1. Identification

Product identifier: Brakleen® Brake Parts Cleaner - 29 oz

Other means of identification

Product Code: No. 05089PS (Item# 1008012)

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: 215-674-4300
General Information: 800-521-3168
Technical Assistance: 800-272-4620
Customer Service: 800-424-9300 (US)

24-Hour Emergency (CHEMTREC): 800-424-9300 (US)
Website: www.crcindustries.com

2. Hazard(s) identification

Physical hazards: Gases under pressure, Compressed gas

Health hazards: Skin corrosion/irritation, Category 2
Serious eye damage/eye irritation, Category 2B
Sensitization, skin, Category 1B
Carcinogenicity, Category 1B
Specific target organ toxicity, single exposure, Category 3 narcotic effects

Environmental hazards: Hazardous to the aquatic environment, acute hazard, Category 2
Hazardous to the aquatic environment, long-term hazard, Category 2

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Contains gas under pressure; may explode if heated. Causes skin irritation. May cause an allergic skin reaction. Causes eye irritation. May cause drowsiness or dizziness. May cause cancer.

Precautionary statement

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Use with adequate ventilation. 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. Avoid breathing mist/vapors. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.
3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>tetrachloroethylene</td>
<td>perchloroethylene</td>
<td>127-18-4</td>
<td>90-100</td>
</tr>
<tr>
<td>carbon dioxide</td>
<td></td>
<td>124-38-9</td>
<td>1-3</td>
</tr>
</tbody>
</table>

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

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.

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

In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.

Most important symptoms/effects, acute and delayed


Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

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

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Dry chemical, CO2, or water spray.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Contents under pressure. Pressurized container may rupture when exposed to heat or flame. 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.

Special protective equipment and precautions for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire-fighting equipment/instructions

In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

General fire hazards

Contents under pressure. Pressurized container may rupture when exposed to heat or flame.
6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Collect spillage. 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. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. 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. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

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. Pressurized container: Do not pierce or burn, even after use. Use with adequate ventilation. 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 use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Do not empty into drains. Observe good industrial hygiene practices. For product usage instructions, see the product label.

Conditions for safe storage, including any incompatibilities
Level 1 Aerosol.

Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Protect from sunlight. Store in a well-ventilated place. Store in cool place. Exposure to high temperature may cause can to burst. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>carbon dioxide (CAS 124-38-9)</td>
<td>PEL</td>
<td>9000 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5000 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-2 (29 CFR 1910.1000) Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>tetrachloroethylene (CAS 127-18-4)</td>
<td>Ceiling</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>carbon dioxide (CAS 124-38-9)</td>
<td>STEL</td>
<td>30000 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5000 ppm</td>
</tr>
</tbody>
</table>
### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>tetrachloroethylene (CAS 127-18-4)</td>
<td>STEL</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>carbon dioxide (CAS 124-38-9)</td>
<td>STEL</td>
<td>54000 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>30000 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000 ppm</td>
<td>tetrachloroethylene (CAS 127-18-4)</td>
</tr>
<tr>
<td>9000 mg/m³</td>
<td>tetrachloroethylene (CAS 127-18-4)</td>
</tr>
</tbody>
</table>

### Biological limit values

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>tetrachloroethylene (CAS 127-18-4)</td>
<td>0.5 mg/l</td>
<td>Tetrachloroethylene</td>
<td>Blood</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>3 ppm</td>
<td>Tetrachloroethylene</td>
<td>End-exhaled air</td>
<td>*</td>
</tr>
</tbody>
</table>

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

### Exposure guidelines

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

- **tetrachloroethylene (CAS 127-18-4)**
  - Skin designation applies.

### 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. Provide eyewash station.**

### 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.

- **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

- Observe any medical surveillance requirements. When using do not 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. Contaminated work clothing should not be allowed out of the workplace.

### 9. Physical and chemical properties

#### Appearance

- **Physical state**: Liquid.
- **Form**: Aerosol.
- **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 (%)
 .Flammability limit - upper (%)
Vapor pressure  1428.3 hPa estimated
Vapor density  5.76 (air = 1)
Relative density  1.62
Solubility(ies)
  Solubility (water)  0.02 % (77 °F (25 °C))
Partition coefficient
  (n-octanol/water)  Not available.
Auto-ignition temperature  Not available.
Decomposition temperature  Not available.
Viscosity  Not available.
Percent volatile  97.8 % estimated
Other information
  Partition coefficient
  (oil/water)  2.88

10. Stability and reactivity
Reactivity  The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability  Material is stable under normal conditions.
 Possibility of hazardous reactions  No dangerous reaction known under conditions of normal use.
Conditions to avoid  Heat, flames and sparks. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.

