

SEAM SEALANT

SECTION 1: SUBSTANCE/MIXTURE IDENTIFICATION AND MANUFACTURER/SUPPLIER IDENTIFICATION

1.1. Product identification

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UFI: NJX0-20DE-E00K-DN6Q

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

Sealing compound to be used in car refinish.

Identified sectors of use:

Industrial, professional.

1.3 Data of the safety data sheet supplier

Przedsiębiorstwo RANAL Sp. z o.o.

ul. Łódzka 3

42-240 Rudniki k. Częstochowy, PL

Tel.: +48 34 329 45 03

Fax: +48 34 320 12 16

Registration number 000029202

Person responsible for the safety data sheet: ranal@ranal.pl

1.4. Emergency telephone

+48 34 329 45 03 (8.00 - 15.00)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product is classified as dangerous in accordance with the provisions of Regulation (EC) 1272/2008 (CLP) (as amended and adapted). The product requires the preparation of a safety data sheet in accordance with the requirements of Commission Regulation (EU) No. 2020/878. *

Additional information regarding health and/or environmental hazards provided in sections 11 and 12 of this MSDS. *

Hazard classification and labelling:

Flammable solid, hazard category 3. H228. Flammable solid. *

Skin irritation, hazard category 2*. H315. Causes skin irritation.

Hazardous to the aquatic environment, chronic toxicity, hazard category 3*. H412. Harmful to aquatic life with long-lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 and the following amendments and annexes.

Pictograms:



Signal word: **Danger**

Hazard statements*:

H228 Flammable solid. *

H315 Causes skin irritation.

H412 Harmful to aquatic life with long-lasting effects.

Precautionary statements*:

P210 Keep away from sources of heat/sparks/open flames/hot surfaces. No smoking.

P264 Wash hands thoroughly after handling the product. *

P370+P378 In case of fire: Use ... to extinguish...

P273 Avoid release to the environment. *

P280 Wear protective gloves/protective clothing/eye protection/face protection.

VOC (Directive 2004/42/EC):

Finishing paints with special effects – all types. *

VOC Given in g/litre of the product in a ready-to use mixture:

Limit value: 840.00

VOC of the product: 348.00

2.3. Other hazards

Based on the available data, the product does not contain PBT or vPvB in amounts greater than 0.1%. *

The product does not contain substances with endocrine disrupting properties in concentration $\geq 0.1\%$. *

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

No data available.

3.2. Mixtures

Substance name

Concentration [% weight]

Identification numbers

Classification and labelling

Reaction products of ethylbenzene and xylene*

$9 \leq x < 10$

CAS: -

EC: 905-588-0

Index no: -

Registration no: 01-2119488216-32-XXXX

Classification 1272/2008 (CLP): Flam. Liq. 3, H226, Acute Tox. 4, H312, Acute Tox. 4, H332, Asp. Tox. 1, H304, STOT RE 2, H373, Eye Irrit. 2, H319, Skin Irrit. 2, H315, STOT SE 3, H335, Aquatic Chronic 3, H412.

Classification note according to Annex VI of the CLP Regulation: C.

STA Skin: 1100 mg/kg, STA Vapour inhalation: 11 mg/l

Heptane

$9 \leq x < 10$ *

EC 927-510-4

CAS: 64742-49-0

Index no: -

Registration no: 01-2119475515-33-XXXX

Classification 1272/2008 (CLP): Flam. Liq. 2, H225; Asp. Tox 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 3, H411.

Classification note according to Annex VI of the CLP Regulation: C:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

$5 \leq x < 9$

CAS: 64742 - 48 - 9*

EC: 919-857-5

Index no: 649-327-00-6*

Registration no: 01-2119463258-33-XXXX

Classification 1272/2008/EC: Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336; EUH066.

Classification note according to Annex VI of the CLP Regulation: C.

Butyl acetate*

$1 \leq x < 5$

CAS: 123-86-4

EC: 204-658-1

Index no: 607-025-00-1

Registration no: 01-2119485493-29-XXXX

Classification 1272/2008/EC: Flam. Liq. 3 H226, STOT SE 3 H336, EUH066.

