

# SAFETY DATA SHEET

Bead Sealer



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

### 1.1 Product identifier

**Product name** : Bead Sealer  
**Product code** : 16-117; 16-118; 16-118-I, 16-119; 16-119-I; 97-293; 97-446  
**Other means of identification** : Not available.

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

**Product use** : Industrial use

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

Patch Rubber Company  
 100 Patch Rubber Road  
 Weldon, NC 27890 USA  
 T: (252) 536-2574

**e-mail address of person responsible for this SDS** : roa-coa@patchrubber.com

#### Only representative

Joachim C. Schmidtke  
 Ramboll Deutschland GmbH  
 Munich, Germany  
 Telephone: +49(0)89 978 970 100

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : CHEMTREC: United States and Canada :1-800-424-9300  
 CHEMTREC: Outside United States and Canada: 001-703-527-3887

France Emergency telephone number (with hours of operation): ORFILA Number: + 33 (0) 1 45 42 59 59 (24 hours per day/7 days per week)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 2, H225  
 Skin Irrit. 2, H315  
 Eye Irrit. 2, H319  
 Carc. 2, H351  
 STOT SE 3, H336  
 Aquatic Acute 1, H400  
 Aquatic Chronic 1, H410

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : 78 percent of the mixture consists of component(s) of unknown toxicity

**Ingredients of unknown ecotoxicity** : Contains 1.5 % of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

## SECTION 2: Hazards identification

**Hazard pictograms** :



**Signal word** :

Danger

**Hazard statements** :

H225 - Highly flammable liquid and vapour.  
 H319 - Causes serious eye irritation.  
 H315 - Causes skin irritation.  
 H351 - Suspected of causing cancer.  
 H336 - May cause drowsiness or dizziness.  
 H410 - Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention** :

P201 - Obtain special instructions before use.  
 P280 - Wear protective gloves: > 8 hours (breakthrough time): neoprene, butyl rubber, nitrile rubber. Wear eye or face protection. Wear protective clothing.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P273 - Avoid release to the environment.

**Response** :

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

**Storage** :

Not applicable.

**Disposal** :

Not applicable.

**Hazardous ingredients** :

Naphtha (petroleum), hydrotreated light Fuels, diesel, No 2

**Supplemental label elements** :

Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** :

Not applicable.

**2.3 Other hazards**

**Other hazards which do not result in classification** :

None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** :

Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Naphtha (petroleum), hydrotreated light	EC: 265-151-9 CAS: 64742-49-0 Index: 649-328-00-1	≥60 - <95	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	-
heptane	EC: 205-563-8 CAS: 142-82-5 Index: 601-008-00-2	≥25 - <50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400	[1][2]

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### SECTION 3: Composition/information on ingredients

3-Methylhexane	EC: 209-643-3 CAS: 589-34-4 Index: 601-008-00-2	≥25 - <50	Aquatic Chronic 1, H410 Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1] [2]
Methylcyclohexane	EC: 203-624-3 CAS: 108-87-2 Index: 601-018-00-7	≥10 - <25	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
2-Methylhexane	EC: 209-730-6 CAS: 591-76-4 Index: 601-008-00-2	≥10 - <25	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1] [2]
3-Ethylpentane	EC: 210-529-0 CAS: 617-78-7 Index: 601-008-00-2	≥5 - <10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1] [2]
2,3-Dimethylpentane	EC: 209-280-0 CAS: 565-59-3 Index: 601-008-00-2	≥5 - <10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1] [2]
carbon black, respirable other than powder	EC: 215-609-9 CAS: 1333-86-4	≥5 - <10	Aquatic Chronic 3, H412	[1] [2]
Fuels, diesel, No 2	EC: 270-676-1 CAS: 68476-34-6 Index: 649-227-00-2	≥1 - <3	Carc. 2, H351	[1]
Zinc oxide	EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≥1 - <3	Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

## SECTION 3: Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

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

## SECTION 4: First aid measures

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. high concentrations: heartbeat irregularity (arrhythmia)
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

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

- Hazards from the substance or mixture** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

