### **SECTION 15: REGULATORY INFORMATION**

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

REACH - Candidate List of Substances of

Very High Concern for Authorisation (Article 59):	Not applicable
REACH - List of substances subject to authorisation	
(Annex XIV):	Not applicable

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Regulation (EC) No 1005/2009 on substances that	
deplete the ozone layer:	Not applicable
Regulation (EC) No 850/2004 on persistent	
organic pollutants:	Not applicable

#### Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

### **SECTION 16: OTHER INFORMATION**

Observe the legal requirements nationally and locally.

#### List of the text of the hazard statements mentioned section 3 (H-phrases):

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
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.

#### Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Eye Dam.:	Serious eye damage
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure

#### Change compared to the previous version:

Change in the composition

#### Legend

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight
CLP	Classification Labelling Packaging Regulation
	Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DIN	Standard of the German Institute for Standardisation
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC-Number	European Community number

Tradename:	CULR <sup>™</sup> Art Pigment for Epoxy – Leaf Green page 24/25
ECx	Concentration associated with x% response
ELx	Loading rate associated with x% response
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
ErCx	Concentration associated with x% growth rate response
GHS	Globally Harmonized System
GLP	Good Laboratory Practice
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships
	carrying Dangerous Chemicals in Bulk
IC50	Half maximal inhibitory concentration
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organisation for Standardization
KECI	Korea Existing Chemicals Inventory
LC50	Lethal Concentration to 50 % of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.o.s.	Not Otherwise Specified
NO(A)EC	No Observed (Adverse) Effect Concentration
NO(A)EL	No Observed (Adverse) Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Co-operation and Development
OPPTS	Office of Chemical Safety and Pollution Prevention
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
(Q)SAR	(Quantitative) Structure Activity Relationship
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the
	Council concerning the Registration, Evaluation, Authorisation and
	Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SADT	Self-Accelerating Decomposition Temperature
SDS	Safety Data Sheet
TCSI	Taiwan Chemical Substance Inventory
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
UN	United Nations
vPvB	Very Persistent and Very Bioaccumulative

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm<sup>3</sup>" means "one point three five g/cm<sup>3</sup>").

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