



Tiger Chemical LLC
250 W. Douglas, Suite 150
Wichita, KS 67202
620-352-0690

HMIS Ratings	
Health	2
Flammability	3
Reactivity	0
PPE	H

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CIO-45

UN# 1993

Recommended Use Oil Soluble Corrosion Inhibitor

Manufactured by: **DBI**
4101 W Green Oaks Blvd
Suite 305-597
Arlington, Texas 76016
Telephone: (817) 437-6438

Emergency Telephone Number (800) 424 9300 Chemtrec
(817) 437 6438 Product or company information

2. HAZARDS IDENTIFICATION

GHS Signal Word **Danger**

Pictogram



Hazard Statement Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs (Central nervous system) through prolonged or repeated exposure. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.

GHS Classification Physical, Flammable liquids (Category 2)
Acute toxicity, Oral (Category 4)
Skin corrosion/irritation (Category 2)
Serious Eye Damage/ Eye Irritation (Category 2B)
Acute toxicity, Inhalation (Category 3)
Specific target organ toxicity - single exposure (category 3) Respiratory Tract Irritation

GHS Label elements, including precautionary statements

Hazard statement(s) H225: Highly flammable liquid and vapor
H302: Harmful if swallowed
H316: Causes mild skin irritation
H320: Causes eye irritation
H333: May be harmful if inhaled
H370: Causes damage to organs

Precautionary statement(s) P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.

P264 - Wash hands thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P280 - Wear eye protection, protective gloves, protective clothing.
 P301+P310 - If swallowed: Immediately call a doctor, a POISON CENTER.
 P302+P352 - If on skin: Wash with plenty of water.
 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.
 P312 - Call a doctor, a POISON CENTER if you feel unwell.
 P321 - Specific treatment (see a doctor on this label).
 P331 - Do NOT induce vomiting.
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder, Water spray to extinguish.
 P391 - Collect spillage.
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P405 - Store locked up.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

HMIS Classification

Health hazard: 2
 Chronic Health Hazard: *
 Flammability: 3
 Physical hazards: 0

NFPA Rating

Health hazard: 2
 Fire: 3
 Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.
 Skin Toxic if absorbed through skin. Causes skin irritation.
 Eyes Causes severe eye irritation.
 Ingestion Toxic if swallowed.

Target Organs

Eyes, Kidney, Liver, Heart, Central nervous system

Emergency Overview

OSHA HAZARDS

In case of fire: Use foam, carbon dioxide, dry powder or water fog for extinction. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If in eyes: 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. Take off contaminated clothing and wash before reuse. Get medical advice/attention if you feel unwell. If exposed or concerned: Call a poison center/doctor.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula Mixture

Chemical name	CAS No.	Weight-%
Petroleum Distillates	64742-94-5	40-80
Fatty acids, tall-oil, reaction products with diethylenetriamine	61790-69-0	12-20
Alcohol Blend	Mixture	5-20

4. FIRST AID MEASURES

General Advice	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Skin Contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking. Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information

Use water spray to cool unopened containers.

Fire-fighting equipment/instructions

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep out of low areas.
Methods for Containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Methods for Cleaning Up	Should not be released into the environment.
Large Spills:	Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.
Small Spills:	Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly. Never return spills in original containers for re-use.

7. HANDLING AND STORAGE

Handling	Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Wear personal protective equipment. Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.
Storage	Keep away from heat and sources of ignition. The pressure in sealed containers can increase under the influence of heat. Keep containers tightly closed in a cool, well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in a closed container away from incompatible materials. Use care in handling/storage. Use appropriate container to avoid environmental contamination. Store in accordance with local/regional/national/international regulation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Petroleum Distillates (64742-94-5)	NA	TWA: 500 ppm	NA
Fatty acids, tall-oil, reaction products with diethylenetriamine (61790-69-0)	NA	NA	NA

Biological limit values ACGIH Biological Exposure Indices

No data available

Engineering Measures	Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.
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Personal Protective Equipment

Eye/Face Protection	Eye protection, such as chemical splash goggles and/or safety glasses, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles. Contact lenses must not be worn.
Skin and Body Protection	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory Protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.
Hygiene Measures	Do not get this material in your eyes, on your skin, or on your clothing. Wash hands before breaks and immediately after handling the product. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid Amber	Odor	Sweet
Physical State	Liquid	Auto ignition Temperature	No data available
Flash Point	137 °F (58.3 °C)	Pour Point	<-40 °F (-40°C)
Boiling Point/Range	NR	Flammability Limits in Air	1.2-7.1 % estimated
		pH (100%)	Not available
Explosion Limits	No data available	Percent volatile	100% estimated
Specific Gravity	0.9593	Solubility in Water	None

Evaporation Rate
Vapor Density

No data available
4.9

Vapor Pressure
Odor Threshold

No data available
No data available

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions
Incompatible Products	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Conditions to Avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Hazardous Decomposition Products	Carbon oxides. Carbon Dioxides.
Hazardous Polymerization	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information	The product itself has not been tested.
Irritation	Irritating to eyes, respiratory system and skin.
Component Information	

Chemical name	Oral LD50	Dermal LD50	LC50 Inhalation
NA			

Respiratory or skin sensitization	
Respiratory sensitization	Not assigned.
Skin sensitization	Not assigned.
Germ cell mutagenicity	Not assigned.
Chronic effects	Toluene has been reported to decrease immunological responses and cause recordable hearing loss in laboratory animals. Contains organic solvents which in case of overexposure may depress the central nervous system causing dizziness and intoxication.
Carcinogenicity	IARC Monographs. None of the ingredients are listed or exempt.
Reproductive toxicity	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure	May cause damage to organs (Central nervous system) through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Based on available data the classification criteria are not met.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Toxic to Algae	Toxic to Fish	Toxicity to Microorganisms	Toxicity to daphnia and other aquatic invertebrates
NA	NA			

Bioaccumulation / Accumulation

Bioaccumulative potential	NA
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13.0 DISPOSAL CONSIDERATIONS

Waste codes D001: Disposal instructions	Waste Flammable material with a flash point <140 F Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORTATION INFORMATION

DOT

Proper Shipping Name(s)	Flammable liquids, n.o.s. (Petroleum Distillates)
Reportable Quantity (RQ):	2000 lbs
Hazard Class	3
UN#	1993
Packing Group	III
Marine pollutant:	No
Poison Inhalation Hazard:	No



15. REGULATORY INFORMATION

U.S. Federal Regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) **Not regulated.**

DEA Essential Chemical Code Number **Not regulated.**

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) **Not regulated.**

DEA Exempt Chemical Mixtures Code Number **Not regulated.**

CERCLA (Superfund) reportable quantity **None**

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No
Section 302 extremely hazardous substance No

The following components are subject to reporting levels established by SARA Title III, Section 313:

CAS-No.	Revision Date
NA	

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

U.S. State Regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

US - New Jersey RTK - Substances:	Listed substance NA
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US - Pennsylvania RTK - Hazardous Substances:	Listed substance NA
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US - Massachusetts RTK - Hazardous Substances:	Listed substance
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NA

16. OTHER INFORMATION

Prepared By Dead Bison Inc, EHS – Greg Swindle

Issuing Date December 11, 2024

Revision Date NA

Reason for Revision

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Unless updated, the Safety Data Sheet is valid until 12/31/2028