Full text of hazard statements provided in section 16 of the Sheet.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eyes: Remove contact lenses. Wash eyes with plenty of water for at least 15 minutes with eyelids wide open. If the problem persists, seek medical advice.

Skin: Remove contaminated clothes. Wash skin with plenty of water. If the problem persists, seek medical advice. Wash contaminated clothes before reuse.

Airways: Move the injured to fresh air. In case of breathing difficulties get medical aid.

Alimentary tract: Consult a doctor. Induce vomiting only if recommended by the doctor. Do not administer anything to an unconscious person if not clearly recommended by a doctor.

4.2. Most important symptoms both acute and delayed

There is no information about symptoms or effects caused by the product.

Symptoms and effects caused by the contained substances are described in section 11.

4.3. Indications of any immediate medical attention and special treatment needed

No data.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing agents: Such extinguishing agents as: carbon dioxide, foam, powder. In case of the leakage of the product, if there is no fire, water spray can be used to disperse flammable vapours to protect personnel trying to stop the leak.

SEAM SEALANT

Unsuitable extinguishing agents: Do not use jets of water. Water is not effective for extinguishing fires, but can be used for cooling containers exposed to fire to prevent explosion.

5.2. Special hazards arising from the substance or mixture

Hazards caused by exposure in case of fire.

Pressure build up in the containers exposed to fire causes the risk of explosion. Do not breathe combustion products.

5.3. Advice for fire fighters

General information: Use water jet to cool the containers, to avoid product decomposition and formation of substances potentially hazardous for health. Rescue teams should be equipped with full set of protective clothes. Collect extinguishing water to prevent it from draining into the sewage system. Dispose of contaminated water according to applicable regulations.

Special protective equipment for fire fighters: Standard set of protective clothes e.s. fire kit (BS EN 469), gloves (BS EN 659) and footwear (A29 and A30) in combination with self-contained breathing apparatus (BS EN 137).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency measures

Avoid dust formation by spraying the product with water unless this is contraindicated.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes or personal clothing. These indications apply to both employees and people providing assistance. *

Keep unprotected people away. Use explosion-proof equipment. Remove all sources of ignition (cigarettes, flames, sparks, etc.) or heat from the area of product release. *

6.2. Environmental precautions

Prevent from penetrating into sewage system, surface water, ground water and soil.

6.3. Methods and materials for containment and cleaning up

Collect the substance into a suitable container. If the product is flammable, use explosion-proof equipment. Verify compatibility of the container in section 10. Collect product residues with an inert absorbent. Make sure that the leakage area is well ventilated. Remove the contaminated material according to the recommendations provided in section 13 of the MSDS.

6.4. Reference to other sections

All the information on personal protection and waste disposal is given in sections 8 and 13 of the MSDS.

SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1. Precautions for safe handling

Store away from heat sources, flames and open fire; do not smoke, do not use matches or lighters. Vapours may catch fire, which may lead to an explosion; vapour accumulation should therefore be avoided by opening door and windows and ensuring good ventilation. With no adequate ventilation, vapours may accumulate at the ground level, and, if ignited, they may catch fire even at a distance, with a risk of backfire. Avoid accumulation of electrostatic charges. Use earthing system of the containers when transferring the product and wear antistatic footwear. Vigorous stirring and flow through the tubes and other equipment may cause formation and accumulation of electrostatic charges. Do not use compressed air when handling the product in order to avoid the risk of fire or explosion. Open the containers carefully, as they may be pressurized. Do not eat, drink and smoke when handling the product. Avoid leakage of the product to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in original containers. Store the containers tightly sealed, in a well-ventilated room, away from direct sunlight. Store in well-ventilated room away from heat sources, open flames, sparks and other ignition sources. Store the containers away from all incompatible materials, see section 10.

