



# SAFETY DATA SHEET

## 1. Identification

|   |  |
|---|--|
| <b>Product identifier</b>                                     | <b>Brakleen® Brake Parts Cleaner - 3.78 L</b>                                  |
| <b>Other means of identification</b>                          |  |
| <b>Product Code</b>   | No. 75090 (Item# 1006336)  |
| <b>Recommended use</b>  | Brake parts cleaner  |
| <b>Recommended restrictions</b>                               | None known.  |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |  |
| <b>Manufactured or sold by:</b>                               |  |
| <b>Company name</b>   | CRC Canada Co.   |
| <b>Address</b>  | 83 Galaxy Blvd<br>Unit 35 - 37<br>Toronto, ON M9W 5X6<br>Canada                |
| <b>Telephone</b>  |  |
| <b>General Information</b>                                    | 416-847-7750   |
| <b>24-Hour Emergency (CHEMTREC)</b>                           | 800-424-9300 (Canada)  |
| <b>Website</b>  | <a href="http://www.crc-canada.ca">www.crc-canada.ca</a>                       |
| <b>E-mail</b>   | <a href="mailto:Support.CA@crcindustries.com">Support.CA@crcindustries.com</a> |

## 2. Hazard identification

|                              |  |                             |
|------------------------------|--|-----------------------------|
| <b>Physical hazards</b>      | Not classified.  |                             |
| <b>Health hazards</b>        | Skin corrosion/irritation                              | Category 2                  |
|                              | Serious eye damage/eye irritation                      | Category 2B                 |
|                              | Sensitization, skin                                    | Category 1B                 |
|                              | Carcinogenicity (inhalation)                           | Category 1B                 |
|                              | Specific target organ toxicity, single exposure        | Category 3 narcotic effects |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, long-term hazard | Category 2                  |

### Label elements



|                                |   |
|--------------------------------|---|
| <b>Signal word</b>             | Danger  |
| <b>Hazard statement</b>        | Causes skin irritation. May cause an allergic skin reaction. Causes eye irritation. May cause drowsiness or dizziness. May cause cancer by inhalation. Toxic to aquatic life with long lasting effects.   |
| <b>Precautionary statement</b> |   |
| <b>Prevention</b>              | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid release to the environment.   |
| <b>Response</b>                | IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. 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 advice/attention. IF exposed or concerned: Get medical advice/attention. Collect spillage. |

|                                 |   |
|---------------------------------|---|
| <b>Storage</b>                  | Store in a well-ventilated place. Keep container tightly closed. Store locked up.   |
| <b>Disposal</b>                 | Dispose of contents/container in accordance with local/regional/national/international regulations.   |
| <b>Other hazards</b>            | None known.   |
| <b>Supplemental information</b> | When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene. |

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name       | Common name and synonyms | CAS number | %        |
|---------------------|--------------------------|------------|----------|
| tetrachloroethylene | perchloroethylene        | 127-18-4   | 80 - 100 |

The exact percentage (concentration) of composition has been withheld as a trade secret.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

|   |  |
|---|--|
| <b>Inhalation</b>   | 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.  |
| <b>Skin contact</b>   | Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.  |
| <b>Eye contact</b>  | 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. Rinse mouth. Get medical attention if symptoms occur.        |
| <b>Ingestion</b>  | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. |
| <b>Most important symptoms/effects, acute and delayed</b>                     | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. 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. Wash contaminated clothing before reuse.   |

### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).  |
| <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>                    | 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 hydrogen chloride and possibly phosgene. |
| <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>                          | Move containers from fire area if you can do so without risk.   |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.  |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

### 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. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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>               | Prevent product from entering drains.<br><br>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.   |

**Environmental precautions** Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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## 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. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

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## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

| Components                         | Type | Value   |
|------------------------------------|------|---------|
| tetrachloroethylene (CAS 127-18-4) | STEL | 100 ppm |
|                                    | TWA  | 25 ppm  |

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

| Components                         | Type | Value               |
|------------------------------------|------|---------------------|
| tetrachloroethylene (CAS 127-18-4) | STEL | 678 mg/m3           |
|                                    |      | 100 ppm             |
|                                    | TWA  | 170 mg/m3<br>25 ppm |

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

| Components                         | Type | Value   |
|------------------------------------|------|---------|
| tetrachloroethylene (CAS 127-18-4) | STEL | 100 ppm |
|                                    | TWA  | 25 ppm  |

