



Effective Date: May 10, 2016

Product #(s) –13112

Safety Data Sheet

For Emergency Call:
CHEM-TEL (800) 255-3924 24 Hour Assistance

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Zecol Brake Parts Cleaner

CAS Number: 127-18-4 / 124-38-9

Recommended Uses: Brake Cleaner

Company Identification

Manufacturer's Name: ZECOL PRODUCTS COMPANY

Address: 4635 Willow Drive, Medina, MN 55340

Telephone – General Information: (763) 478-3438

2. HAZARDS IDENTIFICATION

Hazard Classes: Gases Under Pressure – Compressed Gas
Skin Corrosion/Irritation Category 2
Sensitization – Skin Category 1
Carcinogenicity Category 2
Specific Target Organ Toxicity Single Exposure Category 3
Aspiration Hazard Category 1
Aquatic Toxicity-Long Term Category 2

Signal Word: Warning

Hazard Statements:

H280 Contains gas under pressure, may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children,
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from flames/hot surfaces – No smoking.
P261 Avoid breathing vapors.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothes should not be allowed out of the workplace.
P273 Avoid release to the environment.

Product #(s) –13112

P280	Wear protective gloves / protective clothing / eye protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P333 + P313	IF skin irritation or rash occurs: Get medical advice/attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	If exposed or concerned: Get medical advice/attention.
P312	Call POISON CENTER or doctor if you feel unwell.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P410 + P403	Protect from sunlight. Store in well-ventilated place.
P501	Disposal: Dispose of contents/container to a specialized waste disposal plant in accordance with local/regional regulations

Hazard Pictograms:



3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Typical Weight Percentage	CAS Number
Perchloroethylene	85-100	127-18-4
Carbon Dioxide	0-15%	124-38-9

4. FIRST AID

Eyes: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Remove contaminated shoes and clothing and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

Inhalation: If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion: Aspiration Hazard: Do NOT induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

Notes to Physicians: Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed



Effective Date: May 10, 2016

Product #(s) –13112

spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

Medical Conditions: Conditions which may be aggravated by exposure include skin disorders. Exposure to high concentrations of this material may increase the sensitivity of the heart to certain drugs. Persons with pre-existing heart disorders may be more susceptible to this effect (see Note to Physician above).

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, CO₂, water spray or alcohol-resistant foam. Water spray is recommended to cool or protect exposed materials or structures. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Specific Hazards: Contents under pressure. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide and other products of incomplete combustion.

Special Firefighting Procedures: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Do not puncture or incinerate container. Contents under pressure. For large spills, notify people down-wind of spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop spill/release if it can be done with minimal risk. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Use foam on spills to minimize vapors. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water, notify appropriate authorities. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface water, may require notification of the National Response Center (phone number 800-424-8802).

Methods for Containment and Clean-Up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand, earth or other non-combustible material, and place in suitable container for disposal. If spilled on water remove with



Product #(s) –13112

appropriate methods (e.g., skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Contents under pressure. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see Section 8).

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practice.

Conditions for Safe Storage: Aluminum equipment should not be used for storage and/or transfer of chlorinates. Keep container(s) tightly closed. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA CEIL	OSHA PEAK
Perchloroethylene	25 ppm	100 ppm	100 ppm	200 ppm	300 ppm*
Carbon Dioxide	5000 ppm	30,000 ppm	None	None	None

*Five minutes in any 3 hours

Engineering Controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional ventilation or exhaust systems may be required.

Specific Personal Protective Equipment

Eye/Face Protection: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation or injury. Depending on conditions of use, a face shield may be necessary.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Depending on exposure and use conditions, additional protection may be necessary to prevent skin contact including use of items such as chemical resistant boots, aprons, arm covers, hoods, coveralls, or encapsulated suits.

Respiratory Protection: Where there is potential for airborne exposure above the exposure limits, a NIOSH approved air purifying respirator with an organic vapor cartridge may be used.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Air-purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration as directed by regulation or the manufacturer's instructions, in oxygen



Effective Date: May 10, 2016

Product #(s) –13112

deficient (less than 19.5% oxygen) situations or under conditions that are immediately dangerous to life and health (IDLH).

Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear colorless liquid

Odor: Faint sweet odor

Odor threshold: No data

pH: Not applicable

Melting/Freezing Point: Not available

Boiling Range: 121°C / 250 °F

Flash Point: Non-flammable

Auto-Ignition Temperature: No data

Evaporation rate (butyl acetate = 1): >1

Flammability (solid, gas): Not applicable

Explosive Limits (approx.): Lower – No data / Upper – No data

Vapor Pressure: Approximately 13 mmHg @ 20 °C / 68 °F

Vapor Density (air = 1): Approximately 13 mm

Specific gravity (H₂O = 1): 1062 @ 25°C / 77 °F

Solubility in water: >65%

Partition Coefficient: No data

Decomposition Temperature: No data

Viscosity: No data

10. STABILITY AND REACTIVITY

Stability (thermal, light, etc.): Stable under normal conditions of storage and handling.

Conditions to Avoid: Do not expose to heat or store at temperatures above 120 °F. Avoid contact with open flame, electric arcs, or other hot surfaces that could cause thermal decomposition.

Incompatibility (materials to avoid): Avoid contact with nitric acid, sulfuric acid, strong acids, chloroform, alkalis, potassium t-butoxide, strong bases and strong oxidizers such as liquid chlorine and oxygen.

