Safety Data Sheet

Section 1 – Identification of the Mixture and of the Company

Product Identification

Primary Identifier(s) Used on the Label
Berryman *Electric Motor Cleaner*
Berryman *Energized Electrical Parts Cleaner*
Product Synonym(s)
blend "5B"
Product Number(s)
1520 and 1540

Relevant Identified Uses and Uses Advised Against

Recommended Uses
electrical parts cleaning
Uses Advised Against
not for use in some applications or states

Manufacturer/Supplier Details

Berryman Products, Inc.
3800 E Randol Mill Rd
Arlington, TX 76011
(800) 433-1704 (USA/Canada)
(817) 640-2376 (international)
www.BerrymanProducts.com

Emergency 24-Hour Telephone Number(s) – InfoTrac, Inc.

(800) 535-5053 (USA/Canada)
(352) 323-3500 (international)

Section 2 – Hazards Identification

Classification of the Substance or Mixture (29 CFR 1910.1200)

Physical Hazards
Compressed Gas
Health Hazards
Skin Irritant – Category 2
Eye Irritant – Category 2A
Germ Cell Mutagen – Category 2
Carcinogen – Category 1A
Developmental/Reproductive Toxicant – Category 1B
Specific Target Organ Toxicity - Single Exposure – Category 3 (respiratory tract irritant and narcotic effects)
Environmental Hazard - Acute – Category 3

Allocation of Label Elements

Chemical Identity
Berryman *Electric Motor Cleaner*
Berryman *Energized Electrical Parts Cleaner*
Pictograms

Signal Word
DANGER
Hazard Statements
H280 – Contains gas under pressure; may explode if heated.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H321 – Specific treatment (see supplemental first aid instructions this label/document).
H335 – May cause respiratory irritation.
H336 – May cause drowsiness or dizziness.
H341 – Suspected of causing genetic defects.
H350 – May cause cancer.
H360 – May damage fertility or the unborn child.
H402 – Harmful to aquatic life.
Prevention Precautionary Statements
P101 – Keep out of reach of children.
P102 – Read label before use.
P201 – Obtain special instructions before use.
P202 – Do not handle until all safety precautions have been read and understood.
P251 – Do not pierce or burn, even after use.
P261 – Avoid breathing fumes, gas, mist, vapor, or spray.
P264 – Wash thoroughly with soap and water after handling.
P271 – Use only outdoors or in a well-ventilated area.
P273 – Avoid release to the environment.
P280 – Wear protective gloves, protective clothing, and eye or face protection.
Response Precautionary Statements
P312 – Call POISON CONTROL CENTER, hospital emergency room, or doctor if you feel unwell.
P321 – Specific treatment available in this document in "Section 4 – First Aid Measures."
P331 – Do NOT induce vomiting.
P302/P352 – IF ON SKIN: Wash with plenty of soap and water or shower.
P304/P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305/P351/P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308/P313 – If exposed or concerned, get medical advice/attention.
P332/P313 – If skin irritation occurs, get medical advice/attention.
P337/P313 – If eye irritation persists, get medical advice/attention.
P362/364 – Take off contaminated clothing and launder before reuse.
Storage Precautionary Statements
P405 – Store locked-up.
P410/P412 – Protect from sunlight. Do not expose to temperatures exceeding 122°F (50°C).
Disposal Precautionary Statements
P501 – Dispose of contents/container in accordance with local, regional, national, and international regulations, as applicable.

Hazards Not Otherwise Classified
none known

Ingredients of unknown acute toxicity
none

Section 3 – Composition/Information on Ingredients

Component	CAS RN	Weight
Trichloroethylene	79-01-6	>90%
Carbon Dioxide	124-38-9	<10%

Section 4 – First Aid Measures

Description of First Aid Measures
Ingestion
Do NOT induce vomiting. Rinse mouth. Drink 1-2 glasses of milk or water. Call poison control center, hospital emergency room, or doctor if you feel unwell.
Eye Contact
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.
Skin Contact
Wash with plenty of soap and water or shower.

Inhalation
Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms, call poison control center, hospital emergency room, or doctor.