7.3. Special end use (s)

No data.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION MEASURES

8.1. Control parameters

Regulatory information*:

| | | |
|-----|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DEU | Deutschland | Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56 |
| ESP | España | Límites de exposición profesional para agentes químicos en España 2021 |
| FRA | France | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS |
| ITA | Italy | Presidential Decree-Law No. 81 of April 9, 2008 |
| NLD | Nederland | Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit |
| POL | Polska | Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Fourth Edition 2020) |

SEAM SEALANT

| | | |
|-----|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRT | Portugal | Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos |
| ROU | România | Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1,093/2006 |
| EU | OEL EU | Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC. |
| | TLV-ACGIH | ACGIH 2022 |

| Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics | | | | | | |
|-------------------------------------------------------------------------------|---------|------------------------------|-----|------------------------------------|-----|----------------------|
| Threshold Limit Value | | | | | | |
| TYPE | COUNTRY | NDS/ 8h mg/m ³ | PPM | NDSch/15 min. mg/m ³ | PPM | Comments/conclusions |
| TLV-ACGIH | | 1200 | 197 | | | |

| Reaction products of ethylbenzene and xylene* | | | | | | |
|------------------------------------------------------|---------|------------------------------|-----|------------------------------|-----|----------------------|
| Threshold Limit Value | | | | | | |
| TYPE | COUNTRY | NDS/ 8h mg/m ³ | PPM | NDS/ 8h mg/m ³ | PPM | Comments/conclusions |
| AGW | DEU | 440 | 100 | 880 | 200 | Skin |
| MAK | DEU | 440 | 100 | 880 | 200 | Skin |
| VLA | ESP | 221 | 50 | 442 | 100 | Skin |
| VLEP | FRA | 221 | 50 | 442 | 100 | Skin |
| VLEP | ITA | 221 | 50 | 442 | 100 | Skin |
| TGG | NLD | 210 | | 442 | | Skin |
| VLE | PRT | 221 | 50 | 442 | 100 | Skin |
| NDS/NDSch | POL | 100 | | 200 | | Skin |
| TLV | ROU | 221 | 50 | 442 | 100 | Skin |
| WEL | GBR | 220 | 50 | 441 | 100 | Skin |
| OEL | EU | 221 | 50 | 442 | 100 | Skin |
| TLV-ACGIH | | 434 | 100 | 651 | 150 | |

| Predicted concentration of the product does not have a negative impact on the environment - PNEC | |
|---------------------------------------------------------------------------------------------------------|-------------|
| Reference value in fresh water | 0.32 mg/l |
| Reference value in sea water | 0.32 mg/l |
| Reference value in fresh water sediments | 12.46 mg/kg |
| Reference value in sea water sediments | 12.46 mg/kg |
| Reference value for sea water, intermittent release | 12.46 mg/kg |
| Reference value for land organisms | 2.31 mg/kg |

| Health - Exposure levels - DNEL / DMEL | | | | | | | | |
|-----------------------------------------------|---------------------|----------------|------------------------|------------------|-------------------|----------------|-----------------------|------------------|
| | Effect on consumers | | | | Effect on workers | | | |
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | 12.5 mg/kg/d | | | | | |
| After inhalation: | | | 65.3 mg/m ³ | | 442 mg/kg | | 221 mg/m ³ | |
| Contact with skin | 125 | | 12.5 mg/kg/d | | | | 212 mg/kg/d | |

| Heptane* | | | | | | |
|------------------------------|---------|------------------------------|-----|------------------------------|-----|----------------------|
| Threshold Limit Value | | | | | | |
| TYPE | COUNTRY | NDS/ 8h mg/m ³ | PPM | NDS/ 8h mg/m ³ | PPM | Comments/conclusions |
| MAK | DEU | 2100 | 500 | 2100 | 500 | |
| VLA | ESP | 2085 | 500 | | | n-heptane |
| VLEP | FRA | 1668 | 400 | 2085 | 500 | |
| VLEP | ITA | 2085 | 500 | | | |
| TGG | NLD | 1200 | | 1600 | | |
| VLE | PRT | 2085 | 500 | | | |
| NDS/NDSch | POL | 1200 | | 2000 | | |
| TLV | ROU | 2085 | 500 | | | |
| WEL | GBR | 2085 | 500 | | | |
| OEL | EU | 2085 | 500 | | | |
| TLV-ACGIH | | 1639 | 400 | 2049 | 500 | |

| Health - Exposure levels - DNEL / DMEL | | | | | | | | |
|-----------------------------------------------|---------------------|----------------|----------------|------------------|-------------------|----------------|---------------|------------------|
| | Effect on consumers | | | | Effect on workers | | | |
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | 149 mg/kg bw/d | | | | | |