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

## SECTION 6: Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

#### Seveso Directive - Reporting thresholds (in tonnes)

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000	50000
E1	100	200

**Storage class (TRGS 510)** : 3

### 7.3 Specific end use(s)

Section 7. Handling and storage: The information in this section contains generic advice and guidance.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
heptane	<p><b>TRGS900 AGW (Germany, 4/2014).</b>                      PEAK: 2100 mg/m<sup>3</sup> 15 minutes.                      TWA: 500 ppm 8 hours.                      PEAK: 500 ppm 15 minutes.                      TWA: 1500 mg/m<sup>3</sup> 8 hours.</p> <p><b>Ministere du travail (France, 7/2012). Notes: Labour Act, Art 4412-149 (Regulatory binding exposure limits)</b>                      TWA: 400 ppm 8 hours.                      TWA: 1668 mg/m<sup>3</sup> 8 hours .                      STEL: 500 ppm 15 minutes.                      STEL: 2085 mg/m<sup>3</sup> 15 minutes.</p> <p><b>Ministry of Labour and Social Policy (Italy, 10/2013).</b>  <b>8 hours: 500 ppm 8 hours.</b>  <b>8 hours: 2085 mg/m<sup>3</sup> 8 hours.</b></p>
3-Methylhexane	<p><b>TRGS900 AGW (Germany, 12/2014).</b>                      PEAK: 2100 mg/m<sup>3</sup> 15 minutes.                      TWA: 500 ppm 8 hours.                      PEAK: 500 ppm 15 minutes.                      TWA: 1500 mg/m<sup>3</sup> 8 hours.</p>
Methylcyclohexane	<p><b>TRGS900 AGW (Germany, 12/2014).</b>                      TWA: 810 mg/m<sup>3</sup> 8 hours.                      PEAK: 1620 mg/m<sup>3</sup> 15 minutes.                      TWA: 200 ppm 8 hours.                      PEAK: 400 ppm 15 minutes.</p> <p><b>Ministere du travail (France, 7/2012). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits</b>                      TWA: 400 ppm 8 hours.                      TWA: 1600 mg/m<sup>3</sup> 8 hours.</p>
2-Methylhexane	<p><b>TRGS900 AGW (Germany, 12/2014).</b>                      PEAK: 2100 mg/m<sup>3</sup> 15 minutes.                      TWA: 500 ppm 8 hours.                      PEAK: 500 ppm 15 minutes.                      TWA: 1500 mg/m<sup>3</sup> 8 hours.</p>
3-Ethylpentane	<p><b>TRGS900 AGW (Germany, 12/2014).</b>                      PEAK: 2100 mg/m<sup>3</sup> 15 minutes.                      TWA: 500 ppm 8 hours.                      PEAK: 500 ppm 15 minutes.                      TWA: 1500 mg/m<sup>3</sup> 8 hours.</p>
2,3-Dimethylpentane	<p><b>TRGS900 AGW (Germany, 12/2014).</b>                      PEAK: 2100 mg/m<sup>3</sup> 15 minutes.                      TWA: 500 ppm 8 hours.                      PEAK: 500 ppm 15 minutes.                      TWA: 1500 mg/m<sup>3</sup> 8 hours.</p>
carbon black, respirable other than powder	<p><b>Ministère du travail (France, 7/2012). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits</b>                      TWA: 3.5 mg/m<sup>3</sup> 8 hours.</p>
Zinc oxide	<p><b>Ministère du travail (France, 7/2012). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits</b>                      TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Dust TWA: 5 mg/m<sup>3</sup> 8 hours.</p>

## SECTION 8: Exposure controls/personal protection

Form: Fume

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### DNELs/DMELs

No DNELs/DMELs available.

### PNECs

No PNECs available

## 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

> 8 hours (breakthrough time): neoprene, butyl rubber, nitrile rubber

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.



**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.  
Recommended: Particle filter device (DIN EN 143), Filter type: P2
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Colour** : Black.
- Odour** : Hydrocarbon.
- Odour threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : 93.3°C
- Flash point** : Closed cup: -10°C
- Evaporation rate** : 4.2 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Lower: 1%  
Upper: 7%
- Vapour pressure** : 6 kPa [room temperature]
- Vapour density** : 3.5 [Air = 1]
- Relative density** : 0.74
- Solubility(ies)** : Insoluble in the following materials: cold water and hot water.
- Solubility in water** : 0 g/l
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : 223°C
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

**9.2 Other information****SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.  
Under normal conditions of storage and use, hazardous polymerisation will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.

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## SECTION 10: Stability and reactivity

**10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials  
strong acids

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
heptane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours	-
	LC50 Inhalation Vapour	Rat	103 g/m <sup>3</sup>	4 hours	-
methylcyclohexane	LD50 Oral	Rat	>3200 mg/kg	-	-
carbon black, respirable other than powder	LD50 Dermal	Rabbit	>3 g/kg	-	-
	LD50 Oral	Rat	>15400 mg/kg	-	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation	Remarks
heptane	Skin - Moderate irritant	Rabbit	-	24 hours	-	-
3-methylhexane	Skin - Moderate irritant	Rabbit	-	-	-	-
methylcyclohexane	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-	-
	Skin - Moderate irritant	Rabbit	-	-	-	-
	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-	-
2-methylhexane	Skin - Moderate irritant	Rabbit	-	-	-	-
3-ethylpentane	Skin - Moderate irritant	Rabbit	-	-	-	-
2,3-dimethylpentane	Skin - Moderate irritant	Rabbit	-	-	-	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	-

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## SECTION 11: Toxicological information

	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	-
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### Conclusion/Summary

