

## Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

### BIOSCU D ARTIC

Date of first edition: 12/22/2020

Safety Data Sheet dated 5/29/2023

version 2

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

### 1.1. Product identifier

Mixture identification:

Trade name: BIOSCU D ARTIC

Trade code: 17092020 -2

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

Recommended use: Waterproofing product

Uses advised against: All uses other than recommended ones

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

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel. +39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

### 1.4. Emergency telephone number

European emergency phone number 112

Kerakoll Italy (+39) 0536 816511

Ireland

Poison information centre: (+353) 809 2166 (Daily 8am-10pm)

In case of emergency call 999 or 112

Malta

In case of emergency call: 112 (24h)

## SECTION 2: Hazards identification



### 2.1. Classification of the substance or mixture

#### Regulation (EC) n. 1272/2008 (CLP)

Flam. Liq. 3 Flammable liquid and vapour.

Skin Irrit. 2 Causes skin irritation.

Eye Irrit. 2 Causes serious eye irritation.

STOT SE 3 May cause respiratory irritation.

STOT RE 2 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 May be fatal if swallowed and enters airways.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

#### Regulation (EC) No 1272/2008 (CLP):

#### Pictograms and Signal Words



Danger

#### Hazard statements

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe vapours.
P280	Wear protective gloves and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P331	Do NOT induce vomiting.
P370+P378	In case of fire, use a dry powder fire extinguisher to extinguish.
P501	Dispose of contents/container in accordance with applicable regulations.

#### Special Provisions:

EUH208	Contains Hydroxyphenyl benzotriazole derivatives. May produce an allergic reaction.
EUH208	Contains Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate. May produce an allergic reaction.

#### Contains

xylene

#### Dir. 2004/42/EC (VOC directive)

One-pack performance coatings

EU limit value for this product (cat. A/i): 500 g/l

This product contains max 494.5 g/l VOC.

#### Special provisions according to Annex XVII of REACH and subsequent amendments:

None

#### 2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$ .

Other Hazards: No other hazards

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

N.A.

### 3.2. Mixtures

Mixture identification: BIOSCUD ARTIC

#### Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
25-50 %	xylene	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315; Asp. Tox. 1, H304; STOT RE 2, H373; Eye Irrit. 2, H319; STOT SE 3, H335	01-2119488216-32
< 0,2 %	Hydroxyphenyl benzotriazole derivatives	EC:400-830-7 Index:607-176-00-3	Aquatic Chronic 2, H411; Skin Sens. 1, H317	01-0000015075-76
< 0,2 %	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	CAS:41556-26-7 EC:255-437-1	Skin Sens. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic 4, H413, M-Acute:1	01-2119491304-40

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

Suitable extinguishing media:

In case of fire, use a dry powder fire extinguisher to extinguish.

Extinguishing media which must not be used for safety reasons:

None in particular.

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

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

#### **5.3. Advice for firefighters**

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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### **SECTION 6: Accidental release measures**

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

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

#### **6.2. Environmental precautions**

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

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

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

#### **6.4. Reference to other sections**

See also section 8 and 13

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### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

