



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Brakleen® Brake Parts Cleaner - Non-Chlorinated

**Other means of identification**

**Product code** 05085, 05087, 05186

**Recommended use** Brake parts cleaner

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufactured or sold by:**

**Company name** CRC Industries, Inc.

**Address** 885 Louis Dr.  
Warminster, PA 18974 US

**Telephone**

**General Information** 215-674-4300

**Technical Assistance** 800-521-3168

**Customer Service** 800-272-4620

**24-Hour Emergency (CHEMTREC)** 800-424-9300 (US)  
703-527-3887 (International)

**Website** www.crcindustries.com

## 2. Hazard(s) identification

|                              |                                                        |                             |
|------------------------------|--------------------------------------------------------|-----------------------------|
| <b>Physical hazards</b>      | Flammable liquids                                      | Category 2                  |
| <b>Health hazards</b>        | Acute toxicity, oral                                   | Category 3                  |
|                              | Skin corrosion/irritation                              | Category 2                  |
|                              | Serious eye damage/eye irritation                      | Category 2A                 |
|                              | Reproductive toxicity (fertility, the unborn child)    | Category 2                  |
|                              | Specific target organ toxicity, single exposure        | Category 1                  |
|                              | Specific target organ toxicity, single exposure        | Category 3 narcotic effects |
|                              | Specific target organ toxicity, repeated exposure      | Category 2                  |
|                              | Aspiration hazard                                      | Category 1                  |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, acute hazard     | Category 3                  |
|                              | Hazardous to the aquatic environment, long-term hazard | Category 2                  |
| <b>OSHA defined hazards</b>  | Not classified.                                        |                             |

**Label elements**



**Signal word** Danger

**Hazard statement** Highly flammable liquid and vapor. Toxic if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility. Suspected of damaging the unborn child. Causes damage to organs (eyes). May cause damage to organs (liver, kidneys, lungs, brain) through prolonged or repeated exposure. Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

## Precautionary statement

### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

### Response

If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. Call a POISON CENTER or doctor/physician if you feel unwell. If exposed or concerned: Get medical attention. In case of fire: Do not use water jet as an extinguisher, as this will spread the fire. Collect spillage.

### Storage

Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

### Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

### Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

### Supplemental information

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as formaldehyde.

## 3. Composition/information on ingredients

### Mixtures

| Chemical name     | Common name and synonyms | CAS number | %       |
|-------------------|--------------------------|------------|---------|
| Methanol          |                          | 67-56-1    | 40 - 50 |
| Acetone           |                          | 67-64-1    | 10 - 20 |
| Toluene           |                          | 108-88-3   | 10 - 20 |
| 3-Methylhexane    |                          | 589-34-4   | 5 - 10  |
| n-Heptane         |                          | 142-82-5   | 5 - 10  |
| Methylcyclohexane |                          | 108-87-2   | 3 - 5   |
| Cyclohexane       |                          | 110-82-7   | 1 - 3   |
| Ethylbenzene      |                          | 100-41-4   | < 0.2   |
| n-Hexane          |                          | 110-54-3   | < 0.2   |

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

### Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

### Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

### Most important symptoms/effects, acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Upper respiratory tract irritation. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.

|                                                                               |                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| <b>General information</b>                                                    | IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.                                                                                              |

## 5. Fire-fighting measures

|                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>                                  | Alcohol resistant foam. Water fog. Carbon dioxide (CO <sub>2</sub> ). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Specific hazards arising from the chemical</b>                    | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as formaldehyde. |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Fire-fighting equipment/instructions</b>                          | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>General fire hazards</b>                                          | Highly flammable liquid and vapor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## 6. Accidental release measures

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.                                                                                                                                                                                                                      |
| <b>Methods and materials for containment and cleaning up</b>               | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.<br><br>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.<br><br>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination. |
| <b>Environmental precautions</b>                                           | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Use appropriate containment to avoid environmental contamination.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, please see the product label.

### Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components                       | Type | Value                  |
|----------------------------------|------|------------------------|
| Acetone (CAS 67-64-1)            | PEL  | 2400 mg/m3<br>1000 ppm |
| Cyclohexane (CAS 110-82-7)       | PEL  | 1050 mg/m3<br>300 ppm  |
| Ethylbenzene (CAS 100-41-4)      | PEL  | 435 mg/m3<br>100 ppm   |
| Methanol (CAS 67-56-1)           | PEL  | 260 mg/m3<br>200 ppm   |
| Methylcyclohexane (CAS 108-87-2) | PEL  | 2000 mg/m3<br>500 ppm  |
| n-Heptane (CAS 142-82-5)         | PEL  | 2000 mg/m3<br>500 ppm  |
| n-Hexane (CAS 110-54-3)          | PEL  | 1800 mg/m3<br>500 ppm  |

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

| Components             | Type    | Value   |
|------------------------|---------|---------|
| Toluene (CAS 108-88-3) | Ceiling | 300 ppm |
|                        | TWA     | 200 ppm |

#### US. ACGIH Threshold Limit Values

| Components                    | Type | Value   |
|-------------------------------|------|---------|
| 3-Methylhexane (CAS 589-34-4) | STEL | 500 ppm |
|                               | TWA  | 400 ppm |
| Acetone (CAS 67-64-1)         | STEL | 750 ppm |
|                               | TWA  | 500 ppm |
| Cyclohexane (CAS 110-82-7)    | TWA  | 100 ppm |
| Ethylbenzene (CAS 100-41-4)   | TWA  | 20 ppm  |
| Methanol (CAS 67-56-1)        | STEL | 250 ppm |

**US. ACGIH Threshold Limit Values**

| Components                       | Type | Value   |
|----------------------------------|------|---------|
| Methylcyclohexane (CAS 108-87-2) | TWA  | 200 ppm |
|                                  | STEL | 500 ppm |
| n-Heptane (CAS 142-82-5)         | TWA  | 400 ppm |
|                                  | STEL | 500 ppm |
| n-Hexane (CAS 110-54-3)          | TWA  | 400 ppm |
|                                  | TWA  | 50 ppm  |
| Toluene (CAS 108-88-3)           | TWA  | 20 ppm  |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components                       | Type    | Value      |
|----------------------------------|---------|------------|
| Acetone (CAS 67-64-1)            | TWA     | 590 mg/m3  |
|                                  |         | 250 ppm    |
| Cyclohexane (CAS 110-82-7)       | TWA     | 1050 mg/m3 |
|                                  |         | 300 ppm    |
| Ethylbenzene (CAS 100-41-4)      | STEL    | 545 mg/m3  |
|                                  |         | 125 ppm    |
| Methanol (CAS 67-56-1)           | TWA     | 435 mg/m3  |
|                                  |         | 100 ppm    |
| Methanol (CAS 67-56-1)           | STEL    | 325 mg/m3  |
|                                  |         | 250 ppm    |
| Methanol (CAS 67-56-1)           | TWA     | 260 mg/m3  |
|                                  |         | 200 ppm    |
| Methylcyclohexane (CAS 108-87-2) | TWA     | 1600 mg/m3 |
|                                  |         | 400 ppm    |
| n-Heptane (CAS 142-82-5)         | Ceiling | 1800 mg/m3 |
|                                  |         | 440 ppm    |
| n-Heptane (CAS 142-82-5)         | TWA     | 350 mg/m3  |
|                                  |         | 85 ppm     |
| n-Hexane (CAS 110-54-3)          | TWA     | 180 mg/m3  |
|                                  |         | 50 ppm     |
| Toluene (CAS 108-88-3)           | STEL    | 560 mg/m3  |
|                                  |         | 150 ppm    |
| Toluene (CAS 108-88-3)           | TWA     | 375 mg/m3  |
|                                  |         | 100 ppm    |