Most Important Symptoms and Effects

Acute/Immediate
respiratory tract irritation; headache and lightheadedness; narcotic effects, including dizziness, drowsiness, and loss of coordination; nausea and vomiting
Delayed
drying, cracking, or defatting of the skin

Indications of Need for Immediate Medical Attention and Specific Treatment Required

Indications of Need for Immediate Medical Attention
In the event of shortness of breath, difficulty breathing, or spontaneous vomiting, seek immediate medical attention.
Specific Treatment and Notes to Physician
Avoid administration of sympathomimetic drugs, such as epinephrine. If performing lavage, endotracheal and/or esophageal control is recommended. If spontaneous vomiting occurs, keep head below hips to avoid aspiration.

Section 5 – Firefighting Measures

Fire Extinguishing Media

Support for Combustion
Product does not support combustion.
Suitable Extinguishing Media
water fog, dry chemical, alcohol-resistant foam, or carbon dioxide
Unsuitable Extinguishing Media
water jet/spray

Special Hazards/Considerations

Combustion Products
Combustion in the presence of air may yield hydrocarbons; chlorinated hydrocarbons; organic oxygenates; oxides of carbon and chlorine; phosgene; and hydrochloric acid/hydrogen chloride gas.

Special Protective Equipment and Precautions for Firefighters

Special Protective Equipment
Firefighters should employ SCBA and full protective gear, including shield, as product is comprised of low-boiling solvents and may vent, rupture, or explode violently at elevated temperatures.
Precautions and Procedures
Pressurized container—may burst if heated. Vapors heavier than air. Remove product from area if safe to do so. Use water spray to cool nearby containers.

Section 6 – Accidental Release Measures

Personal and Environmental Precautions

Personal Precautions
Do not handle until all safety precautions have been read and understood. Avoid breathing fumes, gas, mist, vapor, or spray. Wash thoroughly with soap and water after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, and eye or face protection.
Environmental Precautions
Avoid release to the environment. Prevent contamination of ground water.

Materials and Methods for Containment

Small Spills
Use socks/absorbent mini-booms or other inert barrier if necessary to contain small spills.
Large Spills
Use large socks/absorbent booms or other inert barrier to form dam/dike in order to contain large spills and prevent further loss.

Materials and Methods for Cleanup

Small Spills
Remove source from area if safe to do so. Use granular sorbent, gel sorbent, vermiculite, cat litter, dirt/earth, pads/rolls, or pillows to absorb spilled material. Remediate affected area as necessary.
Large Spills
Keep upwind from spill. Remove source from area if safe to do so. Use mechanical transfer equipment to recover spilled material. Use granular sorbent, gel sorbent, vermiculite, cat litter, dirt/earth, pads/rolls, or pillows to absorb residual material. Remediate affected area as necessary.

Section 7 – Handling and Storage

Precautions for Safe Handling

Personal Precautions

Do not handle until all safety precautions have been read and understood. Avoid breathing fumes, gas, mist, vapor, or spray. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, and eye or face protection. Wash thoroughly with soap and water after handling.

Environmental Precautions

Do not pierce or burn, even after use. Avoid release to the environment.

Conditions and Considerations for Safe Storage

Protect from sunlight. Do not expose to temperatures exceeding 122°F (50°C). Store locked-up. Store according to NFPA Aerosol Level 1 recommendations.

Section 8 – Exposure Controls/Personal Protection

Component	CAS RN	OSHA PEL	ACGIH TLV
Trichloroethylene	79-01-6	100 ppm	10 ppm
Carbon Dioxide	124-38-9	5000 ppm	5000 ppm

Exposure Controls

Appropriate Engineering Controls

If practical, use outside with adequate ventilation to minimize exposure.

PPE Overview

Hand Protection

Use of chemical-resistant gloves (butyl rubber, EVAL, neoprene, nitrile/Buna-N, PVA, PVC, or Viton) is recommended.

Eye Protection

Use of safety glasses with wrap-around lens or goggles is recommended.

Respiratory Protection

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

Additional Protection

For industrial settings, access to a chemical safety shower with eye wash station is strongly recommended.