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

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

### 7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Community Occupational Exposure Limits (OEL)

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Notes
xylene	ACGIH	NNN			100.000		150.000	A4, BEI - URT and eye irr, CNS impair
	EU	NNN		221.000	50.000	442.000	100.000	Skin
	NATIONAL	AUSTRIA		221.000	50.000	442.000	100.000	
	NATIONAL	BELGIUM		221.000	50.000	442.000	100.000	
	NATIONAL	DENMARK		109.000	25.000	442.000	100.000	
	NATIONAL	FINLAND		220.000	50.000	440.000	100.000	
	NATIONAL	FRANCE		221.000	50.000	442.000	100.000	
	NATIONAL	GERMANY		440.000	100.000	880.000	200.000	AGS
	NATIONAL	GERMANY		440.000	100.000	880.000	200.000	DFG
	NATIONAL	HUNGARY		221.000		442.000		
	NATIONAL	IRELAND		221.000	50.000	442.000	100.000	
	NATIONAL	ITALY		221.000	50.000	442.000	100.000	Cute
	NATIONAL	LATVIA		221.000	50.000	442.000	100.000	
	NATIONAL	POLAND			100.000			
	NATIONAL	ROMANIA		221.000	50.000	442.000	100.000	
	NATIONAL	SPAIN		221.000	50.000	442.000	100.000	
	NATIONAL	SWEDEN		221.000	50.000	442.000	100.000	
	NATIONAL	SWITZERLAND		435.000	100.000	870.000	200.000	
	NATIONAL	NETHERLANDS		210.000		442.000		
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		220.000	50.000	441.000	100.000	
	NATIONAL	BULGARIA		221.000	50.000	445.000	100.000	
	NATIONAL	CZECHIA		200.000		400.000		
	NATIONAL	CROATIA		221.000	50.000	442.000	100.000	
	NATIONAL	ESTONIA		200.000	50.000	450.000	100.000	
	NATIONAL	GREECE		435.000	100.000	650.000	150.000	
	NATIONAL	LITHUANIA		221.000	50.000	442.000	100.000	
	NATIONAL	PORTUGAL			100.000		150.000	
	NATIONAL	SLOVAKIA		221.000	50.000	442.000	100.000	
	NATIONAL	SLOVENIA		221.000	50.000	442.000	100.000	

#### Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
xylene	1330-20-7	327.000 µg/l	Freshwater	

327.000 µg/l	Intermittent releases (freshwater)
327.000 µg/l	Marine water
6.580 mg/l	Microorganisms in sewage treatments
12.460 mg/kg	Freshwater sediments
12.460 mg/kg	Marine water sediments
2.310 mg/kg	Soil

#### Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency
xylene	1330-20-7		289.000 mg/m <sup>3</sup>	174.000 mg/m <sup>3</sup>	Human Inhalation	Short Term, systemic effects
			289.000 mg/m <sup>3</sup>	174.000 mg/m <sup>3</sup>	Human Inhalation	Short Term, local effects
			180.000 mg/kg	108.000 mg/kg	Human Dermal	Long Term, systemic effects
				1.600 mg/kg	Human Oral	Long Term, systemic effects
			77.000 mg/kg	14.800 mg/kg	Human Inhalation	Long Term, systemic effects
Hydroxyphenyl benzotriazole derivatives			350.000 µg/m <sup>3</sup>	85.000 µg/m <sup>3</sup>	Human Inhalation	Long Term, systemic effects
			250.000 µg/kg	25.000 µg/kg	Human Dermal	Long Term, systemic effects
				25.000 µg/kg	Human Oral	Long Term, systemic effects

## 8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

## SECTION 9: Physical and chemical properties

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

Physical State Liquid

Color: In compliance with the product description

Odour: Like: Xylene

Odour threshold: N.A.

pH: N.A.

Kinematic viscosity: <= 20,5 mm<sup>2</sup>/sec (40 °C)

Melting point / freezing point: N.A.

Initial boiling point and boiling range: 130 °C (266 °F)

Flash point: 30 °C (86 °F)

Upper/lower flammability or explosive limits: 7.00 % (UEL). 1.10 % (LEL).

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.15 g/cm<sup>3</sup>

Solubility in water: N.A.  
Solubility in oil: N.A.  
Partition coefficient (n-octanol/water): N.A.  
Auto-ignition temperature: N.A.  
Decomposition temperature: N.A.  
Flammability: The product is classified Flam. Liq. 3 H226  
Volatile Organic compounds - VOCs = 43 % ; 494.5 g/l

**Particle characteristics:**

Particle size: N.A.

**9.2. Other information**

Miscibility: N.A.  
Conductivity: N.A.  
Evaporation rate: N.A.                      No other relevant information

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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Stable under normal conditions

**10.2. Chemical stability**

Data not available.

