

CHEMICAL EQUIPMENT LABS, INC
COOLING TREAT 101
Safety Data Sheet (SDS)

Section 1: Identification of the substance/mixture and of the company/undertaking

PRODUCT IDENTIFIER

Product name: Cooling Treat 101

Product form: Mixture

Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/algaecide

Details of the supplier of the safety data sheet

Name/Address: Chemical Equipment Labs, INC
1330 E 12TH SREET
WILMINGTON, DE 19802

Contact Information: Telephone: 610-497-9390
Fax: 610-497-9524
Email: ERM@CHEMICAL EQUIPMENT LABS.COM
Website: WWW.CHEMICAL EQUIPMENT LABS.COM

EMERGENCY TELEPHONE NUMBER

CHEMTREC (800) 424-9300

Section 2: HAZARD(S) IDENTIFICATION

Effects from Acute Exposure

Eye Exposure	: Slightly hazardous in case of eye contact (irritant).
Skin Exposure	: Slightly hazardous in case of skin contact (irritant). Non-sensitizer to skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
Inhalation	: Slightly hazardous in case of inhalation. Effects will depend on concentration and length of time of exposure.
Ingestion	: ingestion is not expected to be a primary route of exposure.

Effects from Chronic Exposure

The effects from chronic exposure to the product have not been fully evaluated.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

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By Chemical Equipment Labs, INC
September 15, 2016

Substance

Not applicable

Mixture

NAME	PRODUCT IDENTIFIER	%
Poly[oxyethylene(dimethyliminio)ethylene(dimethyliminioethylenedichloride)]	(CAS No) 31512-74-0	Proprietary
Water	(CAS No) 7732-185	Proprietary

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(I), all known hazards are clearly communicated within this document.

Section 4: FIRST-AID MEASURES

Description of first aid measures

First-aid measures general	: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to unconscious person.
First aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.
First- aid measures after skin contact	: IF ON SKIN (or clothing): Removed affected clothing and wash all exposed skin with water for at least 15 minutes. Get medical attention immediately.
First-aid measures after eye contact	: IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.
First-aid measures after ingestion	: IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

Section 5: FIRE FIGHTING MEASURES

Flammable limits	: Not available.
Extinguishing media	: Water fog, carbon dioxide, foam, dry chemical.
Special firefighting procedures	: Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Spill and leak response guidelines:

Important: before responding to a spill or leak of this product, review each section of this SDS. Follow the

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recommendations given in the Handling Precautions section. Check the Fire and Explosion Data section to determine if the use of non-sparking tools is merited. Insure that spilled or leaked product does not come into contact with materials listed as incompatible. If irritating fumes are present, consider evacuation of enclosed areas.

Emergency Response Assistance: Emergency technical assistance is available at any time from Chemical Equipment Labs, INC by calling 610-497-9390.

Initially minimize area affected by the spill or leak. Block any potential routes to water systems (e.g., sewers, streams, lakes, etc.). Based on the product's toxicological and chemical properties, and on the size and location of the spill or leak, assess the impact on contaminated environments (e.g., water systems, ground, air equipment, etc.). There are no methods available to completely eliminate any toxicity this product may have on aquatic environments. Minimize adverse effects on these environments. Chemical Equipment Labs, INC can be contacted for

technical assistance. Determine if federal, state, and/or local release notification is required (see Regulatory Classifications section of this SDS). Recover as much of the pure product as possible into appropriate containers. Later determine if this is recovered product can be used for its intended purpose. Address clean-up of contaminated environments. Spill or leak residuals may have to be collected and disposed of. Clay, soil, or commercially available absorbents may be used to recover any material that cannot readily be recovered as pure product. Flushing residual material to an industrial sewer, if present at the site of a spill or leak incident, may be acceptable if authorized approval is obtained. If product and/or spill/leak residuals are flushed to and industrial sewer, insure that they do not come into contact with incompatible materials. Contact the person responsible for the operation of your facility's industrial sewer prior to the intentionally flushing of pumping spills or leaks of this product to the industrial sewer.