**Skin** : Causes skin irritation.

### Sensitisation

**Conclusion/Summary** : Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
Fuels, diesel, No 2	Positive - Dermal - TC	Mouse - Male	25	-	-

**Conclusion/Summary** : Carbon black is classified by the IARC as a Group 2B carcinogen (possibly carcinogenic to humans). Carbon black is inextricably bound in this mixture and therefore does not present a carcinogenic risk.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
heptane	Category 3	Not applicable.	Narcotic effects
3-methylhexane	Category 3	Not applicable.	Narcotic effects
methylcyclohexane	Category 3	Not applicable.	Narcotic effects
2-methylhexane	Category 3	Not applicable.	Narcotic effects
3-ethylpentane	Category 3	Not applicable.	Narcotic effects
2,3-dimethylpentane	Category 3	Not applicable.	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Product/ingredient name	Result
heptane	ASPIRATION HAZARD - Category 1
3-methylhexane	ASPIRATION HAZARD - Category 1
methylcyclohexane	ASPIRATION HAZARD - Category 1
2-methylhexane	ASPIRATION HAZARD - Category 1
3-ethylpentane	ASPIRATION HAZARD - Category 1
2,3-dimethylpentane	ASPIRATION HAZARD - Category 1

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

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## SECTION 11: Toxicological information

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Repeated or prolonged contact with irritants may cause dermatitis.

#### Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
Not available.					

- Conclusion/Summary** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

## SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure	Remarks
heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours	-
methylcyclohexane	Acute LC50 5800 µg/l Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	96 hours	-
carbon black, respirable other than powder	Acute EC50 37.563 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours	-
zinc oxide	Acute IC50 1.85 mg/l Marine water	Algae - Skeletonema costatum	96 hours	-
	Acute IC50 46 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours	-
	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours	-
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours	-

**Conclusion/Summary** : Very toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
heptane	4.66	552	high
methylcyclohexane	3.61	186.21	low
Fuels, diesel, No 2	>3.3	-	low
zinc oxide	-	60960	high

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.  
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1133	UN1133	UN1133	UN1133
14.2 UN proper shipping name	ADHESIVES	ADHESIVES	ADHESIVES	Adhesives
14.3 Transport hazard class(es)	3	3	3	3
Label				
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Marine Pollutant: Yes	No.

#### Additional information

**ADN** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Special provisions** 640C

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Emergency schedules** F-E, S-D

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.  
**Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.  
**Special provisions** A3

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## SECTION 14: Transport information

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** : Not available.

## SECTION 15: Regulatory information

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

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Other EU regulations**

**Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

**Category**

P5c  
E1

**National regulations**

Product/ingredient name	List name	Name on list	Classification	Notes
heptane	DFG MAC-values list	n-Heptane	Listed	-
methylcyclohexane	DFG MAC-values list	Methylcyclohexane	Listed	-
carbon black, respirable other than powder	DFG MAC-values list	Carbon black (inhalable fraction); Acetylene black (inhalable fraction)	K3	-
zinc oxide	DFG MAC-values list	Zinc and its inorganic compounds (inhalable fraction) / (respirable fraction)	Listed	-

**Storage class (TRGS 510)** : 3

**Hazardous incident ordinance** : Applicable. Category: 9a Dangerous for the environment.

**Hazard class for water** : 3

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## SECTION 15: Regulatory information

**Technical instruction on air quality control** : TA-Luft Number 5.2.5: 19-100%  
TA-Luft Class I - Number 5.2.5: 0.1-1.5%

### France national regulations

**Social Security Code, Articles L 461-1 to L 461-7** : heptane RG 84  
3-methylhexane RG 84  
2-methylhexane RG 84  
3-ethylpentane RG 84  
2,3-dimethylpentane RG 84

: Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

### Italy national regulations

**D.Lg. 152/06** : Not determined

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia inventory (AICS)** : All components are listed or exempted.  
**Canada** : All components are listed or exempted.  
**China** : All components are listed or exempted.  
**Europe** : All components are listed or exempted.  
**New Zealand** : All components are listed or exempted.  
**Philippines** : All components are listed or exempted.  
**Republic of Korea** : All components are listed or exempted.  
**Taiwan** : All components are listed or exempted.  
**Turkey** : All components are listed or exempted.  
**United States** : All components are listed or exempted.

**15.2 Chemical safety assessment** : -

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DMEL = Derived Minimal Effect Level



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**SECTION 16: Other information**

DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

**Full text of abbreviated H statements**

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]**

Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Acute 1, H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2, H411	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3, H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Carc. 1A, H350	CARCINOGENICITY - Category 1A
Carc. 2, H351	CARCINOGENICITY - Category 2
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Muta. 1B, H340	GERM CELL MUTAGENICITY - Category 1B
Repr. 2, H361fd	REPRODUCTIVE TOXICITY (Fertility and Unborn child) - Category 2
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2

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## SECTION 16: Other information

STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

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