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

1.1 Product identifier

Trade name: PENECOAT™ HYPER ELASTIC BLACK COMPONENT A
UFI: 3VC0-30K7-C00E-4387

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

No further relevant information available.
Application of the substance / the mixture: Polyurethane / asphalt elastomeric resin.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
PENETRON HELLAS S.A.
50, THRAKOMAKEDONON AV., 136 79 ACHARNES, GREECE
TEL.: +30 210 2448250 - FAX: + 30 210 2476803
Email: info@penetron.gr Site: www.penetron.gr
G.E.MI. No: 07278001000

1.4 Emergency telephone number:



European Emergency Tel.: 112

*
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation EC No 1272/2008 CLP:



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

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2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:



GHS02 GHS07 GHS08 GHS09

Signal word: Danger

Hazard-determining components of labelling:
Reaction mass of ethylbenzene and xylene
4,4"-methylenebis[N-sec-butylaniline]
Reaction mass of ethylbenzene and m-xylene and p-xylene

Hazard statements:
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.

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 dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
The product does not contain ingredients that are considered either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at a concentration equal to or greater than 0,1 % w/w
PBT: Not applicable
vPvB: Not applicable
Determination of endocrine-disrupting properties
The product does not contain substances included in the list established in accordance with Article 59(1) of REACH for endocrine disrupting properties or has not been identified as having endocrine disrupting

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properties according to the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or higher than 0.1%.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 2020/878:

EC number: 905-588-0 Reg.nr.: 01-2119486136-34-XXXX	Reaction mass of ethylbenzene and xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	>10-<14%
EC number: 905-562-9 Reg.nr.: 01-2119488216-32-XXXX	Reaction mass of ethylbenzene and m-xylene and p-xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412 Specific concentration limit: STOT RE 2; H373: C ≥ 10 %	>2.5-<4.5%
CAS: 5285-60-9 EINECS: 226-122-6	4,4"-methylenebis[N-sec-butylaniline] STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1B, H317	>2-<4%
CAS: 68479-98-1 EINECS: 270-877-4 Index number: 612-130-00-0 Reg.nr.: 01-2119486805-25-XXXX	diethylmethylbenzenediamine STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H312; Eye Irrit. 2, H319	>0.1-<1%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29-XXXX	n-butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336, EUH066 substance with a Community workplace exposure limit	>0.1-<1%
CAS: 8052-42-4 EINECS: 232-490-9	Asphalt substance with a Community workplace exposure limit	>70-<80%

SVHC
This product does not contain candidate substances of very high concern at a concentration ≥0.1% (Regulation (EC) No 1907/2006 (REACH), Article 59)
Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
Seek immediate medical advice.
After inhalation:
Supply fresh air and for certainty contact a doctor.

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In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
Remove contaminated clothing.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
After eye contact:
Immediately rinse the eyes with plenty of water, alternately lifting the upper and lower eyelids.
Check and remove contact lenses if any.
Continue to rinse for at least 15 minutes.
Seek medical attention if irritation occurs.
After swallowing:
Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
Consult the doctor immediately and show the label or this Safety Data Sheet.
4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, powder or water spray.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.
5.3 Advice for firefighters
Protective equipment: Self-contained breathing apparatus and protective clothing in case of fire.
Additional information
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
Avoid inhalation of vapors.
Avoid contact with skin and eyes.
6.1.1 For non-emergency personnel
Avoid contact with dripping or leaking material.
Use personal protective equipment.
6.1.2 For emergency responders
First-aid responders must wear protective clothing, gloves, goggles and respiratory device with filter type A.
6.2 Environmental precautions:
Do not allow it to enter sewers/ surface or ground water. It must not penetrate the earth's waters.
6.3 Methods and material for containment and cleaning up:
Collect with absorbent material (sand, diatomite).
6.4 Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with skin and eyes.
Avoid inhaling vapors.
Do not eat, drink or smoke when using this product.
Wash contaminated clothes before reusing them.
Wash your hands thoroughly after handling.
Information about fire - and explosion protection:


Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.
7.2 Conditions for safe storage, including any incompatibilities
Storage: Store in well-sealed containers and in well-ventilated areas. Keep it cool.
Requirements to be met by storerooms and receptacles:
Store in a cool location.
Store away from sources of ignition
Information about storage in one common storage facility: Stored away from oxidizing agents.
Further information about storage conditions:
Keep container tightly sealed.
Protect from heat and direct sunlight.
7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 8052-42-4 Asphalt	
WEL (United Kingdom)	Short-term value: 10 mg/m³ Long-term value: 5 mg/m³
CAS: 123-86-4 n-butyl acetate	
IOELV (EU)	Short-term value: 723 mg/m³, 150 ppm Long-term value: 241 mg/m³, 50 ppm
WEL (United Kingdom)	Short-term value: 966 mg/m³, 200 ppm Long-term value: 724 mg/m³, 150 ppm
CAS: 77-58-7 dibutyltin dilaurate	
WEL (United Kingdom)	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ as Sn; Sk
CAS: 2781-10-4 dibutyltin bis(2-ethylhexanoate)	
WEL (United Kingdom)	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ as Sn; Sk

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DNELs		
Reaction mass of ethylbenzene and xylene		
Oral	DNEL General Population (long term exposure - systemic effect)	2.5 mg/kg bw/d (human)
Dermal	DNEL Workers (long term exposure - systemic effect)	212 mg/kg bw/d (human)
	DNEL General Population (long term exposure - systemic effect)	125 mg/kg bw/d (human)
Inhalative	DNEL Workers (long term exposure - systemic effect)	221 mg/m³ (human)
	DNEL Workers (short term exposure - systemic effect)	442 mg/m³ (human)
	DNEL Workers (long term exposure - local effect)	221 mg/m³ (human)
	DNEL General Population (long term exposure - systemic effect)	65.3 mg/m³ (human)
	DNEL General Population (acute/short term exposure - local effect)	260 mg/m³ (human)
	DNEL General Population (long term exposure - local effect)	65.3 mg/m³ (human)
	DNEL General Population (acute/short term exposure - systemic effect)	260 mg/m³ (human)
	DNEL Workers (acute/short term exposure - local effect)	442 mg/m³ (human)
Reaction mass of ethylbenzene and m-xylene and p-xylene		
Oral	DNEL General Population (long term exposure - systemic effect)	5 mg/kg bw/d (human)
Dermal	DNEL Workers (long term exposure - systemic effect)	212 mg/kg bw/d (human)
	DNEL General Population (long term exposure - systemic effect)	125 mg/kg bw/d (human)
Inhalative	DNEL Workers (long term exposure - systemic effect)	221 mg/m³ (human)
	DNEL Workers (short term exposure - systemic effect)	442 mg/m³ (human)
	DNEL Workers (long term exposure - local effect)	221 mg/m³ (human)
	DNEL General Population (long term exposure - systemic effect)	65.3 mg/m³ (human)
	DNEL General Population (acute/short term exposure - local effect)	260 mg/m³ (human)
	DNEL General Population (long term exposure - local effect)	65.3 mg/m³ (human)

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	DNEL General Population (acute/short term exposure - systemic effect)	260 mg/m³ (human)
	DNEL Workers (acute/short term exposure - local effect)	442 mg/m³ (human)
CAS: 5285-60-9 4,4''-methylenebis[N-sec-butylaniline]		
Oral	DNEL (µg/kg) General Popul. (long-term\ systemic)	125 µg/kg bw/d (human)
Dermal	DNEL Workers (long term exposure - systemic effect)	208 mg/kg bw/d (human)
	DNEL General Population (long term exposure - systemic effect)	125 µg/kg bw/d (human)
Inhalative	DNEL Workers (long term exposure - systemic effect)	7.3 mg/m³ (human)
	DNEL General Population (long term exposure - systemic effect)	2.2 mg/m³ (human)
CAS: 68479-98-1 diethylmethylbenzenediamine		
Oral	DNEL General Population (long term exposure - systemic effect)	0.006 mg/kg bw/d (human)
Dermal	DNEL Workers (long term exposure - systemic effect)	0.93 mg/kg bw/d (human)
	DNEL General Population (long term exposure - systemic effect)	0.55 mg/kg bw/d (human)
Inhalative	DNEL Workers (long term exposure - systemic effect)	0.13 mg/m³ (human)
	DNEL General Population (long term exposure - systemic effect)	0.053 mg/m³ (human)
CAS: 123-86-4 n-butyl acetate		
Oral	DNEL General Population (long term exposure - systemic effect)	2 mg/kg bw/d (human)
	DNEL General Population (acute\short term exposure - systemic effect)	2 mg/kg bw/d (human)
Dermal	DNEL Workers (long term exposure - systemic effect)	11 mg/kg bw/d (human)
	DNEL Workers (short term exposure - systemic effect)	11 mg/kg bw/d (human)
	DNEL General Population (long term exposure - systemic effect)	6 mg/kg bw/d (human)
	DNEL General Population (acute/short term exposure - systemic effect)	6 mg/kg bw/d (human)
Inhalative	DNEL Workers (long term exposure - systemic effect)	300 mg/m³ (human)
	DNEL Workers (short term exposure - systemic effect)	600 mg/m³ (human)

