Safety Data Sheet

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

KERADECOR ZINKOVER

Date of first edition: 7/13/2021

Safety Data Sheet dated 29/04/2024 version 7

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

1.1. Product identifier

Mixture identification:

Trade name: KERADECOR ZINKOVER

Trade code: 18062021 -14

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

Recommended use: Paints/coatings - Protective and functional

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

Ireland Emergency medical information: (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland.

Members of the public Number (8 am-10 pm): +353 (0)1 809 2166

Healthcare professional telephone Number (24hrs): +353 (0)1 809 2566

Malta In case of emergency call: +356 2395 2000 (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.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

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

Hazard pictograms and Signal Word



Warning

Hazard statements

H226	Flammable liquid and vapour.
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

P102	Keep out of reach of children.
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/clothing and eye/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with applicable regulations.

Contains

reaction mass of ethylbenzene and xylene

2-methylpropan-1-ol; iso-butanol

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 471.04 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 >= 0.1%

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: KERADECOR ZINKOVER

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥10-<20 %	reaction mass of ethylbenzene and xylene	EC:905-588-0	Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 3, H412	01-2119488216-32
≥10-<20 %	reaction mass of ethylbenzene and xylene	EC:905-588-0	Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; STOT RE 2, H373; Asp. Tox. 1, H304	01-2119539452-40
≥3-<5 %	n-butyl acetate	CAS:123-86-4 EC:204-658-1 Index:607-025-00-1	Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	01-2119485493-29
≥1-<3 %	2-methylpropan-1-ol; iso-butanol	CAS:78-83-1 EC:201-148-0 Index:603-108-00-1	Flam. Liq. 3, H226; STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318, H336	

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 immediatley 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 opthalmologist 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).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO_2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

Water.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Keep containers cool with water spray. Use fire fighter's clothing conforming to European standard EN469

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

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.

For emergency responders:

Wear personal protection equipment.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight. Avoid accumulating electrostatic charge. Always keep in a well ventilated place

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store in closed containers and in a well-ventilated place.

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

Incompatible materials:

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)

n-butyl acetate

CAS: 123-86-4	EU		Long Term: 241 mg/m3 - 50 ppm (8h); Short Term: 723 mg/m3 - 150 ppm
	NATIONAL	AUSTRIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: Ceiling - 480 mg/m3 - 100 ppm Notes: Mow, MAK Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 238 mg/m3 - 50 ppm; Short Term: 712 mg/m3 - 150 ppm Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CYPRUS	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
	NATIONAL	CZECHIA	Long Term: 241 mg/m3; Short Term: Ceiling - 723 mg/m3 Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	GERMANY	Long Term: 300 mg/m3 - 62 ppm Notes: AGS, Y, 2 (I) Source: TRGS 900
	NATIONAL	DENMARK	Long Term: 241 mg/m3 - 50 ppm Notes: E Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Notes: VLI Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm
	NATIONAL	FINLAND	Long Term: 240 mg/m3 - 50 ppm; Short Term: 725 mg/m3 - 150 ppm Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL	GREECE	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: Y.A. 72/2021 (ΦΕΚ 163/Α` 9.9.2021)
	NATIONAL	CROATIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: 2019/1831
	NATIONAL	HUNGARY	Long Term: 241 mg/m3; Short Term: 723 mg/m3 Notes: i, sz, EU7, N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	IRELAND	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Notes: IOELV Source: 2021 Code of Practice
	NATIONAL	ITALY	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: D.lgs. 81/2008, Allegato XXXVIII
	NATIONAL	LUXEMBOURG	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: Mémorial A n.226 du 22 mars 2021
	NATIONAL	LATVIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: KN325P1
	NATIONAL	MALTA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: S.L.424.24
	NATIONAL	NETHERLANDS	Long Term: 241 mg/m3; Short Term: 723 mg/m3 Source: Arbeidsomstandighedenregeling - Lijst A

