



SAFETY DATA SHEET

1. Identification

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|---|---|
| Product identifier | Brakleen® Brake Parts Cleaner |
| Other means of identification | |
| Product code | 05089, 05089T, 85089, 85089AZ |
| Recommended use | Brake 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

| | | |
|------------------------------|--|-----------------------------|
| Physical hazards | Gases under pressure | Compressed gas |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2B |
| | Carcinogenicity | Category 1 |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| | Specific target organ toxicity, repeated exposure | Category 2 |
| Environmental hazards | Hazardous to the aquatic environment, acute hazard | Category 3 |
| | Hazardous to the aquatic environment, long-term hazard | Category 1 |
| OSHA defined hazards | Not classified. | |

Label elements



| | |
|--------------------------------|---|
| Signal word | Danger |
| Hazard statement | Contains gas under pressure; may explode if heated. Causes skin irritation. Causes eye irritation. May cause drowsiness or dizziness. May cause cancer. May cause damage to organs through prolonged or repeated exposure. |
| 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. Do not breathe gas. Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. |
| Response | If on skin: Wash with plenty of 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. 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 attention. If exposed or concerned: Get medical attention. |

Storage Store in a well-ventilated place. Store locked up. Protect from sunlight. Exposure to high temperature may cause can to burst.

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

Hazard(s) not otherwise classified (HNOC) Harmful to aquatic life. Very toxic to aquatic life with long lasting effects.

Supplemental information

2.33% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 2.33% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 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 | 90 - 100 |
| Carbon dioxide | | 124-38-9 | 1 - 5 |

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. Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

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 Rinse mouth. Do not induce vomiting. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed Irritation of eyes and mucous membranes. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged exposure may cause chronic effects. May cause drowsiness or dizziness.

Indication of immediate medical attention and special treatment needed Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. If burn is present, treat as any thermal burn, after decontamination. Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote.

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

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Contents under pressure. Exposure to high temperature may cause can to burst. 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. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. 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.

Methods and materials for containment and cleaning up 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. Collect spillage. Following product recovery, flush area with water.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. 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. Do not breathe mist or vapor. Do not breathe gas. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. 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. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. 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. Observe good industrial hygiene practices. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Store in a well-ventilated place. Store in a cool, dry place out of direct sunlight. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Exposure to high temperature may cause can to burst.

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components | Type | Value |
|-------------------------------|------|------------------------|
| Carbon dioxide (CAS 124-38-9) | PEL | 9000 mg/m ³ |
| | | 5000 ppm |

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

| Components | Type | Value |
|------------------------------------|---------|---------|
| Tetrachloroethylene (CAS 127-18-4) | Ceiling | 200 ppm |
| | TWA | 100 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|------------------------------------|------|-----------|
| Carbon dioxide (CAS 124-38-9) | STEL | 30000 ppm |
| | TWA | 5000 ppm |
| Tetrachloroethylene (CAS 127-18-4) | STEL | 100 ppm |
| | TWA | 25 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|-------------------------------|------|------------------------------------|
| Carbon dioxide (CAS 124-38-9) | STEL | 54000 mg/m ³ |
| | | 30000 ppm |
| | TWA | 9000 mg/m ³ 5000 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.

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. Provide eyewash station.

Individual protection measures, such as personal protective equipment

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|---------------------------------------|--|
| Eye/face protection | Wear eye/face protection. Wear safety glasses with side shields (or goggles). |
| Skin protection | |
| Hand protection | Wear protective gloves such as: Polyvinyl alcohol (PVA). Teflon. Viton®. Ethyl vinyl alcohol laminate (EVAL). |
| Other | Wear appropriate chemical resistant clothing. |
| Respiratory protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Air monitoring is needed to determine actual employee exposure levels. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | Keep away from food and drink. 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

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|---|-------------------------------|
| 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 (Tag Closed Cup) |
| Evaporation rate | Very fast. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Vapor pressure | 1352.4 hPa estimated |
| Vapor density | 5.76 (air = 1) |
| Relative density | 1.62 |
| 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 (kinematic) | Not available. |
| Percent volatile | 97.7 % estimated |
| Other information | |
| Partition coefficient (oil/water) | 2.88 |