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

| Components                         | Type | Value   |
|------------------------------------|------|---------|
| tetrachloroethylene (CAS 127-18-4) | STEL | 100 ppm |
|                                    | TWA  | 25 ppm  |

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

| Components                         | Type | Value   |
|------------------------------------|------|---------|
| tetrachloroethylene (CAS 127-18-4) | STEL | 100 ppm |
|                                    | TWA  | 25 ppm  |

#### Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

| Components                         | Type | Value               |
|------------------------------------|------|---------------------|
| tetrachloroethylene (CAS 127-18-4) | STEL | 685 mg/m3           |
|                                    |      | 100 ppm             |
|                                    | TWA  | 170 mg/m3<br>25 ppm |

#### Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

| Components                         | Type      | Value   |
|------------------------------------|-----------|---------|
| tetrachloroethylene (CAS 127-18-4) | 15 minute | 100 ppm |

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

| Components | Type   | Value  |
|------------|--------|--------|
|            | 8 hour | 25 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Components                         | Value    | Determinant         | Specimen        | Sampling Time |
|------------------------------------|----------|---------------------|-----------------|---------------|
| tetrachloroethylene (CAS 127-18-4) | 0.5 mg/l | Tetrachloroethylene | Blood           | *             |
|                                    | 3 ppm    | Tetrachloroethylene | End-exhaled air | *             |

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

**Appropriate engineering controls**

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 should 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. Viton/butyl. Polyvinyl alcohol (PVA). Silver Shield®.

**Other**

Wear appropriate chemical resistant clothing. Wear suitable protective clothing.

**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**

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.

**9. Physical and chemical properties**

**Appearance**

**Physical state**

Liquid.

**Form**

Liquid.

**Color**

Colorless.

**Odor**

Irritating.

**Odor threshold**

50 ppm

**pH**

Not available.

**Melting point/freezing point**

-8.1 °F (-22.3 °C) estimated

**Initial boiling point and boiling range**

250.3 °F (121.3 °C) estimated

**Flash point**

None.

**Evaporation rate**

Very fast.

**Flammability (solid, gas)**

Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)**

12 % estimated

**Flammability limit - upper (%)**

29 % estimated

**Vapor pressure**

13 mm Hg (68 °F (20 °C))

**Vapor density**

5.76 (air = 1)

**Relative density**

1.62

**Solubility(ies)**

**Solubility (water)**

0.02 % (77 °F (25 °C))

|  |                 |
|--|-----------------|
| <b>Partition coefficient (n-octanol/water)</b> | 2.88            |
| <b>Auto-ignition temperature</b>               | Not available.  |
| <b>Decomposition temperature</b>               | Not available.  |
| <b>Viscosity</b>                               | Not available.  |
| <b>Other information</b>                       |                 |
| <b>Percent volatile</b>                        | 100 % estimated |

## 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>                | Keep away from heat, hot surfaces, 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 hydrogen chloride and possibly phosgene. Contact with incompatible materials. |
| <b>Incompatible materials</b>             | Strong oxidizing agents.  |
| <b>Hazardous decomposition products</b>   | Carbon oxides. Hydrogen chloride. Chlorine. Phosgene.   |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause cancer by inhalation. Prolonged inhalation may be harmful. |
| <b>Skin contact</b> | Causes skin irritation. May cause an allergic skin reaction.   |
| <b>Eye contact</b>  | Causes eye irritation.   |
| <b>Ingestion</b>    | Expected to be a low ingestion hazard.   |

**Symptoms related to the physical, chemical and toxicological characteristics** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute toxicity** Not known.

| Product | Species | Test Results |
|---------|---------|--------------|
|---------|---------|--------------|

Brakleen® Brake Parts Cleaner - 3.78 L

#### Acute

#### Inhalation

|      |     |                    |
|------|-----|--------------------|
| LC50 | Rat | > 20 mg/l, 4 hours |
|------|-----|--------------------|

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes eye irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** May cause cancer.

