



# Material Safety Data Sheet

## Section 1 – Product and Company Identification

**Product Name:** Brake Parts Cleaner  
**Product Synonym:** 5C-4  
**Product Numbers:** 1401, 1405, 1455  
**Product Description:** Non-flammable brake cleaner

**Manufacturer:** Berryman Products, Inc.  
3800 E Randol Mill Rd  
Arlington, TX 76011  
(800) 433-1704 within USA  
(817) 640-2376 outside USA  
www.BerrymanProducts.com

**Emergency Contact:** Infotrac, Inc., (800) 535-5053

## Section 2 – Hazards Identification

**Emergency Overview:** Vapor harmful. May cause eye and skin irritation. Possible carcinogen.

**Routes of Exposure:** Ingestion, inhalation, eye contact, skin contact

### Possible Health Hazards

**Eyes:** May cause moderate to severe irritation and result in blurred vision and corneal injury.

**Skin:** May cause mild to moderate irritation of the skin. Prolonged or repeated contact may dry the skin and result in severe irritation, dermatitis, and effects similar to those of chronic overexposure by way of inhalation.

**Inhalation:** Acute overexposure may rapidly result in headache, dizziness, nausea, unconsciousness, irregular heartbeat, and death. Chronic overexposure or intentional abuse may adversely affect the liver, kidneys, lungs, blood, brain, and hearing and result in death. May aggravate emphysema and bronchitis and cause cancer.

**Ingestion:** Accidental ingestion and subsequent aspiration of even small quantities may cause lung damage, aspiration pneumonitis, cyanosis, and death. Ingestion of larger amounts may also include gastrointestinal effects, such as abdominal discomfort, pain, nausea, and vomiting.

**Supplemental Information:** See “Section 11 – Toxicological Information” for additional information.

## Section 3 – Composition / Information on Ingredients

<u>Ingredient</u>	<u>CAS Number</u>	<u>Weight</u>
Dichloromethane	75-09-2	60-70%
Tetrachloroethylene	127-18-4	5-15%
Toluene	108-88-3	20-30%

## Section 4 – First Aid Measures

**Eye Contact:** Immediately flush eyes with water for at least 15 minutes, holding the eyelids apart at regular intervals to ensure complete irrigation. Dispose of contaminated contact lenses. Seek medical attention immediately.

**Skin Contact:** Remove contaminated clothing, and wash affected areas of body thoroughly with soap and water. Allow clothing to air dry, and launder before reuse. Seek medical attention if irritation persists.

**Inhalation:** If breathing difficulties occur, immediately remove source of exposure or move victim to fresh air and administer oxygen, if necessary. Do *not* administer epinephrine (or “epipen”), if possible. If symptoms persist, seek immediate medical attention. If breathing stops, give artificial respiration and seek immediate medical attention.

**Ingestion:** Do *not* induce vomiting unless otherwise directed by a medical professional. Dilute stomach contents by drinking 1-2 cups of milk or water. Seek medical attention immediately.

## Section 5 – Firefighting Measures

**Flash Point and Method:** none by Setaflash closed-cup tester

**Flammability Limits (composite):** Lower – N/A Upper – N/A

**Suitable Extinguishing Media:** All, including water fog, foam, dry chemical, and carbon dioxide

**Unsuitable Extinguishing Media:** N/A

**Protective Equipment:** Employ SBCA and full protective gear, including shield, as product is comprised of hazardous low-boiling solvents and may vent, rupture, or explode violently at elevated temperatures.

**Specific Procedures:** Product may present explosion hazards at elevated temperatures. Move product from area if possible without risk of injury. Use water spray to cool containers.

## Section 6 – Accidental Release Measures

**General Remediation Overview:** Vapor dangerous and intoxicating! Thoroughly ventilate area!

**Personal Precautions:** Avoid unnecessary contact with product.

**Environmental Precautions:** Prevent further loss of product if safely possible.

**Methods for Containment:** Use booms or other barriers as necessary to prevent further loss.

**Methods for Cleaning Up:** For small spills, quickly mop up or absorb with inert material, such as corn cob, cellulose, or vermiculite. For large spills, pump or transfer material into containers for recovery and use absorbent material for collection of unrecoverable product. Ensure thorough ventilation of the local area to prevent the accumulation of dangerous and intoxicating vapors.

