

SAFETY DATA SHEET

Repair Sealer



Section 1. Identification

GHS product identifier : Repair Sealer

Product code : 16-170; 16-171; 16-173

Product use : Adhesive.

Supplier's details : 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

Emergency telephone number (with hours of operation) : CHEMTREC: United States and Canada :1-800-424-9300
CHEMTREC: Outside United States and Canada: 001-703-527-3887

Section 2. Hazards identification

This material is considered hazardous by the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200) and Health Canada Hazardous Product Regulations - WHMIS 2015

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SKIN IRRITATION - Category 2
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 76%

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes skin irritation.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.

Precautionary statements

Prevention :

Wear protective gloves: > 8 hours (breakthrough time): neoprene, butyl rubber, nitrile rubber. Wear eye or face protection.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep container tightly closed.
Use only outdoors or in a well-ventilated area.
Avoid breathing vapor.
Wash hands thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Section 2. Hazards identification

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
 If skin irritation or rash occurs: Get medical attention.

Storage : Store locked up.
 Store in a well-ventilated place.
 Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.
Product code : 16-170; 16-171; 16-173

| Ingredient name | % | CAS number |
|--|----------|------------|
| Naphtha (petroleum), hydrotreated light | 60 - 100 | 64742-49-0 |
| heptane | 30 - 45 | 142-82-5 |
| 3-methylhexane | 0 - 30 | 589-34-4 |
| Methylcyclohexane | 0 - 20 | 108-87-2 |
| 2-Methylhexane | 0 - 15 | 591-76-4 |
| 2,3-dimethylpentane | 0 - 5 | 565-59-3 |
| 3-Ethylpentane | 0 - 5 | 617-78-7 |
| carbon black, respirable other than powder | 7 - 13 | 1333-86-4 |
| Stearic acid | 0.1 - 1 | 57-11-4 |
| Benzothiazole, 2,2'-dithiobis- | 0.1 - 1 | 120-78-5 |
| Zinc oxide | 0.1 - 1 | 1314-13-2 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary 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. 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.
- 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : May cause eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be irritating to mouth, throat and stomach.

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.

Indication of immediate medical attention and special treatment needed, if necessary

- 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 4. First aid measures

- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.

- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical

- : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors may form explosive mixtures with air. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

- : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides
smoke
fumes or vapor

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.

Section 6. Accidental release measures

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- For emergency responders** : If specialized 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".

Environmental precautions

- : Avoid dispersal of spilled 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.

Methods and materials 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 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor 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.
- 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---|--|
| United States Occupational Exposure Limits | |
| Naphtha (petroleum), hydrotreated light | None. |
| n-Heptane | ACGIH TLV (United States, 4/2014). TWA: 400 ppm 8 hours. TWA: 1640 mg/m ³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m ³ 15 minutes. NIOSH REL (United States, 10/2013). TWA: 85 ppm 10 hours. TWA: 350 mg/m ³ 10 hours. |

Section 8. Exposure controls/personal protection

| | |
|--|---|
| 3-methylhexane | CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m ³ 15 minutes. OSHA PEL (United States, 2/2013). TWA: 500 ppm 8 hours. TWA: 2000 mg/m ³ 8 hours. ACGIH TLV (United States, 4/2014). TWA: 400 ppm 8 hours. TWA: 1640 mg/m ³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m ³ 15 minutes. |
| Methylcyclohexane | ACGIH TLV (United States, 4/2014). TWA: 400 ppm 8 hours. TWA: 1610 mg/m ³ 8 hours. NIOSH REL (United States, 10/2013). TWA: 400 ppm 10 hours. TWA: 1600 mg/m ³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 500 ppm 8 hours. TWA: 2000 mg/m ³ 8 hours. |
| 2-Methylhexane | ACGIH TLV (United States, 4/2014). TWA: 400 ppm 8 hours. TWA: 1640 mg/m ³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m ³ 15 minutes. |
| 3-Ethylpentane | ACGIH TLV (United States, 4/2014). TWA: 400 ppm 8 hours. TWA: 1640 mg/m ³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m ³ 15 minutes. |
| 2,3-Dimethylpentane | ACGIH TLV (United States, 4/2014). TWA: 400 ppm 8 hours. TWA: 1640 mg/m ³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m ³ 15 minutes. |
| carbon black, respirable other than powder | NIOSH REL (United States, 10/2013). TWA: 3.5 mg/m ³ 10 hours. TWA: 0.1 mg of PAHs/cm ³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 3.5 mg/m ³ 8 hours. ACGIH TLV (United States, 4/2014). TWA: 3 mg/m ³ 8 hours. Form: Inhalable fraction |
| Benzothiazole, 2,2'-dithiobis- | None. |
| Stearic acid | None. |
| Zinc oxide | NIOSH REL (United States, 10/2013). CEIL: 15 mg/m ³ Form: Dust TWA: 5 mg/m ³ 10 hours. Form: Dust and fumes STEL: 10 mg/m ³ 15 minutes. Form: Fume OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Fume TWA: 5 mg/m ³ 8 hours. Form: Respirable |