	NATIONAL	POLAND	Long Term: 240 mg/m3; Short Term: 720 mg/m3 Source: Dz.U. 2018 poz. 1286
	NATIONAL	PORTUGAL	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: Decreto-Lei n.º 1/2021
	NATIONAL	ROMANIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Notes: Dir. 2019/1.831 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SLOVAKIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SLOVENIA	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Notes: Y, EU5 Source: UL št. 72, 11. 5. 2021
	NATIONAL	SWEDEN	Long Term: 241 mg/m3 - 50 ppm; Short Term: 723 mg/m3 - 150 ppm Source: AFS 2021:3
	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 724 mg/m3 - 150 ppm; Short Term: 966 mg/m3 - 200 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	SUVA	SWITZERLAND	Long Term: 240 mg/m3 - 50 ppm; Short Term: 720 mg/m3 - 150 ppm Notes: SSC, VR Yeux / AW Auge, INRS NIOSH Source: suva.ch/valeurs-limites

2-methylpropan-1-ol; iso-butanol

CAS: 78-83-1	ACGIH		Long Term: 50 ppm (8h) Notes: Skin and eye irr
	NATIONAL	AUSTRIA	Long Term: 150 mg/m3 - 50 ppm; Short Term: 600 mg/m3 - 200 ppm Notes: 15(Miw), 4x, MAK Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 154 mg/m3 - 50 ppm Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	GERMANY	Long Term: 310 mg/m3 - 100 ppm Notes: DFG, Y, 1(I) Source: TRGS 900
	NATIONAL	DENMARK	Short Term: Ceiling - 150 mg/m3 - 50 ppm Notes: LH Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Long Term: 154 mg/m3 - 50 ppm Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 150 mg/m3 - 50 ppm Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 150 mg/m3 - 50 ppm; Short Term: 230 mg/m3 - 75 ppm Notes: iho Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 150 mg/m3 - 50 ppm Source: INRS outil65
	NATIONAL	GREECE	Long Term: 300 mg/m3 - 100 ppm; Short Term: 300 mg/m3 - 100 ppm Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	CROATIA	Long Term: 154 mg/m3 - 50 ppm; Short Term: 231 mg/m3 - 75 ppm Notes: koža Source: NN 1/2021
	NATIONAL	IRELAND	Long Term: 150 mg/m3 - 50 ppm; Short Term: 225 mg/m3 - 75 ppm Source: 2021 Code of Practice
	NATIONAL	LITHUANIA	Long Term: 10 mg/m3 Notes: O Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	LATVIA	Long Term: 10 mg/m3 Source: KN325P1

NATIONAL	NORWAY	Short Term: Ceiling - 75 mg/m3 - 25 ppm Notes: H T Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 100 mg/m3; Short Term: 200 mg/m3 Notes: skóra Source: Dz.U. 2018 poz. 1286
NATIONAL	ROMANIA	Long Term: 100 mg/m3 - 33 ppm; Short Term: 200 mg/m3 - 66 ppm Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 310 mg/m3 - 100 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SLOVENIA	Long Term: 310 mg/m3 - 100 ppm; Short Term: 310 mg/m3 - 100 ppm Notes: Y Source: UL št. 72, 11. 5. 2021
NATIONAL	SWEDEN	Long Term: 150 mg/m3 - 50 ppm; Short Term: 250 mg/m3 - 75 ppm Notes: H, V Source: AFS 2021:3
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 154 mg/m3 - 50 ppm; Short Term: 231 mg/m3 - 75 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
SUVA	SWITZERLAND	Long Term: 150 mg/m3 - 50 ppm; Short Term: 150 mg/m3 - 50 ppm Notes: SSC, VRS Yeux / OAW Auge, INRS NIOSH Source: suva.ch/valeurs-limites

Predicted No Effect Concentration (PNEC) values

reaction mass of ethylbenzene and xylene

Exposure Route: Food chain; PNEC Limit: 327 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 327 mg/m3

Exposure Route: Marine water; PNEC Limit: 327 mg/m3

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 6.58 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 12.46 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 12.46 mg/kg

Exposure Route: Soil; PNEC Limit: 2.31 mg/kg

reaction mass of ethylbenzene and xylene

Exposure Route: Food chain; PNEC Limit: 327 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 327 mg/m3

Exposure Route: Marine water; PNEC Limit: 327 mg/m3

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 6.58 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 12.46 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 12.46 mg/kg

Exposure Route: Soil; PNEC Limit: 2.31 mg/kg

n-butyl acetate

CAS: 123-86-4

Exposure Route: Fresh Water; PNEC Limit: 180 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 360 mg/m3