SEAM SEALANT

| | | | | | | | |
|-------------------|--|-----------------------|--|--|--|------------------------|--|
| After inhalation: | | 447 mg/m ³ | | | | 2085 mg/m ³ | |
| Contact with skin | | 149 mg/kg bw/d | | | | 300 mg/kg bw/d | |

| Butyl acetate* | | | | | | |
|------------------------------|----------------|---------------------------------|------------|---------------------------------|------------|-----------------------------|
| Threshold Limit Value | | | | | | |
| TYPE | COUNTRY | NDS/ 8h mg/m³ | PPM | NDS/ 8h mg/m³ | PPM | Comments/conclusions |
| AGW | DEU | 300 | 62 | 600 (C) | 124 (C) | |
| VLA | ESP | 241 | 50 | 724 | 150 | |
| VLEP | FRA | 710 | 150 | 940 | 200 | |
| VLEP | ITA | 241 | 50 | 723 | 150 | |
| TGG | NLD | 150 | | | | |
| VLE | PRT | 241 | 50 | 723 | 150 | |
| NDS/NDSch | POL | 240 | | 720 | | |
| TLV | ROU | 241 | 50 | 723 | 150 | |
| WEL | GBR | 724 | 150 | 966 | 200 | |
| OEL | EU | 241 | 50 | 723 | 150 | |
| TLV-ACGIH | | | 50 | | 150 | |

Legend:
C* Maximum permissible concentrations*;
INHAL – Inhalable fraction;
RESP – Respirable fraction;
THORA – Thoracic fraction.
VND – hazard identified but no DNEL/PNEC available;
NEA – no exposure expected;
NPI – no hazard identified

8.2. Exposure control

As the use of adequate technical measures must always take priority over personal protection measures, make sure that the workplace is properly ventilated. Personal protection measures should be WE marked which indicates that they comply with applicable standards. Provide a shower with a tray for glasses.*

Hands protection:

Protect hands with Working gloves cat. III (Standard EN 374).

The following should be considered when choosing the material of gloves: compatibility, degradation and permeability.

Resistance to chemical factors should be verified before the use of gloves, as it can be unpredictable. The gloves' wear time depends on time and type of use.

Glove characteristics*:

Gloves protecting against chemicals (EN 374).

Materials suitable for short-term contact or splashes (recommended: minimum protection factor 2, corresponding to a permeation time of more than 30 minutes according to EN 374):

- Polychloroprene (CR; >= 1 mm thick) or natural rubber (NR; >= 1 mm thick).

Materials suitable also for direct prolonged contact (recommended: minimum protection factor 6, corresponding to a permeation time of over 480 minutes according to standard EN 374):

- Polychloroprene (CR; >= 1 mm thick) or natural rubber (NR; >= 1 mm thick), or nitrile rubber (NBR; >= 1 mm thick).

The indications are based on bibliographic materials and information received from glove manufacturers or as a result of comparison with similar substances.

Note that under the influence of some factors (e.g. temperature), the useful life of gloves protecting against chemical substances may in practice be much shorter than the permeation time determined in accordance with the EN 374 standard. If you notice any signs of wear, replace the gloves immediately.

Skin protection:

Wear long-sleeved work clothes and safety shoes for professional use category II (see Regulation (EU) No. 2016/425 and standard EN ISO 20344).*

Wash body with water and soap after removing protective clothing. Consider the use of antistatic clothing in working environment if there is a risk of explosion.

Eyes protection:

Tight protective goggles (see standard EN 166).