Section 9 – Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical State
liquid

Appearance
clear, colorless

Odor
characteristic

Odor Threshold
20 ppm

pH
not relevant

Freezing Point
< -120°F

Boiling Range
188 - 189°F

Flash Point and Method
none by closed-cup tester

Explosion Limits in Air
8.0 - 10.5% by volume

Evaporation Rate
3.0 (n-Butyl Acetate=1.0)

Vapor Pressure, as supplied
80-120 PSI (typical)

Vapor Density
>1.0

Specific Gravity
1.461 at 68°F

Density
12.17 lb/gal at 68°F

Water Solubility
practically insoluble
n-Octanol/Water Partition Coefficient (log P_{ow})
2.6 (composite)
Viscosity
0.5 cSt at 68°F
Volatility
100% by weight
Auto-ignition temperature
750°F (literature)

Other Information

VOC Content
0% by weight (EPA Method 24)
0% by weight (consumer products)
VOC Composite Partial Pressure, PPC
0 mm of Hg at 68°F

Section 10 – Stability and Reactivity

Chemical Stability under Normal Conditions of Use

Chemical Stability
Stable under normal conditions of use. May contain the following stabilizer(s): 2-methyl-2-butene ("amylene") and/or butylene oxide
Conditions Affording Instability
none known

Reactivity

not expected

Possibility of Hazardous Reactions

none known

Conditions to Avoid

Avoid direct sunlight and excessive temperatures. Do not puncture, incinerate, or crush.

Incompatible Materials

strong acids; oxidizers; reducing agents; metallic aluminum; and powered zinc, aluminum, magnesium, potassium, and sodium

Hazardous Decomposition Products

hydrochloric acid/hydrogen chloride gas and phosgene

Section 11 – Toxicological Information

Likely Routes of Exposure

ingestion, skin contact, eye contact, inhalation

Symptoms Related to Physical, Chemical, and Toxicological Characteristics

Ingestion
Large Quantity
gastrointestinal disturbances, including upset stomach, cramping, nausea, vomiting, and diarrhea
Small Quantity/Incidental Contact
gastrointestinal disturbances, including upset stomach and cramping
Skin Contact
severe skin irritation; numbness or tingling of the skin
Eye Contact
blurred vision; moderate eye Irritation
Inhalation
respiratory tract irritation; headache, lightheadedness; narcotic effects, including dizziness, drowsiness, and loss of coordination

Immediate, Delayed, and Chronic Effects

SHORT-TERM EXPOSURE

Potential Immediate Effects
Ingestion
drying, burning, or irritation of the mouth and throat, gastrointestinal disturbances, nausea and vomiting
Skin Contact
drying of the skin

Eye Contact
blurred vision
Inhalation
shortness of breath or difficulty breathing, headache, dizziness, nausea and vomiting, drowsiness, fatigue, and loss of consciousness
Potential Delayed Effects
Ingestion
aspiration pneumonitis, cyanosis, coma, death
Skin Contact
defatting of the skin, drying and cracking of the skin, aggravation of pre-existing skin conditions
Eye Contact
none known
Inhalation
nausea and vomiting, fatigue

LONG-TERM EXPOSURE

Potential Immediate Effects
none known
Potential Delayed Effects
None known
Potential Chronic Health Effects
Carcinogenicity
International Agency for Research on Cancer (IARC) Monographs
Group 1 – Known Human Carcinogen (Trichloroethylene)
National Toxicology Program (NTP) Report on Carcinogens
Reasonably Anticipated to Be a Human Carcinogen (Trichloroethylene)
Mutagenicity / Genetic Toxicity
possible human mutagen (Trichloroethylene)
Teratogenicity
possible human teratogen (Trichloroethylene)
Developmental Effects
probable developmental toxicant (Trichloroethylene)
Fertility Effects
probable reproductive/fertility toxicant (Trichloroethylene)
Effects on Lactation
not suspected of affecting lactation

SPECIFIC TARGET ORGAN TOXICITY (STOT)

Single Exposure
central nervous system (narcotic effects); respiratory tract (irritation)
Repeated Exposure
none known