**10.3. Possibility of hazardous reactions**

None.

**10.4. Conditions to avoid**

Stable under normal conditions.

**10.5. Incompatible materials**

Avoid contact with combustible materials. The product could catch fire.

**10.6. Hazardous decomposition products**

None.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Toxicological Information of the Preparation**

a) acute toxicity	Not classified Based on available data, the classification criteria are not met LC50 Inhalation > 20.00 mg/l LD50 Skin > 2000.00 mg/kg
b) skin corrosion/irritation	The product is classified: Skin Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified Based on available data, the classification criteria are not met
h) STOT-single exposure	The product is classified: STOT SE 3(H335)
i) STOT-repeated exposure	The product is classified: STOT RE 2(H373)
j) aspiration hazard	The product is classified: Asp. Tox. 1(H304)

**Toxicological information on main components of the mixture:**

xylene	a) acute toxicity	LD50 Oral Rat = 3523.00 ml/Kg LC50 Inhalation Vapour Rabbit = 26.00 mg/l 4h LD50 Skin Rat = 4350.00 mg/kg
Hydroxyphenyl benzotriazole derivatives	a) acute toxicity	LD50 Oral Rat > 5000.00000 mg/kg  LC50 Inhalation Rat > 5.80000 mg/l 96h LD50 Skin Rat > 2000.00000 mg/kg

b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
c) serious eye damage/irritation	Eye Irritant Rabbit No	
d) respiratory or skin sensitisation	Skin Sensitization Guinea pig Positive	
f) carcinogenicity	Genotoxicity Negative	Hamster oral route
g) reproductive toxicity	No Observed Effect Level	Oral Rat < 2.00000 mg/kg

## 11.2 Information on other hazards

### Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

## SECTION 12: Ecological information

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

#### List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

#### List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Hydroxyphenyl benzotriazole derivatives	EINECS: 400-830-7 - INDEX: 607-176-00-3	<p>a) Aquatic acute toxicity : LC50 Fish freshwater fish = 2.80000 mg/L 96h</p> <p>a) Aquatic acute toxicity : LC50 freshwater invertebrates = 4.00000 mg/L</p> <p>b) Aquatic chronic toxicity : EC50 Daphnia Daphnia magna = 780.00000 µg/L OECD Guideline 211 (Daphnia magna Reproduction Test) - 21days</p> <p>a) Aquatic acute toxicity : EC50 Algae freshwater algae = 9.00000 mg/L 72h</p> <p>d) Terrestrial toxicity : LC50 Worm Eisenia foetida &gt; 1000.00000 mg/kg „OECD Guideline 207 (Earthworm, Acute Toxicity Tests - 14days</p>

### 12.2. Persistence and degradability

Component	Persistence/Degradability:	Value	Notes
Hydroxyphenyl benzotriazole derivatives	Non-readily biodegradable	12.000	%; OECD 301B

### 12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value
xylene	Bioaccumulative	BCF - Bioconcentration factor	25.900

### 12.4. Mobility in soil

N.A.

### 12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

### 12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

### 12.7 Other adverse effects

N.A.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

**Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):**

N.A.

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## SECTION 14: Transport information

### 14.1. UN number or ID number

1263

### 14.2. UN proper shipping name

ADR-Shipping Name: PAINT

IATA-Technical name: PAINT

IMDG-Technical name: PAINT

### 14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

### 14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

### 14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: F-E, S-E

### 14.6. Special precautions for user

Road and Rail ( ADR-RID ) :

ADR-Label: 3

ADR - Hazard identification number: -

ADR-Special Provisions: 163 367 650

ADR-Transport category (Tunnel restriction code): 3 (E)

ADR Limited Quantities: 5 L

ADR Excepted Quantities: E1

Air ( IATA ) :

IATA-Passenger Aircraft: 355

IATA-Cargo Aircraft: 366

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisioning: A3 A72 A192

Sea ( IMDG ) :

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 163 223 367 955

### 14.7. Maritime transport in bulk according to IMO instruments

N.A.