**Biological limit values****ACGIH Biological Exposure Indices**

| Components                  | Value     | Determinant                                   | Specimen            | Sampling Time |
|-----------------------------|-----------|-----------------------------------------------|---------------------|---------------|
| Acetone (CAS 67-64-1)       | 50 mg/l   | Acetone                                       | Urine               | *             |
| Ethylbenzene (CAS 100-41-4) | 0.15 g/g  | Sum of mandelic acid and phenylglyoxylic acid | Creatinine in urine | *             |
| Methanol (CAS 67-56-1)      | 15 mg/l   | Methanol                                      | Urine               | *             |
| n-Hexane (CAS 110-54-3)     | 0.4 mg/l  | 2,5-Hexanedio n, without hydrolysis           | Urine               | *             |
| Toluene (CAS 108-88-3)      | 0.3 mg/g  | o-Cresol, with hydrolysis                     | Creatinine in urine | *             |
|                             | 0.03 mg/l | Toluene                                       | Urine               | *             |
|                             | 0.02 mg/l | Toluene                                       | Blood               | *             |

\* - For sampling details, please see the source document.

## Exposure guidelines

### US - California OELs: Skin designation

|                         |                                   |
|-------------------------|-----------------------------------|
| Methanol (CAS 67-56-1)  | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3) | Can be absorbed through the skin. |
| Toluene (CAS 108-88-3)  | Can be absorbed through the skin. |

### US - Minnesota Haz Subs: Skin designation applies

|                        |                           |
|------------------------|---------------------------|
| Methanol (CAS 67-56-1) | Skin designation applies. |
| Toluene (CAS 108-88-3) | Skin designation applies. |

### US - Tennessee OELs: Skin designation

|                        |                                   |
|------------------------|-----------------------------------|
| Methanol (CAS 67-56-1) | Can be absorbed through the skin. |
|------------------------|-----------------------------------|

### US ACGIH Threshold Limit Values: Skin designation

|                         |                                   |
|-------------------------|-----------------------------------|
| Methanol (CAS 67-56-1)  | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3) | Can be absorbed through the skin. |

### US NIOSH Pocket Guide to Chemical Hazards: Skin designation

|                        |                                   |
|------------------------|-----------------------------------|
| Methanol (CAS 67-56-1) | Can be absorbed through the skin. |
|------------------------|-----------------------------------|

## Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

## Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

### Skin protection

**Hand protection** Wear protective gloves such as: Nitrile. Polyvinyl alcohol (PVA). Neoprene.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

### Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

## General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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## 9. Physical and chemical properties

### Appearance

**Physical state** Liquid.

**Form** Liquid.

**Color** Clear.

**Odor** Solvent.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** -195.9 °F (-126.6 °C) estimated

**Initial boiling point and boiling range** 132.9 °F (56.1 °C) estimated

**Flash point** -0.00004 °F (-17.8 °C) Tag Closed Cup

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** 1 % estimated

**Flammability limit - upper (%)** 36 % estimated

**Vapor pressure** 107.9 hPa estimated

**Vapor density** Not available.

|                                                |                             |
|------------------------------------------------|-----------------------------|
| <b>Relative density</b>                        | 0.78                        |
| <b>Solubility (water)</b>                      | Not available.              |
| <b>Partition coefficient (n-octanol/water)</b> | Not available.              |
| <b>Auto-ignition temperature</b>               | 539.6 °F (282 °C) estimated |
| <b>Decomposition temperature</b>               | Not available.              |
| <b>Viscosity (kinematic)</b>                   | Not available.              |
| <b>Percent volatile</b>                        | 100 %                       |