Respiratory protection:

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with AX type of filter, with the limit of use defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) a combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its odour threshold is higher than the corresponding TLV-TWA and in case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

Environmental control:

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be disposed of with waste water or by dumping in waterways.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | |
|---------------------------------------|---------------------------------------------------------|
| Physical state | paste |
| Colour | grey |
| Odour | solvent like* |
| Melting/freezing point | no data |
| Initial boiling point | >70°C |
| Flammability | no data |
| Bottom explosion limit | no data |
| Top explosion limit | no data |
| Flash point | -5°C |
| Auto ignition point | no data |
| Breakdown point* | no data |
| pH | no data |
| Kinematic viscosity* | >20.5 mm ² /sec (40°C); 400000 mPa.s @ 25°C |
| Dynamic Viscosity* | 550000; Method: cPs (Brookfield RVT); Temperature: 25°C |
| Solubility | Insoluble in water* |
| N-octanol/water partition coefficient | no data |
| Vapour pressure | no data |
| Density and/or relative density* | 1.20; method: cPs (Brookfield RVT), Temperature: 25°C |
| Relative Vapour density* | no data |
| Particle characteristics* | not applicable |

9.2. Other information

| | |
|-------------------------------------------|----------------------|
| Total solids (250°C / 482°F) | 71% |
| VOC (Directive 2004/42/EC) | 29% – 348.00 g/litre |
| Combustion rate (mm/s) * | >5 |
| Physical state for transport * | Solid |
| Solvent separation test (for transport) * | <0.05% |

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No particular risk of reaction with other substances under normal conditions.

n-Butyl acetate*: decomposes on contact with water.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixtures with air.

Reaction products of ethylbenzene and xylene*: The product is stable under normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. Vapours may form explosive mixture with air.

n-Butyl acetate*: Risk of explosion in contact with: strong oxidizing agents. May react hazardously with: alkali hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

10.4. Conditions to be avoided

Avoid overheating. Avoid accumulation of electrostatic charges. Avoid all sources of ignition.

n-Butyl acetate*: Avoid exposure to: humidity, heat sources, open flames.

10.5. Incompatible materials

n-Butyl acetate*: Incompatible with: water, nitrates, strong oxidants, acids, bases, zinc.

10.6. Hazardous decomposition products

In case of thermal decomposition or fire gases and vapours potentially hazardous for health may be generated.

SECTION 11: TOXICOLOGICAL INFORMATION

Due to the lack of experimental data for the product itself, the health risk is assessed according to properties of the substances contained in the product, on the basis of the criteria set out in applicable classification regulations.

To assess the toxicological effects of exposure, the concentration of individual harmful substances listed in Section 3 should therefore be taken into account.

SEAM SEALANT

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

Metabolism, toxicokinetics, mechanism of action and other information*:
No data available.

Information on possible routes of exposure:
Reaction products of ethylbenzene and xylene:
WORKERS: inhalation; contact with skin.
POPULATION: ingestion of contaminated food or water; inhaling ambient air.
n-Butyl acetate:
WORKERS: inhalation; contact with skin.

Immediate, delayed and chronic effects of short and long-term exposure:
Reaction products of ethylbenzene and xylene:
Toxic effect on the central nervous system (encephalopathies); irritates the skin, conjunctiva, corneas and respiratory system.
n-Butyl acetate:
Vapours of the substance cause eye and nose irritation in humans. Repeated exposure causes skin irritation, dermatosis (with dry and cracked skin) and keratitis.

Interaction effects:
Reaction products of ethylbenzene and xylene:
Alcohol consumption disrupts the metabolism of substances, inhibiting it. Consumption of ethanol (0.8 g/kg) before 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, while the concentration of xylenes in the blood increases approximately 1.5-2 times. At the same time, there is an increase in additional side effects caused by ethanol. Xylene metabolism is increased by enzyme inducers: phenobarbital and 3-methylcholanthrene. Aspirin and xylenes mutually inhibit conjugation with glycine, which results in a decrease in the secretion of methyl hippuric acid by the urinary system. Other industrial products may interfere with xylene metabolism.

n-Butyl acetate:
A case of acute poisoning was reported in a 33-year-old employee during a container cleaning operation with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The subject experienced irritation of the conjunctiva and upper respiratory tract, drowsiness and impaired motor coordination, which disappeared within 5 hours. Symptoms have been attributed to poisoning by a mixture of xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis have been reported in workers exposed to mixtures of butyl acetate and isobutanol vapours, but it is uncertain whether a specific solvent is responsible (INRC, 2011).