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## SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)



Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
 Regulation (EU) n. 2017/776 (ATP 10 CLP)  
 Regulation (EU) n. 2018/669 (ATP 11 CLP)  
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)  
 Regulation (EU) n. 2019/521 (ATP 12 CLP)  
 Regulation (EU) n. 2020/217 (ATP 14 CLP)  
 Regulation (EU) n. 2020/1182 (ATP 15 CLP)  
 Regulation (EU) n. 2021/643 (ATP 16 CLP)  
 Regulation (EU) n. 2020/878  
 Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3, 40

Restrictions related to the substances contained: 75

Provisions related to directive EU 2012/18 (Seveso III):

**Seveso III category according to Annex 1, part 1**

Product belongs to category: P5c 5000

50000

**Regulation (EU) 649/2012 (PIC regulation):**

No Substance Listed

German Water Hazard Class.

Class 2: hazardous for water.

SVHC Substances:

No data available

**Dir. 2004/42/EC (VOC directive)**

(ready to use)

Volatile Organic compounds - VOCs = 43.00 %

Volatile Organic compounds - VOCs = 494.50 g/L

## 15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

## SECTION 16: Other information

Code	Description
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Code	Hazard class and hazard category	Description
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.10/1	Asp. Tox. 1	Aspiration hazard, Category 1
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2

4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
4.1/C4	Aquatic Chronic 4	Chronic (long term) aquatic hazard, category 4

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

<b>Classification according to Regulation (EC) Nr. 1272/2008</b>	<b>Classification procedure</b>
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2.6/3	On basis of test data
3.2/2	Calculation method
3.3/2	Calculation method
3.8/3	Calculation method
3.9/2	Calculation method
3.10/1	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: Keep Away From Heat

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.  
LD50: Lethal dose, for 50 percent of test population.  
LDLo: Leathal Dose Low  
N.A.: Not Applicable  
N/A: Not Applicable  
N/D: Not defined/ Not available  
NA: Not available  
NIOSH: National Institute for Occupational Safety and Health  
NOAEL: No Observed Adverse Effect Level  
OSHA: Occupational Safety and Health Administration.  
PBT: Persistent, Bioaccumulative and Toxic  
PGK: Packaging Instruction  
PNEC: Predicted No Effect Concentration.  
PSG: Passengers  
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.  
STEL: Short Term Exposure limit.  
STOT: Specific Target Organ Toxicity.  
TLV: Threshold Limiting Value.  
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).  
vPvB: Very Persistent, Very Bioaccumulative.  
WGK: German Water Hazard Class.

**Paragraphs modified from the previous revision:**

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 4. FIRST AID MEASURES
- 5. FIRE-FIGHTING MEASURES
- 6. ACCIDENTAL RELEASE MEASURES
- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 10. STABILITY AND REACTIVITY
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 13. DISPOSAL CONSIDERATIONS
- 14. TRANSPORT INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION



## Exposure Scenario

### Xylene, Mixed Isomers

## Exposure Scenario, 14/10/2022

Substance identity	
	Xylene, Mixed Isomers
CAS No.	1330-20-7
INDEX No.	601-022-00-9
EINECS No.	215-535-7
Registration number	01-2119488216-32

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1. **ES 1**      Widespread use by professional workers

1. ES 1 Widespread use by professional workers	
<b>1.1 TITLE SECTION</b>	
Exposure Scenario name	Professional application of coatings and inks
Date - Version	14/10/2022 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
<b>Environment Contributing Scenario</b>	
CS1	ERC8a - ERC8d
<b>Worker Contributing Scenario</b>	
CS2 Material transfers	PROC8a
CS3 Rolling, Brushing	PROC10
CS4 Roller, spreader, flow application	PROC11
<b>1.2 Conditions of use affecting exposure</b>	
<b>1.2. CS1: Environment Contributing Scenario (ERC8a, ERC8d)</b>	
Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use (or from service life)</i>	
Emission days: 300 days per year	
<i>Conditions and measures related to sewage treatment plant</i>	
STP type: Onsite Sewage Treatment Plant	
STP effluent (m <sup>3</sup> /day): 2000	
<i>Conditions and measures related to treatment of waste (including article waste)</i>	
Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.	
<i>Other conditions affecting environmental exposure</i>	
Local marine water dilution factor: 100 Local freshwater dilution factor: 10	
<b>1.2. CS2: Worker Contributing Scenario: Material transfers (PROC8a)</b>	
Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: = 500 Pa	