#### ACGIH Carcinogens

|                                    |  |
|------------------------------------|--|
| tetrachloroethylene (CAS 127-18-4) | A3 Confirmed animal carcinogen with unknown relevance to humans. |
|------------------------------------|--|

#### Canada - Manitoba OELs: carcinogenicity

|                                    |   |
|------------------------------------|---|
| tetrachloroethylene (CAS 127-18-4) | Confirmed animal carcinogen with unknown relevance to humans. |
|------------------------------------|---|

#### Canada - Quebec OELs: Carcinogen category

|                                    |  |
|------------------------------------|--|
| tetrachloroethylene (CAS 127-18-4) | Detected carcinogenic effect in animals. |
|------------------------------------|--|

#### IARC Monographs. Overall Evaluation of Carcinogenicity

|                                    |                                     |
|------------------------------------|-------------------------------------|
| tetrachloroethylene (CAS 127-18-4) | 2A Probably carcinogenic to humans. |
|------------------------------------|-------------------------------------|

## US. National Toxicology Program (NTP) Report on Carcinogens

tetrachloroethylene (CAS 127-18-4)

Reasonably Anticipated to be a Human Carcinogen.

|   |  |
|---|--|
| <b>Reproductive toxicity</b>                              | This product is not expected to cause reproductive or developmental effects.       |
| <b>Specific target organ toxicity - single exposure</b>   | May cause drowsiness and dizziness.  |
| <b>Specific target organ toxicity - repeated exposure</b> | Not classified.  |
| <b>Aspiration hazard</b>                                  | Not an aspiration hazard.  |
| <b>Chronic effects</b>                                    | Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. |

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## 12. Ecological information

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

| Components                         | Species   | Test Results           |
|------------------------------------|---|------------------------|
| tetrachloroethylene (CAS 127-18-4) |   |                        |
| <b>Aquatic</b>                     |   |                        |
| Crustacea                          | EC50 Water flea (Daphnia magna)                           | 6.1 - 9 mg/l, 48 hours |
| Fish                               | LC50 Rainbow trout, donaldson trout (Oncorhynchus mykiss) | 4.82 mg/l, 96 hours    |

**Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.

### Bioaccumulative potential

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

|  |      |
|--|------|
| Brakleen® Brake Parts Cleaner - 3.78 L | 2.88 |
| tetrachloroethylene                    | 3.4  |

**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.

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## 13. Disposal considerations

**Disposal instructions** 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 of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

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

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## 14. Transport information

### TDG

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1897  |
| <b>UN proper shipping name</b>      | TETRACHLOROETHYLENE, Limited Quantity                                   |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 6.1(PGIII)  |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        | Yes, but exempt from the regulations.                                   |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |

### IATA

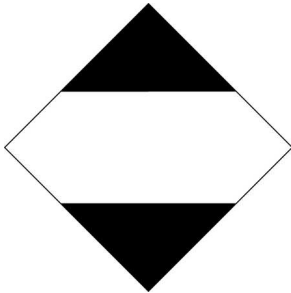
|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1897  |
| <b>UN proper shipping name</b>      | Tetrachloroethylene   |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 6.1(PGIII)  |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | III   |
| <b>ERG Code</b>                     | 6L  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |

**Other information**

**Passenger and cargo aircraft** Allowed with restrictions.  
**Cargo aircraft only** Allowed with restrictions.

**IMDG**

**UN number** UN1897  
**UN proper shipping name** TETRACHLOROETHYLENE, Limited Quantity  
**Transport hazard class(es)**  
**Class** 6.1(PGIII)  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes, but exempt from the regulations.  
**EmS** F-A, S-A  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IATA****IMDG; TDG**

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**15. Regulatory information**

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Canada. Excluded VOCs. Guidelines for Volatile Organic Compounds in Consumer Products. CEPA 1999. Environment Canada, as amended**

tetrachloroethylene (CAS 127-18-4)

**Controlled Drugs and Substances Act**

Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)**

tetrachloroethylene (CAS 127-18-4)

**Precursor Control Regulations**

Not regulated.

**International regulations**

**Stockholm Convention**

Not applicable.



**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

| <b>Country(s) or region</b> | <b>Inventory name</b>  | <b>On inventory (yes/no)*</b> |
|-----------------------------|--|-------------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | Yes                           |
| Canada                      | Domestic Substances List (DSL)   | Yes                           |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                            |
| 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)               | Yes                           |
| Korea                       | Existing Chemicals List (ECL)  | Yes                           |
| New Zealand                 | New Zealand Inventory  | Yes                           |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                           |
| Taiwan                      | Taiwan Chemical Substance Inventory (TCSI)                             | 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**

|                             |  |
|-----------------------------|--|
| <b>Issue date</b>           | 03-28-2019   |
| <b>Version #</b>            | 01   |
| <b>Further information</b>  | CRC # 491G/1002481   |
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| <b>Revision information</b> | This document has undergone significant changes and should be reviewed in its entirety.  |