Exposure Route: Marine water; PNEC Limit: 18 mg/m3

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 35.6 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 981 µg/kg

Exposure Route: Marine water sediments; PNEC Limit: 98.1 µg/kg

Exposure Route: Soil; PNEC Limit: 90.3 µg/kg

2-methylpropan-1-ol; iso-butanol

CAS: 78-83-1

Exposure Route: Fresh Water; PNEC Limit: 400 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 11 mg/l

Exposure Route: Marine water; PNEC Limit: 40 mg/m3

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 1.56 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 156 µg/kg

Exposure Route: Soil; PNEC Limit: 76.5 µg/kg

Derived No Effect Level (DNEL) values

reaction mass of ethylbenzene and xylene

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 221 mg/kg/day; Consumer: 65.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 442 mg/kg/day; Consumer: 260 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 221 mg/kg/day; Consumer: 65.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 442 mg/kg/day; Consumer: 260 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 212 mg/kg; Consumer: 125 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 12.5 mg/kg

reaction mass of ethylbenzene and xylene

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 221 mg/kg/day; Consumer: 65.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 442 mg/kg/day; Consumer: 260 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 221 mg/kg/day; Consumer: 65.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 442 mg/kg/day; Consumer: 260 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 212 mg/kg; Consumer: 125 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 12.5 mg/kg

n-butyl acetate

CAS: 123-86-4

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 48 mg/kg/day; Consumer: 12 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 600 mg/kg/day; Consumer: 300 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 300 mg/kg/day; Consumer: 35.7 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 600 mg/kg/day; Consumer: 300 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 7 mg/kg; Consumer: 3.4 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Professional: 11 mg/kg; Consumer: 6 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 2 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 2 mg/kg

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.

Protection for skin:

Chemical protection clothing. Safety shoes.

Protection for hands:

Nitrile rubber .

Respiratory protection:

Gas filter type A .

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	White
Odour:	Characteristic
pH:	N.A.
Kinematic viscosity:	> 20,5 mm2/s (40 °C)
Melting point/freezing point:	N.A.
Boiling point or initial boiling point and boiling range:	120 °C (248 °F)
Flash point:	24 °C (75 °F) ASTM D 6450
Lower and upper explosion limit:	N.A.
Relative vapour density:	N.A.
Vapour pressure:	8.00 (kPa 50°C). hPa
Density and/or relative density:	1.28 g/cm3
Solubility in water:	Insoluble
Solubility in oil:	N.A.
Partition coefficient n-octanol/water (log value):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Flammability:	The product is classified Flam. Liq. 3
Volatile Organic compounds - VOCs =	47.69%; 610.42g/L

Particle characteristics:

Particle size:	N.A.

9.2. Other information

Explosive properties:	Not Relevant
Oxidizing properties:	Not Relevant

No other relevant information

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

Vapors may form explosive mixture with air

10.4. Conditions to avoid

Heat and open flames. Heating

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

None.

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
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	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

reaction mass of ethylbenzene and xylene

a) acute toxicity	LD50 Oral Rat = 3523 mg/kg
	LC50 Inhalation Vapour Rat = 6700 Ppm 4h
	LD50 Skin Rabbit = 12126 mg/kg 24h
b) skin corrosion/irritation	Skin Corrosive Rabbit Negative 4h
c) serious eye damage/irritation	Eye Irritant Rabbit Yes 1h
f) carcinogenicity	Genotoxicity Negative
g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat >= 500

reaction mass of ethylbenzene and xylene

a) acute toxicity	LD50 Oral Rat = 3523 mg/kg
	LC50 Inhalation Vapour Rat = 6700 Ppm 4h
	LD50 Skin Rabbit = 12126 mg/kg 24h
b) skin corrosion/irritation	Skin Corrosive Rabbit Negative 4h
c) serious eye damage/irritation	Eye Irritant Rabbit Yes 1h
f) carcinogenicity	Genotoxicity Negative
g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat >= 500

n-butyl acetate

CAS: 123-86-4	a) acute toxicity	LD50 Oral Rat = 10760 mg/kg
		LC50 Inhalation of aerosol Rat = 0.74 mg/l 4h
		LD50 Skin Rabbit > 16 ml/Kg 24h
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative
	c) serious eye damage/irritation	Eye Irritant Rabbit No
	d) respiratory or skin sensitisation	Skin Sensitization Negative
	f) carcinogenicity	Genotoxicity Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 750