Section 8. Exposure controls/personal protection

| | |
|--|--|
| | <p>fraction TWA: 15 mg/m³ 8 hours. Form: Total dust ACGIH TLV (United States, 4/2014). TWA: 2 mg/m³ 8 hours. Form: Respirable fraction fraction STEL: 10 mg/m³ 15 minutes. Form: Respirable fraction</p> |
| <p><u>Canada Occupational Exposure Limits</u></p> | |
| <p>heptane</p> | <p>CA Alberta Provincial (Canada, 4/2009). 15 min OEL: 2050 mg/m³ 15 minutes. 8 hrs OEL: 1640 mg/m³ 8 hours. 8 hrs OEL: 400 ppm 8 hours. 15 min OEL: 500 ppm 15 minutes. CA British Columbia Provincial (Canada, 2/2015). TWA: 400 ppm 8 hours. STEL: 500 ppm 15 minutes. CA Ontario Provincial (Canada, 1/2013). TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes. CA Quebec Provincial (Canada, 1/2014). TWAEV: 400 ppm 8 hours. TWAEV: 1640 mg/m³ 8 hours. STEV: 500 ppm 15 minutes. STEV: 2050 mg/m³ 15 minutes.</p> |
| <p>3-methylhexane</p> | <p>CA Alberta Provincial (Canada, 4/2009). 15 min OEL: 2050 mg/m³ 15 minutes. 8 hrs OEL: 1640 mg/m³ 8 hours. 8 hrs OEL: 400 ppm 8 hours. 15 min OEL: 500 ppm 15 minutes.</p> |
| <p>Methylcyclohexane</p> | <p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 400 ppm 8 hours. 8 hrs OEL: 1610 mg/m³ 8 hours. CA British Columbia Provincial (Canada, 2/2015). TWA: 400 ppm 8 hours. CA Ontario Provincial (Canada, 1/2013). TWA: 400 ppm 8 hours. TWA: 1610 mg/m³ 8 hours. CA Quebec Provincial (Canada, 1/2014). TWAEV: 400 ppm 8 hours. TWAEV: 1610 mg/m³ 8 hours.</p> |
| <p>2-Methylhexane</p> | <p>CA Alberta Provincial (Canada, 4/2009). 15 min OEL: 2050 mg/m³ 15 minutes. 8 hrs OEL: 1640 mg/m³ 8 hours. 8 hrs OEL: 400 ppm 8 hours. 15 min OEL: 500 ppm 15 minutes.</p> |
| <p>3-Ethylpentane</p> | <p>CA Alberta Provincial (Canada, 4/2009). 15 min OEL: 2050 mg/m³ 15 minutes. 8 hrs OEL: 1640 mg/m³ 8 hours. 8 hrs OEL: 400 ppm 8 hours. 15 min OEL: 500 ppm 15 minutes.</p> |

Section 8. Exposure controls/personal protection

| | |
|--|---|
| 2,3-dimethylpentane | <p>CA Alberta Provincial (Canada, 4/2009). 15 min OEL: 2050 mg/m³ 15 minutes. 8 hrs OEL: 1640 mg/m³ 8 hours. 8 hrs OEL: 400 ppm 8 hours. 15 min OEL: 500 ppm 15 minutes.</p> |
| carbon black, respirable other than powder | <p>CA British Columbia Provincial (Canada, 2/2015). TWA: 3 mg/m³ 8 hours. Form: Inhalable</p> <p>CA Ontario Provincial (Canada, 1/2013). TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction</p> <p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 3.5 mg/m³ 8 hours.</p> <p>CA Quebec Provincial (Canada, 1/2014). TWAEV: 3.5 mg/m³ 8 hours.</p> |
| Stearic acid | <p>CA Ontario Provincial (Canada, 1/2013). TWA: 10 mg/m³ 8 hours. Form: Total particulate mass</p> |
| Zinc oxide | <p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 2 mg/m³ 8 hours. Form: Respirable 15 min OEL: 10 mg/m³ 15 minutes. Form: Respirable</p> <p>CA British Columbia Provincial (Canada, 2/2015). TWA: 2 mg/m³ 8 hours. Form: Respirable STEL: 10 mg/m³ 15 minutes. Form: Respirable</p> <p>CA Ontario Provincial (Canada, 1/2013). TWA: 2 mg/m³ 8 hours. Form: Respirable fraction STEL: 10 mg/m³ 15 minutes. Form: Respirable fraction</p> <p>CA Quebec Provincial (Canada, 1/2014). TWAEV: 5 mg/m³ 8 hours. Form: Fume STEV: 10 mg/m³ 15 minutes. Form: Fume</p> |

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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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.