Acute toxicity:

ATE*
ATE (Inhalation - vapours) of the mixture: > 20 mg/l
ATE (Oral) of the mixture: Not classified (no significant component)
ATE (Dermal) of the mixture: >2000 mg/kg

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

LD50 (skin): > 2000 mg/kg Rat
LD50 (Oral): > 5000 mg/kg Rat
LC50 (vapour inhalation): > 9300 mg/l/4h rat

Caustic / irritating effect on skin: Causes skin irritation.

Serious eye damage/irritation: Does not meet the classification criteria for this hazard class.

Allergic effect on airways or skin: Does not meet the classification criteria for this hazard class.

Mutagenic effect on germ cells: Does not meet the classification criteria for this hazard class.

Carcinogenic effect: Does not meet the classification criteria for this hazard class.

Reaction products of ethylbenzene and xylene*:

The substance is classified by the International Agency for Research on Cancer (IARC) in group 3 (a substance that cannot be classified as carcinogenic to humans).

The US Environmental Protection Agency (EPA) states that 'data are insufficient to assess carcinogenic potential.'

Reproduction toxicity: Does not meet the classification criteria for this hazard class.

STOT- single exposure: May cause drowsiness or dizziness.

STOT- repeated exposure: Does not meet the classification criteria for this hazard class.

Aspiration hazard: Does not meet the classification criteria for this hazard class.

Does not meet the classification criteria for this hazard class.

Viscosity: >20.5 mm²/s (40°C); 400000 mPas at 25°C.

SECTION 12: ECOLOGICAL INFORMATION

This product is dangerous for the environment and aquatic organisms. With long-term exposure, it causes negative effects in the aquatic environment.

12.1. Toxicity

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics*
LC50 - Fish > 1000 mg/l/96h Oncorhynchus mykiss
EC50 - Crustaceans > 1000 mg/l/48h Daphnia magna
EC50 - Algae / Aquatic Plants > 1000 mg/l/72h Pseudokirchneriella subcapitata

SEAM SEALANT

Reaction products of ethylbenzene and xylene*

| | |
|-------------------------------|----------------------------------|
| LC50 - Fish | 2.6 mg/l/96h Oncorhynchus mykiss |
| EC50 - Algae / Aquatic Plants | 2.2 mg/l/72h Chlorella vulgaris |
| NOEC Fish list | > 1.3 mg/l 56 d |
| NOEC Crustaceans list | > 0.74 mg/l 7 d |

Heptane

| | |
|-------------------------------|---------------------------------------|
| LC50 - Fish | 375 mg/l/96h Tilapia mossambica |
| EC50 - Crustaceans | 82.5 mg/l/48h Daphnia magna |
| EC50 - Algae / Aquatic Plants | 1.5 mg/l/72h algae |
| NOEC Fish list | > 1.534 mg/l Fish 28 d |
| NOEC Crustaceans list | > 1 mg/l Daphnia - Daphnia magna 21 d |

12.2. Persistence and degradability

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics
Inherently degradable. Easily biodegradable.

Reaction products of ethylbenzene and xylene

Solubility in water: 60 mg/l
Decomposes quickly.

Heptane

Solubility in water: 0.1-100 mg/l
Decomposes quickly.

Butyl acetate

Solubility in water: 1000-10000 mg/l

12.3. Bioaccumulative potential

Reaction products of ethylbenzene and xylene*

n-octanol/water partition coefficient: 3.16
BCF: 29

Heptane

n-octanol/water partition coefficient: 4.5
BCF: 552

n-Butyl acetate*

n-octanol/water partition coefficient: 2.3
BCF: 15.3

12.4. Mobility in soil

Reaction products of ethylbenzene and xylene*

Soil/water partition coefficient: 2.73 mg/l

Heptane

Soil/water partition coefficient: 2.38

n-Butyl acetate*

Soil/water partition coefficient: <3

12.5. Results of PBT and vPvB assessment

Based on the available data, the product does not contain PBT or vPvB in amounts greater than 0.1%.

12.6. Endocrine disrupting properties*

Based on available data, the product does not contain any substance listed on the main European lists of potential or suspected endocrine disruptors for which their impact on environment is under evaluation. *

12.7. Other hazardous effects*

No data.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Reuse if possible. Product residues should be treated as harmful waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management unit, in compliance with national and local regulations The transport of product waste is subject to the provisions of ADR.