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	DNEL Workers (long term exposure - local effect)	300 mg/m³ (human)
	DNEL General Population (long term exposure - systemic effect)	35.7 mg/m³ (human)
	DNEL General Population (acute/short term exposure - local effect)	300 mg/m³ (human)
	DNEL General Population (long term exposure - local effect)	35.7 mg/m³ (human)
	DNEL General Population (acute/short term exposure - systemic effect)	300 mg/m³ (human)
	DNEL Workers (acute/short term exposure - local effect)	600 mg/m³ (human)

PNECs

Reaction mass of ethylbenzene and xylene

	PNEC freshwater	0.044 mg/l
	PNEC freshwater (intermittent releases)	0.01 mg/l
	PNEC marinewater	0.004 mg/l
	PNEC sediment freshwater	2.52 mg/kg dw
	PNEC sediment marinewater	0.252 mg/kg dw
	PNEC soil	0.852 mg/kg dw
	PNEC STP	1.6 mg/l
	PNEC marinewater (intermittent releases)	0.001 mg/l

Reaction mass of ethylbenzene and m-xylene and p-xylene

	PNEC freshwater	0.044 mg/l
	PNEC freshwater (intermittent releases)	0.01 mg/l
	PNEC marinewater	0.004 mg/l
	PNEC sediment freshwater	2.52 mg/kg dw
	PNEC sediment marinewater	0.252 mg/kg dw
	PNEC soil	0.852 mg/kg dw
	PNEC STP	1.6 mg/l
	PNEC marinewater (intermittent releases)	0.001 mg/l

CAS: 5285-60-9 4,4''-methylenebis[N-sec-butylaniline]

Oral	PNEC secondary poisoning	1 mg/kg
	PNEC sediment freshwater	2.06 mg/kg dw
	PNEC sediment marinewater	0.21 mg/kg dw
	PNEC soil	0.411 mg/kg dw
	PNEC STP	23.2 mg/l
	PNEC freshwater	0.187 µg/l
	PNEC marinewater	0.019 µg/l

CAS: 68479-98-1 diethylmethylbenzenediamine

	PNEC freshwater	0.006 mg/l

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	PNEC freshwater (intermittent releases)	0.058 mg/l
	PNEC marinewater	0.001 mg/l
	PNEC sediment freshwater	0.34 mg/kg dw
	PNEC sediment marinewater	0.034 mg/kg dw
	PNEC soil	64.96 mg/kg dw
	PNEC STP	17 mg/l
CAS: 123-86-4 n-butyl acetate		
	PNEC freshwater	0.18 mg/l
	PNEC freshwater (intermittent releases)	0.36 mg/l
	PNEC marinewater	0.018 mg/l
	PNEC sediment freshwater	0.981 mg/kg dw
	PNEC sediment marinewater	0.098 mg/kg dw
	PNEC soil	0.09 mg/kg dw
	PNEC STP	35.6 mg/l

8.2 Exposure controls

8.2.1. Appropriate engineering controls No other recommendations, see chapter 7.

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Keep away from food, beverages and pet food.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while using the product.
Do not breathe vapours or mists.
Remove contaminated clothes and wash before reusing them.
Respiratory protection:



Use suitable respiratory protective device in case of insufficient ventilation. Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter A2-P2 (EN529) is recommended.

Hand protection



Protective gloves resistant to chemicals (standard EN 374-1)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material should be made considering the penetration times, rates of diffusion and the degradation
Material of gloves
Hand protection when handling the product at room temperature:
Butyl rubber - IIR: thickness ≥0,5mm; breakthrough time ≥480min.
Fluorinated rubber - FKM: thickness ≥0,4mm; breakthrough time ≥480min.
Recommendation: contaminated gloves should be disposed of.
The selection of the suitable gloves does not only depend on the material. Further marks of quality vary from manufacturer to manufacturer. As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to application.