## 10. Stability and reactivity

|                                           |                                                                                                                                                                                                                               |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport.                                                                                                                                 |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.                                                                                                                                                                                   |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                                                                                                                                                   |
| <b>Conditions to avoid</b>                | Avoid heat, sparks, open flames and other ignition sources. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as formaldehyde. Contact with incompatible materials. |
| <b>Incompatible materials</b>             | Acids. Alkalies. Reducing agents. Strong oxidizing agents. Hypochlorites. Peroxides. Aluminum. Magnesium. Sodium. Zinc.                                                                                                       |
| <b>Hazardous decomposition products</b>   | Carbon oxides. Formaldehyde.                                                                                                                                                                                                  |

## 11. Toxicological information

### Information on likely routes of exposure

|                                                                                     |                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ingestion</b>                                                                    | Toxic if swallowed. May be fatal or cause blindness if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.                                                                                                                                                    |
| <b>Inhalation</b>                                                                   | May cause damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.                                                                                                             |
| <b>Skin contact</b>                                                                 | Causes skin irritation.                                                                                                                                                                                                                                                                                                                     |
| <b>Eye contact</b>                                                                  | Causes serious eye irritation.                                                                                                                                                                                                                                                                                                              |
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b> | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Upper respiratory tract irritation. Skin irritation. May cause redness and pain. |

### Information on toxicological effects

|                       |                                                                 |
|-----------------------|-----------------------------------------------------------------|
| <b>Acute toxicity</b> | May be fatal if swallowed and enters airways. Narcotic effects. |
|-----------------------|-----------------------------------------------------------------|

| <b>Product</b>                                  | <b>Species</b> | <b>Test Results</b>             |
|-------------------------------------------------|----------------|---------------------------------|
| Brakleen® Brake Parts Cleaner - Non-Chlorinated |                |                                 |
| <b>Acute</b>                                    |                |                                 |
| <i>Dermal</i>                                   |                |                                 |
| LD50                                            | Rabbit         | 4356.5029 mg/kg estimated       |
| <i>Inhalation</i>                               |                |                                 |
| LC50                                            | Rat            | 37.3684 mg/l, 4 Hours estimated |
| <i>Oral</i>                                     |                |                                 |
| LD50                                            | Human          | 102.2495 mg/kg estimated        |
|                                                 | Rat            | 4161.1147 mg/kg estimated       |

\* Estimates for product may be based on additional component data not shown.

|                                          |                                                           |
|------------------------------------------|-----------------------------------------------------------|
| <b>Skin corrosion/irritation</b>         | Causes skin irritation.                                   |
| <b>Serious eye damage/eye irritation</b> | Causes serious eye irritation.                            |
| <b>Respiratory sensitization</b>         | Not available.                                            |
| <b>Skin sensitization</b>                | This product is not expected to cause skin sensitization. |

|                                                               |                                                                                                                                                                                                          |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Germ cell mutagenicity</b>                                 | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.                                                                                         |
| <b>Carcinogenicity</b>                                        | Based on available data, the classification criteria are not met. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.                                                        |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b> |                                                                                                                                                                                                          |
| Ethylbenzene (CAS 100-41-4)                                   | 2B Possibly carcinogenic to humans.                                                                                                                                                                      |
| Toluene (CAS 108-88-3)                                        | 3 Not classifiable as to carcinogenicity to humans.                                                                                                                                                      |
| <b>Reproductive toxicity</b>                                  | Suspected of damaging the unborn child. Suspected of damaging fertility.                                                                                                                                 |
| <b>Specific target organ toxicity - single exposure</b>       | Causes damage to organs. Even small amounts (30-250 ml methanol) may be fatal. Symptoms are stomach ache, nausea, vomiting, dullness, visual disorder and blindness. May cause drowsiness and dizziness. |
| <b>Specific target organ toxicity - repeated exposure</b>     | May cause damage to organs (liver, kidneys, lungs, brain) through prolonged or repeated exposure.                                                                                                        |
| <b>Aspiration hazard</b>                                      | May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.                                            |
| <b>Chronic effects</b>                                        | Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.                                                                                                  |