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. Contaminated work clothing should not be allowed out of the workplace. 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.

Section 8. Exposure controls/personal protection

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.

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.

Respiratory protection

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure an MSHA/NIOSH-approved respirator or equivalent is used.

Section 9. Physical and chemical properties

Appearance

| | |
|--|---|
| Physical state | : Liquid. |
| Color | : Black. |
| Odor | : Hydrocarbon. |
| Odor threshold | : Not available. |
| pH | : Not available. |
| Melting point | : Not available. |
| Boiling point | : 93.3°C (199.9°F) |
| Flash point | : Closed cup: -10°C (14°F) |
| Evaporation rate | : 4.2 (butyl acetate = 1) |
| Flammability (solid, gas) | : Not available. |
| Lower and upper explosive (flammable) limits | : Lower: 1% Upper: 7% |
| Vapor pressure | : 6 kPa (45 mm Hg) [room temperature] |
| Vapor density | : 3.5 [Air = 1] |
| Relative density | : 0.824 [Water = 1] |
| Solubility | : 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 (433.4°F) |
| Decomposition temperature | : Not available. |
| Viscosity | : Dynamic: 2000 to 6000 mPa·s (2000 to 6000 cP) |

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
- Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials
strong acids
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-----------------------|---------|----------------------|----------|
| heptane | LC50 Inhalation Gas. | Rat | 48000 ppm | 4 hours |
| | LC50 Inhalation Vapor | Rat | 103 g/m ³ | 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 | - |
| Benzothiazole, 2,2'-dithiobis- | LD50 Dermal | Rabbit | >7940 mg/kg | - |
| | LD50 Oral | Rat | >12 g/kg | - |
| Stearic acid | LD50 Dermal | Rabbit | >5 g/kg | - |
| | LD50 Oral | Rat | 4600 mg/kg | - |

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

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|--------------------------|-------------|
| 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 | - | - | - |
| 2-Methylhexane | Skin - Moderate irritant | Rabbit | - | - | - |
| 3-Ethylpentane | Skin - Moderate irritant | Rabbit | - | - | - |
| 2,3-dimethylpentane | Skin - Moderate irritant | Rabbit | - | - | - |

Section 11. Toxicological information

| | | | | | |
|--------------|--------------------------|--------|---|-------------------------------------|---|
| Stearic acid | Skin - Mild irritant | Human | - | 72 hours 75 milligrams Intermittent | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 milligrams | - |
| Zinc oxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |

Conclusion/Summary

Skin : Causes skin irritation.

Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|--------------------------------|-------------------|---------|-------------|
| Benzothiazole, 2,2'-dithiobis- | skin | Human | Sensitizing |

Mutagenicity

Not available.

Carcinogenicity

Not available.

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.

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|--|------|------|-----|
| carbon black, respirable other than powder | - | 2B | - |

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| 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

Section 11. Toxicological information

| 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 the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Ocular.

Potential acute health effects

- Eye contact** : May cause eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be irritating to mouth, throat and stomach.

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 and also 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

Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.

Section 11. Toxicological information

- 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.

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|-------|----------------|
| Oral | 530159.2 mg/kg |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|------------------------------------|---|----------|
| 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 |

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--------------------------------|--------------------|------------|-----------|
| heptane | 4.66 | 552 | high |
| Methylcyclohexane | 3.61 | 112 | low |
| Benzothiazole, 2,2'-dithiobis- | 4.5 | 1.4 to 51 | low |
| Stearic acid | 8.23 | 238 to 288 | low |
| Zinc oxide | - | 60960 | high |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized 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 federal, state and 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | DOT Classification | TDG Classification | | | IMDG | IATA |
|-----------------------------------|--|---|---|---|--|---|
| UN number | UN1133 | UN1133 | - | - | UN1133 | UN1133 |
| UN proper shipping name | Adhesives | ADHESIVES | - | - | ADHESIVES | Adhesives |
| Transport hazard class(es) | 3 | 3 | - | - | 3 | 3 |
| Label |   |   | | |   |   |
| Packing group | II | II | - | - | II | II |
| Environmental hazards | Yes. | Yes. | - | - | Marine Pollutant: Yes | No. |
| Additional information | This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. Limited quantity | Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail. Explosive Limit and | - | - | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-E, S-D | The environmentally hazardous substance mark may appear if required by other transportation regulations. Passenger and Cargo Aircraft Quantity limitation: 5 L Packaging instructions: 353 Cargo Aircraft Only Quantity limitation: 60 L Packaging |

Section 14. Transport information

| | | | | | | |
|--|---|---|--|--|--|--|
| | Yes. Packaging instruction Passenger aircraft Quantity limitation: 5 L Cargo aircraft Quantity limitation: 60 L Special provisions 149, B52, IB2, T4, TP1, TP8 | Limited Quantity Index 5 Passenger Carrying Road or Rail Index 5 | | | | instructions: 364 Limited Quantities - Passenger Aircraft Quantity limitation: 1 L Packaging instructions: Y341 Special provisions A3 |
|--|---|---|--|--|--|--|

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.