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Penetration time of glove material
≥480 minutes
The breakthrough times according to EN 374 Part III do not always apply under real conditions. A maximum usage time corresponding to 50% of the breakthrough time is recommended.
Eye/face protection



Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:



Chemically resistant, protective work clothing (EN 14605) and boots.

Environmental exposure controls
Prevent the product from entering into drains, surface, groundwater and soil.

*
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Physical state	Viscous liquid
Colour:	Black
Odour:	Characteristic
Odour threshold:	Not determined
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	Not specified
Flammability	Flammable.
Lower and upper explosion limit	
Lower:	Not determined
Upper:	Not determined
Flash point:	27-32 °C
Auto-ignition temperature:	Not specified
Decomposition temperature:	Not determined
pH	Not determined
Viscosity:	
Kinematic viscosity	Not determined
Dynamic:	Not determined
Solubility	
water:	Not miscible
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not determined
Density and/or relative density	
Density at 20 °C:	0.98 g/cm³
Relative density	Not determined
Vapour density	Not determined

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9.2 Other information

Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent separation test:	<1 % (UN Part III, par. 32.5.1)
Solvent content:	
VOC (EC)	170 g/l 0.10 %
Change in condition	Not applicable
Fusion temperature / range:	Not applicable
Oxidising properties	Not oxidising
Evaporation rate	Not determined

Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.
10.2 Chemical stability
Thermal decomposition / conditions to be avoided Stable at environment temperature.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid Avoid heat, sparkles, naked flame or other sources of ignition.
10.5 Incompatible materials Oxidizing agents
10.6 Hazardous decomposition products No dangerous decomposition products known.

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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Oral	LD50	17182 mg/kg
Dermal	LD50	6,246 mg/kg
Inhalative	LC50/4 h (vapour)	62.3 mg/l

Reaction mass of ethylbenzene and xylene		
Oral	LD50	3523 mg/kg (rat)
Dermal	LD50	12126 mg/kg (rabbit)
Inhalative	LC50(4h)	27,124 mg/m³ air (rat)
Reaction mass of ethylbenzene and m-xylene and p-xylene		
Oral	LD50	3523 mg/kg (rat)
Dermal	LD50	12126 mg/kg (rabbit)
Inhalative	LC50(4h)	27,124 mg/m³ air (rat)
CAS: 5285-60-9 4,4''-methylenebis[N-sec-butylaniline]		
Oral	LD50	300 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
CAS: 123-86-4 n-butyl acetate		
Oral	LD50	10,760 mg/kg (rat) (Acute Oral Toxicity)
Dermal	LD50	14,112 mg/kg (rabbit) ((OECD 402))
Inhalative	LC50/4 h (vapour)	>20 mg/l (rat)
CAS: 68479-98-1 diethylmethylbenzenediamine		
Oral	LD50	738 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

Specific symptoms in biological assay:
Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation May cause an allergic skin reaction.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure
STOT Repeated Exposure Category 2
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard
The product is classified Aspiration toxicity Category 1
May be fatal if swallowed and enters airways.
11.2 Information on other hazards
Endocrine disrupting properties
The product does not contain substances included in the list established in accordance with Article 59(1) of REACH for endocrine disrupting properties or has not been identified as having endocrine disrupting

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properties according to the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or higher than 0.1%.

None of the ingredients is listed.

*

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
Reaction mass of ethylbenzene and m-xylene and p-xylene	
EC50 (72h)	4.6-4.9 mg/l (algae)
EC50 (48h)	10.389 mg/l (Daphnia magna)
LC50(96h)	>2.6 mg/l (fish)
CAS: 5285-60-9 4,4''-methylenebis[N-sec-butylaniline]	
EC50 (48h)	0.21 mg/l (Daphnia magna)
LC50(96h)	>0.61 mg/l (fish)
EC50(72h)	187 ug/l (algae)
CAS: 68479-98-1 diethylmethylbenzenediamine	
EC50 (48h)	0.5 mg/l (daphnia magna)
LC50(48h)	200 mg/l (fish)
CAS: 123-86-4 n-butyl acetate	
EC50 (72h)	397 mg/l (Pseudokirchneriella subcapitata)
EC50 (48h)	44 mg/l (Daphnia magna)
LC50(96h)	18 mg/l (Pimephales promelas)
NOEC (21d)	23 mg/l (Daphnia magna)
EC50(40h)	356 mg/l (Tetrahymena pyriformis)
NOEC(72h)	196 mg/l (aquatic algae and cyanobacteria)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
12.5 Results of PBT and vPvB assessment
The product does not contain ingredients that are considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative at levels of 0.1% or higher according to REACH, Annex XIII.
PBT: Not applicable
vPvB: Not applicable
12.6 Endocrine disrupting properties
The product does not contain substances included in the list established in accordance with Article 59(1) of REACH for endocrine disrupting properties or has not been identified as having endocrine disrupting properties according to the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or higher than 0.1%.
12.7 Other adverse effects
Remark: Toxic for fish
Additional ecological information:
General notes:
Hazardous to the aquatic environment - slightly hazardous