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

| Product                                         | Species |                                                     | Test Results                     |
|-------------------------------------------------|---------|-----------------------------------------------------|----------------------------------|
| Brakleen® Brake Parts Cleaner - Non-Chlorinated |         |                                                     |                                  |
| Aquatic                                         |         |                                                     |                                  |
| Crustacea                                       | EC50    | Daphnia                                             | 48.6123 mg/l, 48 hours estimated |
| Acute                                           |         |                                                     |                                  |
| Fish                                            | LC50    | Fish                                                | 34.3781 mg/l, 96 hours estimated |
| Components                                      |         | Species                                             | Test Results                     |
| Acetone (CAS 67-64-1)                           |         |                                                     |                                  |
| Aquatic                                         |         |                                                     |                                  |
| Crustacea                                       | EC50    | Water flea (Daphnia magna)                          | 21.6 - 23.9 mg/l, 48 hours       |
| Fish                                            | LC50    | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 4740 - 6330 mg/l, 96 hours       |
| Cyclohexane (CAS 110-82-7)                      |         |                                                     |                                  |
| Aquatic                                         |         |                                                     |                                  |
| Fish                                            | LC50    | Fathead minnow (Pimephales promelas)                | 23.03 - 42.07 mg/l, 96 hours     |
| Ethylbenzene (CAS 100-41-4)                     |         |                                                     |                                  |
| Aquatic                                         |         |                                                     |                                  |
| Acute                                           |         |                                                     |                                  |
| Crustacea                                       | EC50    | Water flea (Daphnia magna)                          | 2.1 mg/l, 48 hours               |
| Fish                                            | LC50    | Fathead minnow (Pimephales promelas)                | 12.1 mg/l, 96 hours              |
| Methanol (CAS 67-56-1)                          |         |                                                     |                                  |
| Aquatic                                         |         |                                                     |                                  |
| Fish                                            | LC50    | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 18000 - 20000 mg/l, 96 hours     |
| Acute                                           |         |                                                     |                                  |
| Crustacea                                       | EC50    | Water flea (Daphnia magna)                          | > 10000 mg/l, 48 hours           |
| Fish                                            | LC50    | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 18000 - 20000 mg/l, 96 hours     |
| Methylcyclohexane (CAS 108-87-2)                |         |                                                     |                                  |
| Aquatic                                         |         |                                                     |                                  |
| Fish                                            | LC50    | Striped bass (Morone saxatilis)                     | 5.8 mg/l, 96 hours               |

| Components               | Species | Test Results                                                          |
|--------------------------|---------|-----------------------------------------------------------------------|
| n-Heptane (CAS 142-82-5) |         |                                                                       |
| <b>Aquatic</b>           |         |                                                                       |
| <i>Acute</i>             |         |                                                                       |
| Fish                     | LC50    | Fathead minnow (Pimephales promelas) 2.1 - 2.98 mg/l, 96 hours        |
| n-Hexane (CAS 110-54-3)  |         |                                                                       |
| <b>Aquatic</b>           |         |                                                                       |
| Fish                     | LC50    | Fathead minnow (Pimephales promelas) 2.101 - 2.981 mg/l, 96 hours     |
| Toluene (CAS 108-88-3)   |         |                                                                       |
| <b>Aquatic</b>           |         |                                                                       |
| Crustacea                | EC50    | Water flea (Daphnia magna) 5.46 - 9.83 mg/l, 48 hours                 |
| Fish                     | LC50    | Coho salmon, silver salmon (Oncorhynchus kisutch) 8.11 mg/l, 96 hours |

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Partition coefficient n-octanol / water (log Kow)**

|                   |       |
|-------------------|-------|
| Acetone           | -0.24 |
| Cyclohexane       | 3.44  |
| Ethylbenzene      | 3.15  |
| Methanol          | -0.77 |
| Methylcyclohexane | 3.61  |
| n-Heptane         | 4.66  |
| n-Hexane          | 3.9   |
| Toluene           | 2.73  |