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

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: heptane; Methylcyclohexane
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 United States inventory (TSCA 8b): All components are listed or exempted.
 Clean Water Act (CWA) 307: toluene; ethylbenzene; benzene; Zinc oxide
 Clean Water Act (CWA) 311: toluene; ethylbenzene; benzene; Propionic acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard

Composition/information on ingredients

Section 15. Regulatory information

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|---|------------|-------------|----------------------------|----------|---------------------------------|---------------------------------|
| Naphtha (petroleum), hydrotreated light heptane | ≥60 - <100 | Yes. | No. | No. | Yes. | No. |
| 3-methylhexane | ≥25 - <50 | Yes. | No. | No. | Yes. | No. |
| Methylcyclohexane | ≥25 - <50 | Yes. | No. | No. | Yes. | No. |
| 2-Methylhexane | ≥10 - <25 | Yes. | No. | No. | Yes. | No. |
| carbon black, respirable other than powder | ≥10 - <25 | No. | No. | No. | No. | Yes. |
| 3-Ethylpentane | ≥5 - <10 | Yes. | No. | No. | Yes. | No. |
| 2,3-dimethylpentane | ≥5 - <10 | No. | No. | No. | Yes. | No. |
| Benzothiazole, 2,2'-dithiobis- | ≥1 - <3 | Yes. | No. | No. | Yes. | No. |
| Stearic acid | ≥1 - <3 | Yes. | No. | No. | Yes. | No. |
| Zinc oxide | ≥1 - <3 | No. | No. | No. | Yes. | No. |

SARA 313

| | Product name | CAS number | % |
|--|--------------|------------|---------|
| Form R - Reporting requirements | Zinc oxide | 1314-13-2 | ≥1 - <3 |
| Supplier notification | Zinc oxide | 1314-13-2 | ≥1 - <3 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: HEPTANE (N-HEPTANE); 3-METHYLHEXANE; METHYLCYCLOHEXANE; ISOHEPTANE; 2,3-DIMETHYLPENTANE; CARBON BLACK; ZINC OXIDE FUME
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: n-HEPTANE; HEPTANE; 3-METHYLHEXANE; HEXANE, 3-METHYL-; METHYLCYCLOHEXANE; CYCLOHEXANE, METHYL-; 2, 3-DIMETHYLPENTANE; PENTANE, 2,3-DIMETHYL-; CARBON BLACK; ZINC OXIDE
- Pennsylvania** : The following components are listed: HEPTANE; HEXANE, 3-METHYL-; CYCLOHEXANE, METHYL-; HEXANE, 2-METHYL-; PENTANE, 2,3-DIMETHYL-; CARBON BLACK; ZINC OXIDE (ZNO)

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

| Ingredient name | Cancer | Reproductive | No significant risk level | Maximum acceptable dosage level |
|--|--------|--------------|--|---|
| carbon black, respirable other than powder | Yes. | No. | No. | No. |
| toluene | No. | Yes. | No. | 7000 µg/day (ingestion) |
| ethylbenzene | Yes. | No. | 41 µg/day (ingestion) 54 µg/day (inhalation) | No. |
| benzene | Yes. | Yes. | 6.4 µg/day (ingestion) 13 µg/day (inhalation) | 24 µg/day (ingestion) 49 µg/day (inhalation) |

Canadian lists

Section 15. Regulatory information

- Canadian NPRI** : The following components are listed: Heptane (all isomers); Heptane (all isomers); Heptane (all isomers); Heptane (all isomers); Zinc (and its compounds)
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : All components are listed or exempted.

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 Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

- Australia** : 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.
- Japan** : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.
- Malaysia** : Not determined.
- 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** : Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.)



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Procedure used to derive the classification

Section 16. Other information

| Classification | Justification |
|--|---|
| FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 | On basis of test data Calculation method Calculation method |

History

Date of printing : 01/19/2016

Date of issue/Date of revision : 01/19/2016

Date of previous issue : No previous validation.

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
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)
UN = United Nations

References : Not available.

▣ Indicates information that has changed from previously issued version.

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