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Also poisonous for fish and plankton in water bodies.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation



Dispose according to National Regulations.



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

Contact manufacturer for recycling information.

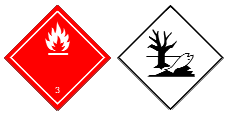
European waste catalogue	
HP3	Flammable
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP14	Ecotoxic

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID number
ADR, IMDG, IATA UN1866
14.2 UN proper shipping name
ADR UN1866 RESIN SOLUTION, ENVIRONMENTALLY HAZARDOUS
IMDG RESIN SOLUTION, MARINE POLLUTANT
IATA RESIN SOLUTION
14.3 Transport hazard class(es)

ADR, IMDG



Class 3 Flammable liquids.
Label 3

IATA



Class 3 Flammable liquids.
Label 3

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14.4 Packing group	
ADR, IMDG, IATA	III
14.5 Environmental hazards:	Environmental Hazardous
Marine pollutant:	Yes Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	30
EMS Number:	F-E,S-E
Stowage Category	A
14.7 Maritime transport in bulk according to IMO instruments	Not applicable

Transport/Additional information:

ADR

Limited quantities (LQ)	5L


Limited Quantity Marking.

Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
Remarks:	• Viscous liquid par. 2.2.3.1.5., 2.2.3.1.5.2 ADR and par. 2.3.2.5 of the IMDG Code. • Exception for packages: ≤ 5 liters. - In accordance to paragraphs 2.2.3.1.5, 2.2.3.1.5.2 of ADR (road transport) and 2.3.2.5 of the IMDG Code (marine transport) for packaging ≤ 5 liters (L), are not subject to the ADR agreement and are not subject to the provisions for the marking, labelling and testing of packages (IMDG).

IMDG

Limited quantities (LQ)	5L


Limited Quantity Marking.

Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Remarks:	• Viscous liquid par. 2.2.3.1.5., 2.2.3.1.5.2 ADR and par. 2.3.2.5 of the IMDG Code. • Exception for packages: ≤ 5 liters. - In accordance to paragraphs 2.2.3.1.5, 2.2.3.1.5.2 of ADR (road transport) and 2.3.2.5 of the IMDG Code (marine transport) for packaging ≤ 5 liters (L), are not subject to the ADR agreement and are not subject to the

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provisions for the marking, labelling and testing of packages (IMDG).

UN "Model Regulation": UN 1866 RESIN SOLUTION, 3, III, ENVIRONMENTALLY HAZARDOUS

*

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH Regulation 1907/2006/EC
Regulation (EU) 2020/878
CLP Regulation 1272/2008/EC
Directive 98/24/EC on the protection of health and safety of workers from the risks related to chemicals agents at work.
Council Directive 94/33/EC on the protection of young people at work, as ammended.
Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding, as ammended

Directive 2012/18/EU
Named dangerous substances - ANNEX I The substance is not included in Annex I.
Seveso category
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

National regulations: None

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57

It doesn't contain substances of very high concern (SVHC).

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

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

Relevant phrases

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
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.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

Training hints

Suitable training on safety in handling, storing and converting the product should be given to the employees based on all the existing information.

Classification according to Regulation (EC) No 1272/2008	
Flammable liquids	Bridging principles
Skin corrosion/irritation Serious eye damage/irritation Skin sensitisation Specific target organ toxicity (repeated exposure) Hazardous to the aquatic environment - long-term (chronic) aquatic hazard	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
Aspiration hazard	Expert judgement

Department issuing SDS:

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Version number of previous version: 5

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)

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PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3