Contaminated packaging:

Contaminated packaging should be disposed of in accordance with applicable law.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number or ID number*

ADR/RID, IMDG, IATA: 3175

14.2. UN proper shipping name

ADR/RID,: SOLID SUBSTANCES CONTAINING FLAMMABLE LIQUIDS, (heptane and reaction mixture of ethylbenzene and xylenes) MIXTURE *

IMDG: SOLIDS CONTAINING FLAMMABLE LIQUID, (heptane and reaction mass of ethylbenzene and xylene) MIXTURE *

IATA: SOLIDS CONTAINING FLAMMABLE LIQUID, (heptane and reaction mass of ethylbenzene and xylene) MIXTURE *

14.3. Transport hazard class(-es)



ADR/ RID, Class: 4.1, Label: 4.1



IMDG: Class: 4.1, Label: 4.1



IATA: Class: 4.1, Label: 4.1

14.4. Packaging group

ADR/RID, IMDG, IATA: II

14.5. Environmental hazards

ADR/RID*: Environmentally hazardous.

IMDG*: Marine pollutants.

IATA: No.



*

14.6. Special precautions for users

| | | | |
|----------|-----------------------|-------------------------|------------------------------|
| ADR/RID: | HIN – Kemler: 40 | Limited quantities: 1kg | Tunnel restriction code: (E) |
| | Special provisions: - | | |
| IMDG: | EMS: F-A, S-I | Limited quantities: 1kg | |
| IATA: | Cargo: | Maximum quantity: 50 kg | Packaging instructions: 448 |
| | Pass.: | Maximum quantity: 15 kg | Packaging instructions: 445 |
| | Special instructions: | A46 | |

14.7. Sea transport in bulk in accordance with IMO instruments*

No relevant information available.

SECTION 15: REGULATORY INFORMATION

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

Category according to SEVESO – Directive 2012/18/EC: none*

Restrictions related to the product or contained substances subject to Annex XVII to EC Regulation 1907/2006.

Product: Point 3-40

Contained substances: 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors*: not applicable.

Substances on Candidate List (Art.59 REACH):

Based on the available data, the product does not contain SVHC or vPvB in amounts greater than 0.1%.

Substances subject to authorization (Annex XIV REACH): none.

Substances subject to export reporting pursuant to EC Regulation 649/2012: none.

Substances subject to the Rotterdam Convention: not applicable.*

Substances subject to the Stockholm Convention: not applicable. *

Healthcare control:

Employees exposed to this chemical agent do not have to be under constant medical observation in accordance with Art. 41 of Italian Legislative Decree No. 81 of 9 April 2008, unless there is only a negligible risk to the safety and health of workers as defined in Art. 224, paragraph 2.*

VOC (Directive 2004/42/EC):

Finishing paints with special effects- all types. *

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances*:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics.

Reaction products of ethylbenzene and xylene.

Heptane.

n-Butyl acetate.

SECTION 16: OTHER INFORMATION

Full text of hazard statements mentioned in section 2 - 15 of the Sheet:

| | |
|-------------------|-----------------------------------------------------------------|
| Flam. Liq. 2 | Flammable liquids, cat. 2, |
| Flam. Liq. 3 | Flammable liquids, cat. 3. |
| Flam. Sol. 1 | Flammability solids, cat. 3. * |
| Acute Tox. 4 | Acute toxicity, cat. 4. |
| Asp. Tox. 1 | Aspiration hazard, cat. 1. |
| STOT RE 2 | Specific target organ toxicity – repeated exposure, cat. 2. |
| Eye Irrit. 2 | Eye irritation, cat. 2, |
| Skin Irrit. 2 | Skin irritation, cat. 2, |
| STOT SE 3 | Specific target organ toxicity - single exposure, kat. 3. |
| Aquatic Chronic 2 | Hazardous to the aquatic environment, chronic toxicity, cat. 1. |
| Aquatic Chronic 3 | Hazardous to the aquatic environment, chronic toxicity, cat. 3. |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H228 | Flammable solid. * |
| H312 | Harmful in contact with skin. |
| H332 | Harmful if inhaled. |
| H304 | May be fatal if swallowed and enters airways. |
| H373 | May cause damage to organs. |
| H319 | Causes serious eye damage. |
| H315 | Causes skin irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H411 | 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. |

Explanation of abbreviations and acronyms:

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

CAS Number - number in the register of Chemical Abstract Service

CE50 – Effective concentration (required for 50% effectiveness).

