



Effective Date: May 10, 2016

Product #(s) – 15012

Safety Data Sheet

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

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Zecol Non-Chlorinated Brake Parts Cleaner

CAS Number: 67-64-1 / 108-88-3 / 67-56-1 / 124-38-9

Recommended Uses: Brake Parts 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: Flammable Liquid Category 2

Gases Under Pressure Compressed Gas

Serious Eye Damage/Eye Irritation Category 2

Skin Corrosion/Irritation Category 2

Acute Oral Toxicity Category 4

Acute Dermal (skin) Toxicity Category 4

Acute Inhalation Toxicity Category 4

Toxic to Reproduction Category 1B

Specific Target Organ Toxicity (Single Exposure) Category 1 and Category 3

Aspiration Hazard Category 1

Signal Word: DANGER

Hazard Statements:

H225 Highly Flammable Liquid and Vapor.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if Swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if Inhaled.
H336 May cause drowsiness or dizziness.
H360 May damage fertility or the unborn child – fetotoxic and teratogenic effects.
H370 Causes damage to the optic nerve causing blindness if swallowed.
H373 May cause damage to the central nervous system through prolonged or repeated contact.

Precautionary Statements:

P101 If medical advice is needed, have product container or label at hand.

Product #(s) – 15012

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 heat/sparks/open flames/hot surfaces – No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical lighting and equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing vapors.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves / protective clothing / eye protection.
P301 + P310	If SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331	Do NOT induce vomiting.
P330	Rinse mouth.
P303 + P361 + P353	If ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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 so.
P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician
P361 + P378	Take off immediately all contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use dry chemical, CO ₂ , alcohol-resistant foam, and water spray for extinction.
P410 + P403 + P235	Protect from sunlight. Store in a well-ventilated place. Keep cool.
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
Acetone	30-40%	67-64-1
Toluene	30-40%	108-88-3
Methanol	20-30%	67-56-1
Carbon Dioxide	5-15%	124-38-9

4. FIRST AID



Effective Date: May 10, 2016

Product #(s) – 15012

Eyes: Move victim away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek medical attention. For direct contact, remove contact lenses if present and easy to do so. Immediately hold eyelids apart and flush the affected eye(s) with clean water for at least 15 minutes. Seek immediate 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 or other symptoms of exposure develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. 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 immediate medical attention.

Note to Physicians: Ethanol significantly decreases the toxicity of methanol because it competes for the same metabolic enzymes, and has been used to treat methanol poisoning.

Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed 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: 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. This material is highly flammable and can be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights or mechanical/electrical equipment). Flame is invisible in daylight. Vapors may travel considerable distances to a source of ignition where they can ignite, flashback or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Vapors are heavier than air and can accumulate in low areas.

Hazardous Combustion Products: Toxic gases and vapors; oxides of carbon and formaldehyde.



Effective Date: May 10, 2016

Product #(s) – 15012

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: Flammable. Do not puncture or incinerate container. Contents under pressure. Spilling of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof equipment is recommended. Stay upwind and away from spill/release. 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 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. Keep away from ignition sources such as heat/sparks/open flames – No smoking. Take precautionary measures against static discharge. Non-sparking tools should be used. 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).

Flammable. May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low lying areas. Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by bonding and grounding containers and equipment before transferring material. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-77 and/or API RP 2003 for specific



Product #(s) – 15012

bonding/grounding requirements. 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: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Post area “No Smoking or Open Flame.” Store only in approved containers. 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
Acetone	250 ppm	500 ppm	1,000 ppm	None	None
Toluene	20 ppm	None	200 ppm	300 ppm	500 ppm (10 Min)
Methanol	200 ppm (Skin)	250 ppm (Skin)	200 ppm	None	None
Carbon Dioxide	5000 ppm	30,000 ppm	5000 ppm	None	None

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. Suggested protective materials: butyl and nitrile rubbers.

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



Effective Date: May 10, 2016

Product #(s) – 15012

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 (approximate values)

Appearance: Colorless to pale yellow liquid

Odor: Mild

Odor threshold: No data

pH: Not applicable

Melting/Freezing Point: 43.3°C / <-110°F

Boiling point (at 1 atm): 64.7°C / 148 °F

Flash Point: -4 °C / 20 °F (estimated)

Auto-ignition Temperature: 56.1 °C / 133 °F (estimated)

Evaporation rate (butyl acetate = 1): >1

Flammability (solid, gas): Not applicable

Explosive Limits: Lower – 1.2%/ Upper – 7.1% (estimated)

Vapor Pressure: Not determined

Vapor Density (air = 1): approx.. 2

Specific gravity (H₂O = 1): 0.82

Solubility in water: Approximately 64% soluble

Partition Coefficient: Not determined

Decomposition Temperature: No data

Viscosity: <20.5cSt @ 40 °C

10. STABILITY AND REACTIVITY

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

Conditions to Avoid: Avoid all possible sources of ignition (see Sections 5 and 7). Do not expose to heat or store at temperatures above 120 °F.