2-methylpropan-1-ol; iso-butanol

CAS: 78-83-1	a) acute toxicity	LD50 Oral Rat > 2830 mg/kg

	LC50 Inhalation Vapour Rat > 18.18 mg/l 6h
	LD50 Skin Rabbit > 2000 mg/kg 24h
b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h
c) serious eye damage/irritation	Eye Corrosive Rabbit Positive
d) respiratory or skin sensitisation	Skin Sensitization Negative
f) carcinogenicity	Genotoxicity Negative
g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat >= 7.5

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 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

reaction mass of ethylbenzene and xylene

a) Aquatic acute toxicity: LC50 Fish = 2.6 mg/L 96h

b) Aquatic chronic toxicity: NOEC Fish Salmo gairdneri > 1.3 mg/L

a) Aquatic acute toxicity: LC50 Daphnia Daphnia magna = 1 mg/L 24h

b) Aquatic chronic toxicity: NOEC Daphnia Ceriodaphnia dubia = 0.96 mg/L

d) Terrestrial toxicity: NOEC Worm = 16 mg/kg

e) Plant toxicity: LC50 = 1 mg/kg

d) Terrestrial toxicity: EC50 soil microorganisms = 220 mg/kg

reaction mass of ethylbenzene and xylene

a) Aquatic acute toxicity: LC50 Fish = 2.6 mg/L 96h

b) Aquatic chronic toxicity: NOEC Fish Salmo gairdneri > 1.3 mg/L

a) Aquatic acute toxicity: LC50 Daphnia Daphnia magna = 1 mg/L 24h

b) Aquatic chronic toxicity: NOEC Daphnia Ceriodaphnia dubia = 0.96 mg/L

d) Terrestrial toxicity: NOEC Worm = 16 mg/kg

e) Plant toxicity: LC50 = 1 mg/kg

d) Terrestrial toxicity: EC50 soil microorganisms = 220 mg/kg

n-butyl acetate

CAS: 123-86-4

a) Aquatic acute toxicity: LC50 Fish Pimephales promelas = 18 mg/L 96h

a) Aquatic acute toxicity: LC50 Daphnia Daphnia magna = 44 mg/L 48h

b) Aquatic chronic toxicity: NOEC Daphnia Daphnia magna = 23 mg/L

a) Aquatic acute toxicity: EC50 Algae Desmodesmus subspicatus = 397 mg/L 72h

a) Aquatic acute toxicity: EC50 Tetrahymena pyriformis = 356 mg/L

2-methylpropan-1-ol; iso-butanol

CAS: 78-83-1

a) Aquatic acute toxicity: LC50 Fish Pimephales promelas = 1430 mg/L 96h

a) Aquatic acute toxicity: EC50 Daphnia Daphnia pulex = 1100 mg/L 48h

a) Aquatic acute toxicity: EC50 Algae Scenedesmus subspicatus = 1799 mg/L 72h

12.2. Persistence and degradability

reaction mass of ethylbenzene and xylene

Readily biodegradable	Value: 87.8 Notes: 28days

reaction mass of ethylbenzene and xylene

Readily biodegradable	Value: 87.8

Notes: 28days

n-butyl acetate

CAS: 123-86-4 Readily biodegradable Value: 83
Notes: %; OECD 301 D

2-methylpropan-1-ol; iso-butanol

CAS: 78-83-1 Readily biodegradable Test: Biochemical oxigen demand; Value: 80
Notes: 28days

12.3. Bioaccumulative potential

reaction mass of ethylbenzene and xylene

Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 25.9
Notes: dimensionless

reaction mass of ethylbenzene and xylene

Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 25.9
Notes: dimensionless

n-butyl acetate

CAS: 123-86-4 Bioaccumulative Test: BCF - Bioconcentrantion factor

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 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.

The product disposed of as such, pursuant to Regulation (EU) 1357/2014, must be classified as hazardous waste

A waste code according to the European List of Wastes (LoW) 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.