Hazardous Decomposition Products: Thermal decomposition may release carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur.



Product #(s) –13112

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Product/Ingredient Name	Result(estimated based on similar material)	Species	Dose
Perchloroethylene	LD50 Oral	Rat	3.0 g/kg
	LD50 Dermal	Rabbit	>10 g/kg
	LC50 Inhalation (vapor)	Rat	2613 ppm 4hr

Skin Corrosion/Irritation: Causes skin irritation. Repeated exposure may cause dryness or cracking.

Serious Eye Damage/Irritation: Causes mild irritation.

Signs and Symptoms: High concentrations can cause minor respiratory irritation, headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Continued exposure may cause cyanosis, unconsciousness, coma and death. Ingestion can cause irritation of the digestive tract, nausea, vomiting and diarrhea.

Skin Sensitization: Perchloroethylene has cause skin sensitization in a mouse lymphoma study.

Respiratory Sensitization: No data found.

Germ Cell Mutagenicity: There is insufficient information available to conclude that this material is mutagenic.

Carcinogenicity: Perchloroethylene has been shown to increase the incidence of tumors in certain strains of mice and rats; however, other long-term inhalation studies have failed to show tumorigenic response. Several epidemiology studies have investigated cancer mortality among dry cleaning workers and have shown no consistent link between perchloroethylene exposure and cancer. Perchloroethylene is not believed to pose a measurable carcinogenic risk to people when handled as recommended.

Perchloroethylene is categorized by IARC as probably carcinogenic to humans (Group 2A). It is also listed by NTP as reasonably anticipated to be a carcinogen.

Reproductive Toxicity: Although not classified, Perchloroethylene has been toxic to the fetus in laboratory animals at doses toxic to the mother. Effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Although Carbon Dioxide is not a selective developmental toxicant, developmental effects have been demonstrated as a secondary effect of hypoxia and/or respiratory acidosis in the mother.

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness and dizziness.

Specific Target Organ Toxicity (Repeated Exposure): There is insufficient evidence to conclude that this material causes effects.

Aspiration Hazard: May be fatal if swallowed and enters airways.



Effective Date: May 10, 2016

Product #(s) –13112

12. ECOLOGICAL INFORMATION

Toxicity: A long-term daphnia study indicated a 28 day NOEC of 510 ug/l.
Classification: H411; Chronic Category 2

Persistence and Degradability: Perchloroethylene is not readily biodegradable under aerobic conditions. However, this does not necessarily mean that the material is not biodegradable in the environment. Biodegradation can occur under anaerobic conditions (in the absence of oxygen).

Bioaccumulative Potential: Perchloroethylene is not likely to accumulate in the aquatic food chain (bioconcentration potential is low). It is moderately toxic to aquatic organisms on an acute basis.

Mobility in Soil: Perchloroethylene is expected to be mobile in soil, and has the potential to reach underground water supplies. Perchloroethylene that reaches groundwater may be difficult to remediate.

Other Adverse Effects: Perchloroethylene does not contribute to the depletion of the stratospheric ozone layer. The U.S. Environmental Protection Agency has determined that perchloroethylene is often an acceptable alternative for ozone-depleting solvents whose production has been phased out by the federal Clean Air Act.

13. DISPOSAL CONSIDERATIONS

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA “listed” or characteristic hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

14. TRANSPORT INFORMATION

DOT/TDG Proper Shipping Name: Limited Quantity
DOT/TDG Identification Number: Not applicable
DOT/TDG Hazard Class: Not applicable
DOT/TDG Packing Group: Not applicable
ERG Guide Number: Not applicable

15. REGULATORY INFORMATION

TSCA: This material and/or its components are listed on the TSCA inventory or not regulated by TSCA.

DSL: This material and/or its components are listed on the DSL inventory or are exempt from DSL listing requirements.

OSHA (Occupational Safety and Health Administration): This material is considered to be hazardous as defined by the OSHA Hazard Communication Standard.



Effective Date: May 10, 2016

Product #(s) –13112

This material has not been identified as a carcinogen by NTP, IARC or OSHA however, components are listed by IARC (see Section 11).

CERCLA/SARA – Section 302 Extremely Hazardous Substances and TPQ (in pounds): This material does NOT contain chemicals subject to the reporting requirements of SARA 302 and 40 CFR 355 Appendix A and B.

EPA (CERCLA) Reportable Quantity (in pounds): EPA's Petroleum Exclusion applies to this material (CERCLA 101(14)):

Component	Concentration	RQ
Perchloroethylene	85-100%	100 lbs.

CERCLA/SARA - Sections 311/312 (Title III Hazard Categories):

Acute: Yes Chronic: Yes Fire: No Pressure: Yes Reactivity: No

CERCLA/SARA – Section 313 and 40 CFR 372: This material contains the following chemicals subject to the reporting requirements of SARA 313 and SARA Title III and 40 CFR:

Component	Concentration	de minimis
Perchloroethylene	85-100%	1%

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material contains detectable chemicals known to the State of California to cause cancer and/or reproductive toxicity.

Component	Concentration	Effect
Perchloroethylene	85-100%	Cancer

Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

WHMIS Hazard Class: A, D2A, D2B

16. OTHER INFORMATION

Issue Date: May 10, 2016
Previous Issue Date: June 1, 2015
Change: Minor wording

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information in this document is believed to be correct as of the date issued. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for this particular purpose and on the condition that he assumes the risk of his use thereof.