



Material Safety Data Sheet

Section 1 – Product and Company Identification

Product Name: Brake Parts Cleaner
Product Synonym: 5C-4
Product Numbers: 1401, 1405, 1415, 1455
Product Description: Automotive 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 conjunctivitis, 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 respiratory tract irritation, headache, dizziness, nausea, vomiting, unconsciousness, irregular heartbeat, and death. Chronic overexposure or intentional abuse may adversely affect the liver, kidneys, lungs, blood, central nervous system, and hearing and result in death. May aggravate asthma, emphysema, and bronchitis and cause cancer.
Ingestion: Accidental ingestion and subsequent aspiration of even small quantities may cause severe 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: Water fog, foam, dry chemical, and carbon dioxide

Unsuitable Extinguishing Media: Use water spray with caution as product is substantially insoluble.

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. Remove 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. See “Section 8” for recommended protective equipment.

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: Clean-up *must* be in compliance with §29 CFR 1910.1026 and 1052. For small spills, quickly mop up or absorb with inert material, such as corn cob, cellulose, or vermiculite. For large spills, ensure thorough ventilation of the local area to prevent the accumulation of dangerous and intoxicating vapors. Pump or transfer material into containers for recovery and use absorbent material for collection of unrecoverable product.

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: This product contains methylene chloride (“dichloromethane”) and *must* be used in accordance with §29 CFR 1910.1052. If possible, use outside with positive cross-ventilation in order to reduce accumulation of vapor and minimize exposure.

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

Eye Protection: Use of safety 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)

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_c: 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: Strong acids, oxidizers, and powdered zinc, aluminum, magnesium, and sodium

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

Possibility of Hazardous Reactions: Low if kept from “Incompatible Materials”

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 animals 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): When shipped by ground, this product may be eligible for a “Limited Quantity” exception per §49 CFR 173.153. Otherwise, it 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): When shipped by air, this product may be eligible for a “Limited Quantity” exception. Otherwise, in any size container this, it should bear the following 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 the table of §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! Harmful or fatal if swallowed. Vapor Harmful. Possible cancer agent based on test with laboratory animals. 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

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)

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Primary Revision Change(s): updated "Section 8 – Exposure Controls / Personal Protection"; "Section 14 – Transportation Information"; and "Section 15 – Regulatory Information"

Applicability: This document only applies to part numbers 1401, 1405, 1415, 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.