Numerical Measures of Acute Toxicity

Oral (Rat)
LD_{50}: 5110 mg/kg (literature value)
Dermal (Rabbit)
LD_{50}: 20000 mg/kg (literature value)
Inhalation (Rat)
LC_{50}: 1620 mg/L (literature value)

Additional Toxicological Information

Skin Irritation/Corrosion (Rabbit)
severe skin irritant
Serious Eye Damage/Irritation (Rabbit)
eye irritant
Respiratory Sensitization
does not cause respiratory sensitization
Skin Sensitization
does not cause skin sensitization
Aspiration Hazard
probable aspiration hazard

Section 12 – Ecological Information

General Ecological Assessment/Overview
Harmful to aquatic life with long-lasting effects. Mobile in soils which may lead to contamination of groundwater.

Aquatic Toxicity
Vertebrates (Fish)
Acute Toxicity
LC_{50}: 41 mg/L (literature value)
Chronic Toxicity
NOEC: 40 mg/L (literature value)
Invertebrates (Water Flea)
Acute Toxicity
LC_{50}: 18 mg/L (literature value)
Chronic Toxicity
NOEC: not available
Aquatic Plants (Freshwater Algae)
Acute Toxicity
EC_{50}: 180 mg/L (literature value)
Chronic Toxicity
NOEC: not available

Terrestrial Toxicity
Invertebrate (Earthworm)
LC_{50}: not available

Persistence and Degradability
Persistence
no persistence data available
Degradability
non-rapidly degradable

Bioaccumulative Potential
Bioaccumulation Potential Assessment
does not bioaccumulate
Bioaccumulation Factor
17

Mobility in Soils
Mobility in Soils Assessment
mobile in soils—may contaminate groundwater
Soil Organic Carbon/Water Partition Coefficient (log K_{OC})
2.2 (composite)

Results of PBT and vPvB Assessment
not a persistent, bioaccumulative, toxic chemical (PBT); not very persistent and very bioaccumulative (vPvB)

Other Adverse Effects
none known

Section 13 – Disposal Considerations

General Assessment/Overview
Dispose of waste in accordance with all applicable regulations. Harmful to aquatic life—do not pour into waterways. Contains aggressive solvents, which may dissolve PVC pipes and fittings—do not pour down drain.

RCRA Hazardous Waste Code(s) (40 CFR 261.20-33)
Based on this material as-supplied, used or unwanted product may be subject to RCRA regulations and classified as F001 – spent halogenated solvent used in degreasing

Section 14 – Transportation Information

Transportation by Ground – US Department of Transportation
Shipping Description
UN1950, Aerosols, 2.2
Exemption Eligibility
When shipped by ground, this product may be eligible for a “Limited Quantity” exception per §49 CFR 173.306.

Transportation by Air – ICAO/IATA

Shipping Description
UN1950, Aerosols, 2.2
Exemption Eligibility
When shipped by air, this product may be eligible for a "Limited Quantity" exception.

Transportation by Water – IMO/IMDG

Shipping Description
UN1950, Aerosols, 2.2
Exemption Eligibility
When shipped by water, this product may be eligible for a "Limited Quantity" exception.