10. Stability and reactivity

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| 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 | 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. |
| Incompatible materials | Strong oxidizing agents. Metals. Powdered metal. Amines. Strong bases. |
| Hazardous decomposition products | Hydrogen chloride. Trace amounts of chlorine and phosgene. |

11. Toxicological information

Information on likely routes of exposure

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|---------------------|--|
| Ingestion | Single dose oral toxicity is considered to be extremely low. Swallowing large amounts may cause injury if aspirated into the lungs. This may be rapidly absorbed through the lungs and result in injury to other body systems. |
| Inhalation | Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful. May cause damage to organs by inhalation. |
| Skin contact | Causes skin irritation. |
| Eye contact | Causes eye irritation. |

Symptoms related to the physical, chemical and toxicological characteristics Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Irritant effects.

Information on toxicological effects

Acute toxicity Narcotic effects.

| Product | Species | Test Results |
|-------------------------------|---------|-----------------------------------|
| Brakleen® Brake Parts Cleaner | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 3305.1284 mg/kg estimated |
| <i>Inhalation</i> | | |
| LC50 | Rat | 4197.9639 mg/l, 6 Hours estimated |
| <i>Oral</i> | | |
| LD50 | Rat | 2691.8162 mg/kg estimated |

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

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.

US. National Toxicology Program (NTP) Report on Carcinogens

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

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Narcotic effects.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard May be an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

| Product | Species | Test Results |
|------------------------------------|----------------|--|
| Brakleen® Brake Parts Cleaner | | |
| <i>Acute</i> | | |
| Fish | LC50 | Fish 20.7168 mg/l, 96 hours estimated |
| Components | Species | Test Results |
| Tetrachloroethylene (CAS 127-18-4) | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Fish | LC50 | Bluegill (Lepomis macrochirus) 12.9 mg/l, 96 hours |

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) | |
| Tetrachloroethylene | 2.88 |
| 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

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| Disposal of waste from residues / unused products | This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. 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 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 | Not available. |

14. Transport information

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|-------------------------------------|---|
| DOT | |
| UN number | UN1950 |
| UN proper shipping name | Aerosols, non-flammable, limited quantity, MARINE POLLUTANT |
| Transport hazard class(es) | |
| Class | 2.2 |
| Subsidiary risk | 6.1 |
| Label(s) | 2.2, 6.1 |
| Packing group | Not applicable. |
| Environmental hazards | |
| Marine pollutant | Yes |
| Special precautions for user | Not available. |
| 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, Limited Quantity |
| Transport hazard class(es) | |
| Class | 2.2 |
| Subsidiary risk | 6.1 |
| Packing group | Not applicable. |
| Environmental hazards | No. |
| ERG Code | 2P |
| Special precautions for user | Not available. |
| Other information | |
| Passenger and cargo aircraft | Allowed. |
| Cargo aircraft only | Allowed. |
| IMDG | |
| UN number | UN1950 |
| UN proper shipping name | AEROSOLS, MARINE POLLUTANT |
| Transport hazard class(es) | |
| Class | 2 |
| Subsidiary risk | 6.1 |
| Packing group | Not applicable. |
| Environmental hazards | |
| Marine pollutant | Yes |
| EmS | Not available. |
| Special precautions for user | Not available. |

15. Regulatory information

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

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.

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) Not regulated.**Food and Drug Administration (FDA)** Not regulated.**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

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

SARA 302 Extremely hazardous substance No**US state regulations****US. New Jersey RTK - Substances: Listed substance**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 RTK - Hazardous Substances**Carbon dioxide (CAS 124-38-9)
Tetrachloroethylene (CAS 127-18-4)**US. Rhode Island RTK**

Tetrachloroethylene (CAS 127-18-4)

US. California Proposition 65

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

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

Tetrachloroethylene (CAS 127-18-4) Listed: April 1, 1988

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**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| 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 |
| 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

| | |
|----------------------------|--|
| Issue date | 12-20-2013 |
| Prepared by | Allison Cho |
| Version # | 01 |
| Further information | CRC # 491G |
| HMIS® ratings | Health: 2* Flammability: 0 Physical hazard: 0 Personal protection: B |
| NFPA ratings | Health: 2 Flammability: 0 Instability: 0 |
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