## Section 7 – Handling and Storage

**Handling:** Avoid contact with skin and eyes. Wash hands thoroughly after use.

**Storage:** Store in cool, dry location. Do not store in plastic or aluminum containers.

## Section 8 – Exposure Controls / Personal Protection

<u>Ingredient</u>	<u>Exposure Limit</u>	<u>Source</u>
Dichloromethane	25 ppm	OSHA
Tetrachloroethylene	25 ppm	ACGIH
Toluene	20 ppm	ACGIH

**Engineering Controls:** Use outside with adequate ventilation to minimize exposure. If necessary, employ positive cross-ventilation to reduce accumulation of vapor.

**Respiratory Protection:** If necessary, use respiratory protection sufficient to reduce exposure to permissible limits.

**Eye Protection:** Use of safety goggles or glasses with wrap-around lens or goggles is recommended.

**Skin Protection:** Employment of impermeable gloves is recommended.

**Other Protection:** For industrial settings, combination safety shower with eye wash station is recommended.

## Section 9 – Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Clear, colorless liquid

**Odor:** Moderate, sweet, aromatic

**Freezing Point:** <10°F (approximate)

**Boiling Range:** 104-250°F (approximate)

**Flash Point:** None by Setaflash closed-cup tester

**Specific Gravity:** 1.20-1.22 at 68°F

**pH:** N/A, as supplied

**Solubility in Water:** Negligible

**Volatile Content:** 100%

**Evaporation Rate:** Faster than water

**Vapor Density:** Heavier than air

**Vapor Pressure:** 5 PSI at 68°F

**VOC Content:** 22% by weight (260 g/L) (by EPA Method 24)

**VOC Composite Partial Pressure, PP<sub>c</sub>:** 8 mm Hg at 68°F (as calculated by SCAQMD Rule 1171(B)(57))

## Section 10 – Stability and Reactivity

**Chemical Stability:** Stable under normal conditions

**Incompatible Materials:** Acids, strong oxidizers, and powdered zinc, aluminum, magnesium, and sodium

**Hazardous Decomposition Products:** None under normal conditions of use. Thermal decomposition may yield carbon monoxide, carbon dioxide, organic oxygenates, hydrogen chloride, chlorine, and phosgene.

**Possibility of Hazardous Reactions:** Negligible

## Section 11 – Toxicological Information

**General Information:** This formulated product has not been evaluated for toxicological properties. Used responsibly, acute and chronic toxicity are expected to be low to moderate, but intentional abuse may cause cancer or be fatal.

**Acute Toxicity:** No specific data available on blend

**Chronic Toxicity:** No specific data available on blend

**Carcinogenicity:** Dichloromethane increases the incidence of tumors in rodents. However, it has not demonstrated tumorigenic responses in other animal or human epidemiological studies.

**Teratogenicity:** Case studies suggest maternal abuse of toluene may increase the chances of birth defects.

**Mutagenicity:** N/A

**Supplemental Information:** See “Section 2 – Hazards Identification” of this MSDS for additional information.

## Section 12 – Ecological Information

**Ecotoxicity:** This product is not anticipated to be ecologically significant in small amounts.

**Persistence and Degradability:** Not readily biodegradable. May be environmentally persistent.

**Bioaccumulation Potential:** Minimal

## Section 13 – Disposal Considerations

**Disposal Instructions:** None specific. Dispose of waste in accordance with applicable regulations.

## Section 14 – Transportation Information

**US Department of Transportation (DOT):** In any size container shipped by ground, this product should bear the following shipping description:

UN2810, Toxic, Liquids, Organic, n.o.s. (contains Dichloromethane, Toluene, and Tetrachloroethylene), 6.1, III

**International Air Transportation Association (IATA):** In any size container shipped by air, this product should bear the following shipping description:

UN2810, Toxic, Liquids, Organic, n.o.s. (contains Dichloromethane, Toluene, and Tetrachloroethylene), 6.1, III

**International Maritime Dangerous Goods (IMDG):** Contains the following marine pollutant: Tetrachloroethylene

## Section 15 – Regulatory Information

### FEDERAL CONSIDERATIONS

**SARA Title III, Section 302 – Extremely Hazardous Substances:** Neither this product nor any of its components appear on the list of extremely hazardous substances (EHS) found in §40 CFR 355 Appendices A and B and are not subject to the emergency planning (EPCRA) requirements of §40 CFR 355.30 or the reportable quantity (RQ) and threshold planning quantity (TPQ) requirements of §40 CFR 355 Appendices A and B.