11. Toxicological information
Information on likely routes of exposure
Inhalation  May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact  Causes skin irritation. May cause an allergic skin reaction.
Eye contact  Causes eye irritation.
Ingestion  Based on available data, the classification criteria are not met.
Symptoms related to the physical, chemical and toxicological characteristics  May cause drowsiness or 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.
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.

IARC Monographs. Overall Evaluation of Carcinogenicity

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

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

tetrachloroethylene (CAS 127-18-4) Reasonably Anticipated to be a Human Carcinogen.

12. Ecological information

Ecotoxicity

Toxic to aquatic life with long lasting effects.

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)

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.

13. Disposal considerations

Disposal instructions

This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. 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

D039: Waste Tetrachloroethylene
F001: Waste Halogenated Solvent - Spent Halogenated Solvent Used in Degreasing
F002: Waste Halogenated Solvent - Spent Halogenated Solvent

US RCRA Hazardous Waste U List: Reference

tetrachloroethylene (CAS 127-18-4) U210

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.

14. Transport information

DOT

UN number UN1950
UN proper shipping name Aerosols, poison, Limited Quantity
Transport hazard class(es)

Class 2.2
Subsidiary risk 6.1(PGIII)
Label(s) 2.2, 6.1
Packing group Not applicable.
Special precautions for user Forbidden from transportation by air.
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

IATA

UN number UN1950
UN proper shipping name Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III
Transport hazard class(es)

Class: 2.2
Subsidiary risk: 6.1(PGIII)
Packing group: Not applicable.
ERG Code: 2P

Special precautions for user: 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: UN1950
UN proper shipping name: AEROSOLS

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
- tetrachloroethylene (CAS 127-18-4)

CERCLA Hazardous Substance List (40 CFR 302.4)
- tetrachloroethylene (CAS 127-18-4)

CERCLA Hazardous Substances: Reportable quantity
- tetrachloroethylene (CAS 127-18-4) 100 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.

Other federal regulations

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**
- tetrachloroethylene (CAS 127-18-4)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**
Not regulated.

**Safe Drinking Water Act (SDWA)**
Contains component(s) regulated under the Safe Drinking Water Act.

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

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**
- Classified hazard categories
  - Gas under pressure
  - Skin corrosion or irritation
  - Serious eye damage or eye irritation
  - Respiratory or skin sensitization
  - Carcinogenicity
  - Specific target organ toxicity (single or repeated exposure)

**SARA 302 Extremely hazardous substance**
- Not listed.

**SARA 311/312 Hazardous chemical**
- Yes

**SARA 313 (TRI reporting)**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>tetrachloroethylene</td>
<td>127-18-4</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

**US state regulations**

**US. New Jersey Worker and Community Right-to-Know Act**
- carbon dioxide (CAS 124-38-9)
- tetrachloroethylene (CAS 127-18-4)

**US. Massachusetts RTK - Substance List**
- carbon dioxide (CAS 124-38-9)
- tetrachloroethylene (CAS 127-18-4)

**US. Pennsylvania Worker and Community Right-to-Know Law**
- carbon dioxide (CAS 124-38-9)
- tetrachloroethylene (CAS 127-18-4)

**US. Rhode Island RTK**
- carbon dioxide (CAS 124-38-9)
- tetrachloroethylene (CAS 127-18-4)

**California Proposition 65**

**WARNING:** Cancer - www.P65Warnings.ca.gov

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**
- carbon tetrachloride (CAS 56-23-5) Listed: October 1, 1987
- tetrachloroethylene (CAS 127-18-4) Listed: April 1, 1988

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**
- tetrachloroethylene (CAS 127-18-4)

**Volatile organic compounds (VOC) regulations**

**EPA**
- VOC content (40 CFR 51.100(s)) 0 %
- 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 and New Jersey. This product is compliant in all other states.
VOC content (CA) 0 %
VOC content (OTC) 0 %

International Inventories

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

*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

Issue date 03-12-2019
Revision date 09-15-2020
Prepared by Allison Yoon
Version # 03
Further information CRC # 491G/1002481

Disclaimer
The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

Revision information This document has undergone significant changes and should be reviewed in its entirety.