Incompatibility (materials to avoid): Avoid contact with strong acids, bases and oxidizers such as liquid chlorine and oxygen. Contact with these materials may cause a violent or explosive reaction. May be corrosive to lead, aluminum, magnesium and platinum. May react with metallic aluminum or magnesium and explode and/or generate hydrogen gas. May attack some forms of plastic, rubber and coatings.

Hazardous Decomposition Products: Thermal decomposition may release carbon monoxide, carbon dioxide, formic acid and formaldehyde.

Hazardous Polymerization: Will not occur.



Effective Date: May 10, 2016

Product #(s) – 15012

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Acute toxicity estimate: Oral LD50 = 500 mg/kg, Inhalation LC50 = 1.5 mg/l (mist) 4h,
Dermal LD50 = 1500 mg/kg

Product/Ingredient Name	Result	Species	Dose
Acetone	LD50 Oral	Rat	5.8 g/kg
	LD50 Dermal	Rabbit	>15.8 g/kg
Toluene	LD50 Oral	Rat	5.6 g/kg
	LD50 Dermal	Rabbit	>5 g/kg
	LC50 Inhalation	Rat	28.1 mg/l - 4hr
Methanol	LD50 Oral	Rat	≥2528 mg/kg
	LD50 Dermal	Rabbit	17,100 mg/kg
	LC50 Inhalation (vapor)	Rat	13.3 mg/l – 6hr
Carbon Dioxide	LC50 Inhalation (vapor)	Rat	1807 ppm – 4h

Note: Methanol assigned to classification based on human LD50 Oral experience and not animal data.

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

Serious Eye Damage/Irritation: Causes serious eye irritation.

Signs and Symptoms: High concentrations can cause minor respiratory irritation, headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue, shortness of breath, cyanosis, convulsions and coma. Ingestion can cause irritation of the digestive tract, nausea, abdominal pain, vomiting, ringing in ears, tremors, brain damage and visual disturbances ranging from blurred vision to light sensitivity, blindness or death.

Skin Sensitization: None reported

Respiratory Sensitization: None reported

Germ Cell Mutagenicity: None of the components have been identified as mutagens.

Carcinogenicity: None of the components have been identified as a carcinogen. They are not listed by NTP, IARC or OSHA.

Reproductive Toxicity: Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations of methanol vapors.

Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. Decreased fetal body weight and increased skeletal variations in both inhalation and oral studies, but only at doses that were maternally toxic. No fetal toxicity was seen at doses that were not maternally toxic. Decreased sperm counts have been observed in male rats in the absence of a reduction in fertility. Toluene has been reported to cause mental or growth retardation in the children of solvent abusers who directly inhale toluene during pregnancy.



Effective Date: May 10, 2016

Product #(s) – 15012

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): Methanol ingestion causes damage to the optic nerve causing blindness. May cause drowsiness and dizziness.

Specific Target Organ Toxicity (Repeated Exposure): Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause central nervous system damage, including hearing loss and visual disturbances. Epidemiology studies suggest that chronic occupational overexposure to toluene may damage color vision. Chronic inhalation studies with toluene demonstrated limited evidence of kidney damage in laboratory animals.

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

12. ECOLOGICAL INFORMATION

Toxicity: None of the components have been classified as acutely or chronically toxic to aquatic life.

Other Adverse Effects: None known

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.

Recycle wherever possible. Large volumes may be suitable for re-distillation or, if contaminated, incinerated. Can be disposed of in a sewage treatment facility.

This material, if discarded as produced, would not be a federally regulated RCRA “listed” hazardous waste. However, it would likely be identified as a federally regulated RCRA hazardous waste for the characteristic of ignitability (D001). 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

Marine Pollutant: No

15. REGULATORY INFORMATION

TSCA: All components are listed on the TSCA inventory.

DSL: All components are listed on the DSL inventory.



Effective Date: May 10, 2016

Product #(s) – 15012

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

This material has not been identified as a carcinogen by NTP, IARC or OSHA

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): This material contains the following chemicals subject to the reporting requirements of 40 CFR 302.4.

Component	Concentration	RQ
Toluene	30-40%	1000 lbs
Acetone	30-40%	5000 lbs
Methanol	20-30%	5000 lbs

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

Acute: Yes Chronic: Yes Fire: Yes 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
Methanol	20-30%	1%
Toluene	30-40%	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
Methanol	20-30%	Developmental
Toluene	30-40%	Developmental

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, B2, D1B, D2A, D2B

16. OTHER INFORMATION

Issue Date: May 10, 2016

Previous Issue Date: June 1, 2015

Change: Updated Sec. 14

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Effective Date: May 10, 2016

Product #(s) – 15012

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.