Section 15 – Regulatory Information

Safety, Health, and Environmental Regulations/Legislation

UNITED STATES – SELECT FEDERAL REGULATIONS

Environmental Protection Agency (EPA)
Toxic Substances Control Act (TSCA) (15 USC 2601, et seq.)
All chemicals known to be present in this product are either listed on the TSCA inventory or are not required to be.
SARA Title III (42 USC 9601, et seq.)
Section 302 – Extremely Hazardous Substances (40 CFR 355)
none
Section 304 – Emergency Release Notification (40 CFR 302.4)
Trichloroethylene
Section 311/312 – Hazard Categorization (40 CFR 370.40)
acute toxicity, chronic toxicity, sudden release of pressure
Section 313 – Toxic Chemicals (40 CFR 372.65)
Trichloroethylene
Clean Air Act (42 USC 7401, et seq.)
Section 112 – Hazardous Air Pollutants
Trichloroethylene
Occupational Safety & Health Administration (OSHA)
Hazard Communication Standard
This safety data sheet (SDS) is provided for compliance with applicable regulations of the Hazard Communication Standard of 2012 (HCS/HAZCOM 2012) found in §29 CFR 1910.1200. Federal law requires persons receiving this document to study it carefully, become aware of the hazards of this product, and notify all employees, visitors, agents, and contractors of the information contained herein.
Consumer Product Safety Commission
Federal Hazardous Substances Act
This product is regulated under the Federal Hazardous Substances Act, is subject to the labeling requirements of 16 CFR 1500, and must include at minimum the following cautionary statements: WARNING: Vapor harmful. Eye and skin irritant. Contents under pressure. Keep out of the reach of children.

UNITED STATES – SELECT REGIONAL CONSIDERATIONS

Ozone Transport Commission (OTC) – Model Rule VOC Limit and Category
no VOC limit as "Electrical Cleaner" (restrictions may apply)
no VOC limit as "Energized Electrical Cleaner" (restrictions may apply)
Lake Michigan Air Directors Consortium (LADCO) – Model Rule VOC Limit and Category
no VOC limit as "Electrical Cleaner" (restrictions may apply)
no VOC limit as "Energized Electrical Cleaner" (restrictions may apply)

UNITED STATES – SELECT STATE REGULATIONS

California
Proposition 65 – Safe Drinking Water and Toxic Enforcement Act of 1986
This product is subject to the labeling requirements of Proposition 65 – Safe Drinking Water and Toxic Enforcement Act of 1986 and must bear the cautionary statement: WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.
Air Resources Board (ARB/CARB)
Regulation for Reducing Emissions from Consumer Products – VOC Limit and Category
no VOC limit as "Electrical Cleaner" (does not comply)
no VOC limit as "Energized Electrical Cleaner" (restrictions may apply)
Massachusetts
"Right-to-Know" Legislation – Substance List (105 CMR 670.000)
Trichloroethylene, Carbon Dioxide

New Jersey
"Right-to-Know" Legislation – Hazardous Substance List (34:5A-1, et seq.)
Trichloroethylene, Carbon Dioxide
Pennsylvania
"Right-to-Know" Legislation – Hazardous Substance List (Chapter 323)
Trichloroethylene, Carbon Dioxide
INTERNATIONAL – SELECT REGULATIONS

Canada
Environment Canada – Domestic Substances List (DSL)
All chemicals known to be present in this product are listed on the DSL.
China
Ministry of Environmental Protection – Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)
All chemicals known to be present in this product are listed on the IECSC.
European Union
European Chemical Agency – European Inventory of Existing Chemical Substances (EINECS)
All chemicals known to be present in this product are listed on the EINECS.

Chemical Safety Assessment
has not been conducted on product, as-supplied

Section 16 – Other Information

Hazardous Materials Information System (HMIS)

Health	*	2
Flammability		0
Reactivity		0
Protective Equipment		X

Hazard Index
Least - 0
Slight - 1
Moderate - 2
High - 3
Extreme - 4

Index of Abbreviations
ACGIH – American Council of Governmental and Industrial Hygienists
CAS RN – Chemical Abstracts Service Registry Number
EC_{50} – Median Effective Concentration
IATA – International Air Transport Association
ICAO – International Civil Aviation Organization
IMDG – International Maritime Dangerous Goods
IMO – International Maritime Organization
LC_{50} – Median Lethal Concentration
LD_{50} – Median Lethal Dose
N/A – Not Applicable
NE – Not Established
NOEC – No Observable Exposure Concentration
PEL – Permissible Exposure Limit (as required by OSHA)
TLV – Threshold Limit Value (as recommended by ACGIH)
VOC – Volatile Organic Compound

Relevant Dates and Applicability
Date of Issuance
August 19, 2015
Date of Previous Revision
May 28, 2015
Primary Revision Change(s)
Section 2 – Hazards Identification
Document Applicability
This safety data sheet applies to part numbers 1520 and 1540 manufactured on or after January 1, 2015.

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