<b>Concentration of substance in product:</b> Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
<b>Duration:</b> Covers daily exposures up to 8 hours	
<i>Technical and organisational conditions and measures</i>	
<b>Technical and organisational measures</b> Use in closed process Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
<b>Personal protection</b> Wear suitable gloves tested to EN374.	
<i>Other conditions affecting worker exposure</i>	
Professional use	
<b>Temperature:</b> Assumes use at not more than 20 °C above ambient temperature.	
<b>1.2. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)</b>	
<b>Process Categories</b>	Roller application or brushing (PROC10)
<i>Product (article) characteristics</i>	
<b>Physical form of product:</b> Liquid	
<b>Vapour pressure:</b> = 500 Pa	
<b>Concentration of substance in product:</b> Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
<b>Duration:</b> Covers daily exposures up to 8 hours	
<i>Technical and organisational conditions and measures</i>	
<b>Technical and organisational measures</b> Provide a good standard of controlled ventilation (10 to 15 air changes per hour).	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
<b>Personal protection</b> Wear suitable gloves tested to EN374. Wear a respirator conforming to EN140.	
<i>Other conditions affecting worker exposure</i>	
Professional use	
<b>Temperature:</b> Assumes use at not more than 20 °C above ambient temperature.	
<b>1.2. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)</b>	
<b>Process Categories</b>	Non industrial spraying (PROC11)
<i>Product (article) characteristics</i>	
<b>Physical form of product:</b> Liquid	
<b>Vapour pressure:</b> = 500 Pa	
<b>Concentration of substance in product:</b> Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use/exposure</i>	

**Duration:**

Covers daily exposures up to 8 hours

**Technical and organisational conditions and measures****Technical and organisational measures**

Carry out in a vented booth provided with laminar airflow.

**Conditions and measures related to personal protection, hygiene and health evaluation****Personal protection**

Wear suitable gloves tested to EN374.

**Other conditions affecting worker exposure**

Professional use

**Temperature:** Assumes use at not more than 20 °C above ambient temperature.**1.3 Exposure estimation and reference to its source****1.3. CS1: Environment Contributing Scenario (ERC8a, ERC8d)**

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	= 0.0015 mg/L	N/A	= 0.005
marine water	= 0.000145 mg/L	N/A	< 0.001
freshwater sediment	= 0.016 mg/kg wet weight	N/A	= 0.006
marine sediment	= 0.0156 mg/kg wet weight	N/A	< 0.001
soil	= 0.0117 mg/kg wet weight	N/A	= 0.006
Sewage treatment plant	= 0.00866 mg/L	N/A	= 0.001

**1.3. CS2: Worker Contributing Scenario: Material transfers (PROC8a)**

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	= 14 ppm	N/A	= 0.79
dermal, systemic, long-term	= 13.71 mg/kg bw/day	N/A	= 0.08
combined routes	N/A	N/A	= 0.87

**1.3. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)**

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	= 3 ppm	N/A	= 0.17
dermal, systemic, long-term	= 27.43 mg/kg bw/day	N/A	= 0.15
combined routes	N/A	N/A	= 0.32

**1.3. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)**

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative, systemic, long-term	= 5 ppm	N/A	= 0.28
dermal, systemic, long-term	= 13.71 mg/kg bw/day	N/A	= 0.08
combined routes	N/A	N/A	= 0.29

## 1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### **Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.