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal of waste from residues / unused products** If discarded, this product is considered a RCRA ignitable waste, D001. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

**Hazardous waste code** D001: Waste Flammable material with a flash point <140 F

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

**DOT**

|                                     |                                                                                   |
|-------------------------------------|-----------------------------------------------------------------------------------|
| <b>UN number</b>                    | UN1992                                                                            |
| <b>UN proper shipping name</b>      | Flammable liquids, toxic, n.o.s. (Methanol RQ = 10225 LBS, Toluene RQ = 5348 LBS) |
| <b>Transport hazard class(es)</b>   |                                                                                   |
| <b>Class</b>                        | 3                                                                                 |
| <b>Subsidiary risk</b>              | 6.1                                                                               |
| <b>Label(s)</b>                     | 3, 6.1                                                                            |
| <b>Packing group</b>                | II                                                                                |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling.           |
| <b>Special provisions</b>           | IB2, T7, TP2, TP13                                                                |
| <b>Packaging exceptions</b>         | 150                                                                               |
| <b>Packaging non bulk</b>           | 202                                                                               |
| <b>Packaging bulk</b>               | 243                                                                               |

**IATA**

|                                |                                                     |
|--------------------------------|-----------------------------------------------------|
| <b>UN number</b>               | UN1992                                              |
| <b>UN proper shipping name</b> | Flammable liquid, toxic, n.o.s. (Methanol, Toluene) |

**Transport hazard class(es)****Class** 3**Subsidiary risk** 6.1**Packing group** II**Environmental hazards** No.**ERG Code** 3HP**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Other information****Passenger and cargo aircraft** Allowed.**Cargo aircraft only** Allowed.**IMDG****UN number** UN1992**UN proper shipping name** FLAMMABLE LIQUID, TOXIC, N.O.S. (Methanol, Toluene), MARINE POLLUTANT**Transport hazard class(es)****Class** 3**Subsidiary risk** 6.1**Packing group** II**Environmental hazards****Marine pollutant** Yes**EmS** F-E, S-D**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**General information** IMDG Regulated Marine Pollutant.

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**15. Regulatory information****US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**SARA 304 Emergency release notification**

Not regulated.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Cyclohexane (CAS 110-82-7)

Ethylbenzene (CAS 100-41-4)

Methanol (CAS 67-56-1)

Toluene (CAS 108-88-3)

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Acetone (CAS 67-64-1)

Cyclohexane (CAS 110-82-7)

Ethylbenzene (CAS 100-41-4)

Methanol (CAS 67-56-1)

Toluene (CAS 108-88-3)

**CERCLA Hazardous Substances: Reportable quantity**

Acetone (CAS 67-64-1) 5000 LBS

Cyclohexane (CAS 110-82-7) 1000 LBS

Ethylbenzene (CAS 100-41-4) 1000 LBS

Methanol (CAS 67-56-1) 5000 LBS

Toluene (CAS 108-88-3) 1000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Methanol (CAS 67-56-1)

Toluene (CAS 108-88-3)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

|                        |      |
|------------------------|------|
| Acetone (CAS 67-64-1)  | 6532 |
| Toluene (CAS 108-88-3) | 6594 |

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

|                        |        |
|------------------------|--------|
| Acetone (CAS 67-64-1)  | 35 %WV |
| Toluene (CAS 108-88-3) | 35 %WV |

**DEA Exempt Chemical Mixtures Code Number**

|                        |      |
|------------------------|------|
| Acetone (CAS 67-64-1)  | 6532 |
| Toluene (CAS 108-88-3) | 594  |

**Food and Drug Administration (FDA)** Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

|                          |                        |
|--------------------------|------------------------|
| <b>Section 311/312</b>   | Immediate Hazard - Yes |
| <b>Hazard categories</b> | Delayed Hazard - Yes   |
|                          | Fire Hazard - Yes      |
|                          | Pressure Hazard - No   |
|                          | Reactivity Hazard - No |

|                                               |    |
|-----------------------------------------------|----|
| <b>SARA 302 Extremely hazardous substance</b> | No |
|-----------------------------------------------|----|