SECTION 14: Transport information

14.1. UN number or ID number

1263

14.2. UN proper shipping name

ADR-Shipping Name: PAINT

IATA-Shipping Name: PAINT

IMDG-Shipping 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: 30
ADR-Special Provisions: 163 367 650
ADR-Transport category (Tunnel restriction code): 3 (D/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 Provisions: A3 A72 A192

Sea (IMDG):

IMDG-Stowage and handling: Category A
IMDG-Segregation: -
IMDG-Subsidiary hazards: -
IMDG-Special Provisions: 163 223 367 955

14.7. Maritime transport in bulk according to IMO instruments

N.A.

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 (EU) n. 2020/878

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. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)	Regulation (EU) n. 2023/707
Regulation (EU) n. 2023/1434 (ATP 19 CLP)	Regulation (EU) n. 2023/1435 (ATP 20 CLP)
Regulation (EU) n. 2024/197 (ATP 21 CLP)	Regulation (EU) n. 2024/2564 (ATP 22 CLP)
Regulation (EU) n. 2024/2865	Regulation (EU) n. 2025/1222 (ATP 23 CLP)

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	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
Product belongs to category: P5c	5000	50000

Explosives precursors – Regulation 2019/1148

No substances listed

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 2: hazardous for water.

German Lagerklasse according to TRGS 510:

LGK 3

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 36.80 %

Volatile Organic compounds - VOCs = 471.04 g/L

KERADECOR ZINKOVER (not ready to use)

Volatile Organic compounds - VOCs = 47.69 %

Volatile Organic compounds - VOCs = 610.42 g/L

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

n-butyl acetate

SECTION 16: Other information

Code	Description
EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

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
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
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/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

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

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Flam. Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H335	Calculation method
STOT RE 2, H373	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:

- Safety Data Sheet
- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 5: Firefighting measures
- SECTION 7: Handling and storage
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 10: Stability and reactivity
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 13: Disposal considerations
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 16: Other information

Exposure Scenario
N-butyl acetate

Exposure Scenario, 13/07/2021

Substance identity	
	N-butyl acetate
CAS No.	123-86-4
INDEX No.	607-025-00-1
EINECS No.	204-658-1
Registration number	01-2119485493-29

Table of contents

1. **ES 1** Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1. ES 1 Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
Date - Version	14/05/2021 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a)

Environment Contributing Scenario

CS1	ERC8a

Worker Contributing Scenario

CS2 Equipment cleaning and maintenance - Roller, spreader, flow application	PROC11
CS3 Equipment cleaning and maintenance - Rolling, Brushing - Material transfers	PROC8a - PROC10

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8a)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 100 %.

Amount used, frequency and duration of use (or from service life)

Amounts used:
Application rate = 4000 t(onnes)/year

Conditions and measures related to sewage treatment plant

STP type:
Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 89.1 %

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10
Receiving surface water flow: 18000 m³/day
Covers indoor and outdoor use

1.2. CS2: Worker Contributing Scenario: Equipment cleaning and maintenance - Roller, spreader, flow application (PROC11)

Process Categories	Non industrial spraying (PROC11)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
< 10000 Pa

Concentration of substance in product:
Covers percentage substance in the product up to 100 %.

Amount used, frequency and duration of use/exposure

Duration:
Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures
Closed systems
Open systems

Other conditions affecting worker exposure

Temperature: Assumes use at not more than 20 °C above ambient temperature.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:
Wear suitable respiratory protection.

1.2. CS3: Worker Contributing Scenario: Equipment cleaning and maintenance - Rolling, Brushing - Material transfers (PROC8a, PROC10)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Roller application or brushing (PROC8a, PROC10)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
< 10000 Pa

Concentration of substance in product:
Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:
Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures
Closed systems
Open systems

Other conditions affecting worker exposure

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)

Release route	Release rate	Release estimation method
N/A	N/A	ESVOC SPERC 8.3b.v1

1.3. CS2: Worker Contributing Scenario: Equipment cleaning and maintenance - Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 242 mg/m³	ECETOC TRA worker v3	= 0.504

1.3. CS3: Worker Contributing Scenario: Equipment cleaning and maintenance - Rolling, Brushing - Material transfers (PROC8a, PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 290.4 mg/m³	ECETOC TRA worker v3	= 0.605

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.