CE NUMBER – Identification in ESIS (European database of existing chemical substances).

CLP – EC Regulation 1272/2008.

DNEL – derived no effect level.

EmS – Emergency plan.

GHS– Globally Harmonised System of Classification and Labelling of Chemicals.

IATA DGR – International Air Transport Association; Regulations on dangerous goods .

IC50 – Effective concentration of immobilization 50%.

IMDG – International Marine Code of Dangerous Goods.

IMO – International Marine Organization.

INDEX NUMBER: Identification in Annex VI to CLP.

LC50 – Lethal concentration 50%.

LD50 – Lethal dose 50%.

OEL – Occupational exposure level.

PBT – persistent, bioaccumulative and toxic according to REACH Regulation.

PEC – Predicted environmental concentration.

PEL – Predicted exposure level .

PNEC Predicted no-effect concentration

REACH – EC Regulation 1907/2006.

RID – Regulations concerning the international carriage of dangerous goods by rail.

TLV – Threshold value.

TLV CEILING – Concentration, which should not be exceeded during occupational exposure.

TWA STEL – Short time exposure limit.

TWA – Time - Weighted average of exposure.

LZO – Volatile Organic Compounds.

vPvB – Very persistent and very bioaccumulative according to REACH Regulation.

WGK – Water hazard class (German).

General bibliography*:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
 2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
 3. Regulation (EU) 2020/878 of Annex II of the REACH Regulation
 4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
 5. Regulation (EU) 286/2011 of the European Parliament (II. Atp. CLP)
 6. Regulation (EU) 618/2012 of the European Parliament (III. Atp. CLP)
 7. Regulation (EU) 487/2013 of the European Parliament (IV. Atp. CLP)
 8. Regulation (EU) 944/2013 of the European Parliament (V. Atp. CLP)
 9. Regulation (EU) 605/2014 of the European Parliament (VI. Atp. CLP)
 10. Regulation (EU) 2015/1221 of the European Parliament (VII. Atp. CLP)
 11. Regulation (EU) 2016/918 of the European Parliament (VIII. Atp. CLP)
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2019/521 (XII Atp. CLP)
 16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP)
 17. Regulation (EU) 2019/1148
 18. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP)
 19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)
 20. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP)
 21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)
 22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - Agency ECHA Website
 - Database of SDS chemical models - Ministry of Health and Higher Institute of Health

Note for users:

The information contained in this sheet is based on our knowledge of the day of the last version. Users must verify the suitability and accuracy of the information provided for each specific use of the product.
This document does not constitute a guarantee of any specific features of the product .
The use of this product is not subject to our direct control; therefore the users must comply to occupational health and safety regulations under their own responsibility. The producer is relieved from any liability resulting from improper use of the product.
Personnel should be trained on handling chemical products.

Changes compared to the previous sheet:

Update of sections:

- 9: rewording of sub-section 9.1: Information on basic physical and chemical properties
- 11: rewording of sub-section 11.1: Information on the hazard classes defined in Regulation (EC) No 1272/ 2008: added subsection 11.2. Information on other hazards
- 12: new subsection 12.6: Endocrine disrupting properties.
- 14: rewording of sub-section 14.1: UN number or ID number; rewording of sub-section 14.7: Sea transport in bulk in accordance with IMO instruments.

Changes in the content of sections:

- 1.1, 2.1, 2.2, 2.3, 3.2, 6.1, 8.1, 8.2, 9.1, 9.2, 10.1, 10.3, 10.4, 10.5, 11.1, 12.1, 12.2, 12.3, 12.4, 12.6, 12.7, 14.1, 14.2, 14.5, 14.7, 15.1, 15.2, 16.

General update.

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