**US state regulations**

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. New Jersey Worker and Community Right-to-Know Act**

3-Methylhexane (CAS 589-34-4)  
Acetone (CAS 67-64-1)  
Methylcyclohexane (CAS 108-87-2)  
n-Heptane (CAS 142-82-5)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
Methanol (CAS 67-56-1)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)

**US. Massachusetts RTK - Substance List**

3-Methylhexane (CAS 589-34-4)  
Acetone (CAS 67-64-1)  
Cyclohexane (CAS 110-82-7)  
Methanol (CAS 67-56-1)  
Methylcyclohexane (CAS 108-87-2)  
n-Heptane (CAS 142-82-5)  
Toluene (CAS 108-88-3)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Acetone (CAS 67-64-1)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
Methanol (CAS 67-56-1)  
Toluene (CAS 108-88-3)  
3-Methylhexane (CAS 589-34-4)  
Methylcyclohexane (CAS 108-87-2)  
n-Heptane (CAS 142-82-5)  
n-Hexane (CAS 110-54-3)

**US. Rhode Island RTK**

Acetone (CAS 67-64-1)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
Methanol (CAS 67-56-1)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

|                             |                           |
|-----------------------------|---------------------------|
| Benzene (CAS 71-43-2)       | Listed: February 27, 1987 |
| Cumene (CAS 98-82-8)        | Listed: April 6, 2010     |
| Ethanal (CAS 75-07-0)       | Listed: April 1, 1988     |
| Ethylbenzene (CAS 100-41-4) | Listed: June 11, 2004     |

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

|                        |                           |
|------------------------|---------------------------|
| Benzene (CAS 71-43-2)  | Listed: December 26, 1997 |
| Methanol (CAS 67-56-1) | Listed: March 16, 2012    |
| Toluene (CAS 108-88-3) | Listed: January 1, 1991   |

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**

|                        |                        |
|------------------------|------------------------|
| Toluene (CAS 108-88-3) | Listed: August 7, 2009 |
|------------------------|------------------------|

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

|                       |                           |
|-----------------------|---------------------------|
| Benzene (CAS 71-43-2) | Listed: December 26, 1997 |
|-----------------------|---------------------------|

**Volatile organic compounds (VOC) regulations****EPA**

**VOC content (40 CFR 51.100(s))** 90 %

**Consumer products (40 CFR 59, Subpt. C)** Not regulated

**State**

**Consumer products** This product is regulated as a Brake Cleaner. This product is not compliant to be sold for use in California, Connecticut, Delaware, the District of Columbia, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island and parts of Utah and Virginia. This product is compliant in all other states.

**VOC content (CA)** 90 %

**VOC content (OTC)** 90 %

**International Inventories**

| Country(s) or region        | Inventory name                                                         | On inventory (yes/no)* |
|-----------------------------|------------------------------------------------------------------------|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | No                     |
| Canada                      | Domestic Substances List (DSL)                                         | No                     |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | Yes                    |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | No                     |
| Korea                       | Existing Chemicals List (ECL)                                          | Yes                    |
| New Zealand                 | New Zealand Inventory                                                  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

|                            |             |
|----------------------------|-------------|
| <b>Issue date</b>          | 08-14-2014  |
| <b>Revision date</b>       | 08-27-2014  |
| <b>Prepared by</b>         | Allison Cho |
| <b>Version #</b>           | 02          |
| <b>Further information</b> | CRC # 483A  |

**HMIS® ratings**

Health: 3\*  
Flammability: 3  
Physical hazard: 0  
Personal protection: B

**NFPA ratings**

Health: 3  
Flammability: 3  
Instability: 0

**NFPA ratings****Disclaimer**

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