**SARA Title III, Section 304 – Hazardous Substances:** This product contains the following components found in the list of hazardous substances of §40 CFR Table 302.4: Dichloromethane (CAS # 75-09-2); Tetrachloroethylene (CAS # 127-18-4); Toluene (CAS # 108-88-3)

**SARA Title III, Sections 311/312 – Hazard Classes:** This product contains one or more ingredients that are classified into the following hazard categories outlined in §40 CFR 370.40: immediate (acute) health; delayed (chronic) health

**SARA Title III, Section 313 – Toxic Chemicals:** This product contains the following chemicals listed in §40 CFR 372.65 exceeding the *de minimis* concentration reporting requirements of §40 CFR 372.38: Dichloromethane (CAS # 75-09-2); Tetrachloroethylene (CAS # 127-18-4); Toluene (CAS # 108-88-3)

## Section 15 – Regulatory Information (continued)

### FEDERAL CONSIDERATIONS (continued)

**Clean Air Act, Section 183(e) – Consumer and Commercial Products:** This product complies with the National Volatile Organic Compound Emission Standards for Consumer Products regulations found in §70 FR 69759.

**Toxic Substances Control Act (TSCA):** All chemicals known to be present in this product are either listed on the TSCA inventory or are not required to be per §15 USC 2601 et seq.

**Occupation Safety and Health Administration (OSHA):** This material safety data sheet is provided for compliance with applicable regulations of the Hazard Communication Standard (HCS) found in §29 CFR 1910.1200(g). Federal law requires persons receiving this document to study it carefully and become aware of the hazards of this product. Notify all employees, visitors, agents, and contractors of the information on this sheet.

**Consumer Product Safety Commission (CPSC):** This product is regulated under the Federal Hazardous Substances Act, is subject to the labeling requirements of 16 CFR 1500, and must include the following cautionary statements: Danger. Vapor Harmful. Eye and skin irritant. Keep out of the reach of children.

### REGIONAL CONSIDERATIONS

**Lake Michigan Air Directors Consortium (LADCO):** Complies with category VOC requirement

**Ozone Transport Commission (OTC):** Complies with category VOC requirement

### STATE CONSIDERATIONS

**California:** This product is *not* compliant with the category VOC requirements of §94509 of Subchapter 8.5 Article 2 of the Air Resource Board's "Regulation for Reducing Emissions from Consumer Products" and is not suitable for sale as a *consumer product*.

This product is subject to the labeling requirements of "Proposition 65 – Safe Drinking Water and Toxic Enforcement Act of 1986" ("Prop 65") and must product bear the cautionary statement "WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm."

**New Jersey:** This product is *not* compliant for sale per NJAC 7:27-24.4(r).

## Section 16 – Other Information

### Hazardous Materials Identification System (HMIS)

HMIS Hazard Rating	HMIS Hazard Index
Health 2	Least - 0
Flammability 0	Slight - 1
Reactivity 0	Moderate - 2
Protective Equipment X	High - 3
	Extreme - 4

### Index of Abbreviations

**ACGIH** – American Council of Governmental and Industrial Hygienists

**MSHA** – Mine Safety and Health Administration

**N/A** – not applicable

**NE** – not established

**NIOSH** – National Institute for Occupational Safety and Health

**PEL** – Permissible Exposure Limit (as required by OSHA)

**TLV** – Threshold Limit Value (as recommended by ACGIH)

**Date of Issuance:** 3-31-2011

**Date of Previous Revision:** 9-3-2009

**Revision Changes:** Numerous due to formula modifications; document format updated.

**Applicability:** This document only applies to part numbers 1401, 1405, and 1455 manufactured on or after March 7, 2011.

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**Legal Disclaimer:** The information contained in this document is, to the best of Berryman Products, Inc.'s knowledge, complete and accurate but is not warranted. All materials may present unknown hazards and should be used with caution. It is the responsibility of the user to evaluate the information in a prudent manner and to use it in a manner consistent with its intended purpose. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.