SAFETY DATA SHEET

1. Identification

Product identifier	**Tyme®-1 Cold Parts Cleaner**
Other means of identification	
Product code	14101
Recommended use	Parts cleaning solvent for use in cold cleaner / dip tank
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1C
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage. Causes damage to organs (gastrointestinal system, respiratory system). May cause drowsiness or dizziness. May cause cancer. Harmful to aquatic life. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

Supplemental information

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Tetrachloroethylene	Perchloroethylene	127-18-4	50 - 60
Water		7732-18-5	30 - 40
Cyclohexanol		108-93-0	10 - 20
Tall Oil		8002-26-4	3 - 5
Potassium hydroxide		1310-58-3	< 1

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
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. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Foam. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. For product usage instructions, please see the product label.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Cyclohexanol (CAS 108-93-0)	PEL	200 mg/m3
		50 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Tetrachloroethylene (CAS 127-18-4)	Ceiling	200 ppm
	TWA	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Cyclohexanol (CAS 108-93-0)	TWA	50 ppm
Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m3
Tetrachloroethylene (CAS 127-18-4)	STEL	100 ppm
	TWA	25 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Cyclohexanol (CAS 108-93-0)	TWA	200 mg/m3
		50 ppm
Potassium hydroxide (CAS 1310-58-3)	TWA	2 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Tetrachloroethylene (CAS 127-18-4)	0.5 mg/l	Tetrachloroethylene	Blood	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
	3 ppm	Tetrachloroethylene	End-exhaled air	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanol (CAS 108-93-0) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanol (CAS 108-93-0) Skin designation applies.
Tetrachloroethylene (CAS 127-18-4) Skin designation applies.

US - Tennessee OELs: Skin designation

Cyclohexanol (CAS 108-93-0) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanol (CAS 108-93-0) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Cyclohexanol (CAS 108-93-0) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower should be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear protective gloves such as: Polyvinyl alcohol (PVA). Polytetrafluoroethylene (PTFE). Viton®.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Yellow.

Odor Solvent.

Odor threshold Not available.

pH 12.2

Melting point/freezing point -8.1 °F (-22.3 °C) estimated

Initial boiling point and boiling range 212 °F (100 °C) estimated

Flash point None (Tag Closed Cup)

Evaporation rate Slow.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.3 % estimated

Flammability limit - upper (%)	13.1 % estimated
Vapor pressure	17.5 hPa estimated
Vapor density	> 3 (air = 1)
Relative density	1.24
Solubility (water)	Emulsifiable.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	572 °F (300 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	95.7 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Heat, flames and sparks. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as Hydrogen chloride and Phosgene.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hydrogen chloride. Chlorine. Phosgene.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Headache. May cause drowsiness and dizziness. Nausea, vomiting. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Narcotic effects.

Product	Species	Test Results
Tyme®-1 Cold Parts Cleaner		
Acute		
Dermal		
LD50	Rabbit	2620 mg/kg estimated
Inhalation		
LC50	Rat	38 mg/l, 4 hours estimated
Oral		
LD50	Rat	3007 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Tetrachloroethylene (CAS 127-18-4) 2A Probably carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Tetrachloroethylene (CAS 127-18-4) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Causes damage to organs (gastrointestinal system, respiratory system). May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Product		Species	Test Results
Tyme®-1 Cold Parts Cleaner			
Aquatic			
Fish	LC50	Fish	36.2821 mg/l, 96 hours estimated
Acute			
Crustacea	EC50	Daphnia	113.4105 mg/l, 48 hours estimated

Components		Species	Test Results
Cyclohexanol (CAS 108-93-0)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	704 mg/l, 96 hours
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	17 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	704 mg/l, 96 hours
Potassium hydroxide (CAS 1310-58-3)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	80 mg/l, 96 hours
Tall Oil (CAS 8002-26-4)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	12.2 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 20 mg/l, 96 hours
Tetrachloroethylene (CAS 127-18-4)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4.73 - 5.27 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Cyclohexanol	1.23
Tall Oil	4.7
Tetrachloroethylene	2.88

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products	This material and its container must be disposed of as hazardous waste. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	D039: Waste Tetrachloroethylene F001: Waste Tetrachloroethylene - Spent halogenated solvent used in degreasing F002: Waste Tetrachloroethylene - Spent halogenated solvent
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN2922
UN proper shipping name	Corrosive liquids, toxic, n.o.s. (Potassium hydroxide RQ = 200000 LBS, Tetrachloroethylene RQ = 195 LBS), Limited Quantity
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1(PGIII)
Label(s)	8, 6.1
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IMDG

UN number	UN2922
UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium hydroxide, Tetrachloroethylene), LIMITED QUANTITY
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1(PGIII)
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN2922
UN proper shipping name	Corrosive liquids, toxic, n.o.s. (Potassium hydroxide, Tetrachloroethylene), Limited Quantity
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1(PGIII)
Packing group	III
Environmental hazards	No.
ERG Code	8P
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

15. Regulatory information

US 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.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Cyclohexanol (CAS 108-93-0)
Tetrachloroethylene (CAS 127-18-4)

CERCLA Hazardous Substance List (40 CFR 302.4)

Potassium hydroxide (CAS 1310-58-3)	Listed.
Tetrachloroethylene (CAS 127-18-4)	Listed.

CERCLA Hazardous Substances: Reportable quantity

Potassium hydroxide (CAS 1310-58-3)	1000 LBS
Tetrachloroethylene (CAS 127-18-4)	100 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Tetrachloroethylene (CAS 127-18-4)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Tetrachloroethylene (CAS 127-18-4)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Cyclohexanol (CAS 108-93-0)
Tetrachloroethylene (CAS 127-18-4)

US. New Jersey Worker and Community Right-to-Know Act

Cyclohexanol (CAS 108-93-0)
Tetrachloroethylene (CAS 127-18-4)

US. Pennsylvania Worker and Community Right-to-Know Law

Tetrachloroethylene (CAS 127-18-4)

US. Rhode Island RTK

Cyclohexanol (CAS 108-93-0)
Tetrachloroethylene (CAS 127-18-4)

US. Pennsylvania Worker and Community Right-to-Know Law

Potassium hydroxide (CAS 1310-58-3)
Sodium nitrite (CAS 7632-00-0)
Cyclohexanol (CAS 108-93-0)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-Dioxane (CAS 123-91-1)	Listed: January 1, 1988
Ethylene oxide (CAS 75-21-8)	Listed: July 1, 1987
Tetrachloroethylene (CAS 127-18-4)	Listed: April 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

2-Methoxyethanol (CAS 109-86-4)	Listed: January 1, 1989
Ethylene oxide (CAS 75-21-8)	Listed: August 7, 2009

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Ethylene oxide (CAS 75-21-8)	Listed: February 27, 1987

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

2-Methoxyethanol (CAS 109-86-4)	Listed: January 1, 1989
Ethylene oxide (CAS 75-21-8)	Listed: August 7, 2009

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	14 %
Consumer products (40 CFR 59, Subpt. C)	Not regulated

State

Consumer products	Not regulated. This product is intended to be used in solvent cleaning machines (cold cleaner / dip tank) with a capacity greater than 2 gallons.
VOC content (CA)	10.3 %
VOC content (OTC)	10.3 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	09-16-2015
Revision date	09-16-2015
Prepared by	Allison Cho
Version #	02
Further information	CRC # 609J
HMIS® ratings	Health: 3* Flammability: 1 Physical hazard: 1 Personal protection: D
NFPA ratings	Health: 3 Flammability: 1 Instability: 1
NFPA ratings	

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