Section 7: HANDLING AND STORAGE

Eye- wash fountains in the work place are recommended. Rubber gloves, safety glasses or goggles and body protective clothing and shoes are required. The handling precautions for this product are based of the characteristics of the neat product unless otherwise specified.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS

Appropriate engineering controls	: 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 exposition-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	: Gloves. Wear chemical goggles and face shield in combination. Protective clothing.
Hand protection	: Use gloves chemically-resistant to this material when prolonged or repeated contact could occur. Change contaminated gloves immediately. Suitable gloves for this specific application can be recommended by glove supplier.

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Eye protection	: Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles. Chemical goggles and face shield must be worn in combination.
Skin and body protection	: Wear long-sleeves, and chemically impervious PPE/Coveralls to minimize bodily exposure.
Respiratory protection	: Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, Use NIOSH-approved respiratory protective equipment.

Satisfactory materials of construction

Buna-N rubber	EPDM rubber	Silicone rubber
Butyl rubber	PVC – flexible	Hypalon
Polypropylene	Fiberglass	Polyethylene – High density
Plexiglas	Neoprene	Stainless steels 304 / 316
Teflon	Polyethylene – low density	ABS (Plastic)
PVC-rigid	Tyrl 880	Morton test liner (108 T 44LV)
Viton	Gum rubber	
6/6 Nylon	FRP lines mild steel	

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	: Clear, pale yellow liquid
Odor	: Mild.
Density	: 1.15 g/cm ³
Flash point	: Closed cup: >100 °C (212°F). (Tagliabue.)
Melting Point	: <-16°C (3.2°F)
Boiling Point	: >100°C (212°F)
Solubility	: Easily soluble in cold water. Easily soluble in hot water.
pH (Neat)	: 7 [Neutral.]
pH (100 ppm in water)	: 6-7
Vapor pressure	: Not available.
o/w partition coefficient	: Not available.
Oxidizing/reducing properties	: Not available.
Viscosity	: Kinetic: 125 cS
Additional pH information	: pH (Neat) = 6.0-8.0

Section 10: STABILITY AND REACTIVITY

Stability	: Stable under normal conditions of use and storage.
Incompatibility	: Anionic polymers
Hazardous decompositions products	: Carbon monoxide may be formed upon burning.

Section 11: TOXICOLOGICAL INFORMATION

Acute Effects

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Acute	Oral	(LD50) = 1951 mg/kg	Male rat
Acute	Oral	(LD50) = 2587 mg/kg	Female rat
Acute	Dermal	(LD50) = >200 mg/kg	Rabbit
Acute	Inhalation	(LC50) = 2.9 mg/kg	(4 hours) Rat

Irritant / Sensitization effects:

Slightly hazardous in case of eye contact (irritant).
 Slightly hazardous in case of skin contact (irritant). Non-sensitizer to skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
 Slightly hazardous in case of inhalation. Effects will depend on concentration and length of time exposure.

Carcinogenic potential:

A two year rat carcinogenicity study showed a slightly increase in c-cell adenomas in female rats. Studies with mall rats and male and female mice did not show any evidence of carcinogenic response. This product is not considered a carcinogen.

Target organs effects:

May cause damage to the following organs: upper respiratory tract, skin, eyes.

Other health effects:

None known.

Section 12: ECOLOGICAL INFORMATION

Toxicity

Ecology – general

- LC50 = 0.37 mg/l 48 hours Invertebrate
- LC50 = 0.26 mg/l 96 hours Fathead minnow
- LC50 = 0.21 mg/l 96 hours Bluegill sunfish
- LC50 = 0.047 mg/l 96 hours Rainbow trout
- LC50 = >600 mg/l 96 hours Sheepshead minnow
- LC50 = 13 mg/l 96 hours Mysid shrimp

Section 13: DISPOSAL CONSIDERATIONS

Disposal guidelines

Note: Follow federal, state, and local regulations governing the disposal of the water materials.

Neat product: Contac your Chemical Equipment Labs representative or Chemical Equipment Labs, INC., at 610-497-9390.

Contaminated Materials: Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management unit. If off-site management is required, contact a company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a Resource Conservation and Recovery Act (RCRA) hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act. Check the characteristic of the material to be disposed of and/or the physical and reactivity data given in this SDS for the neat product.

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Container Disposal: Empty containers, as defined by appropriate sections of the RCRA, are not RCRA hazardous waste. However, insure proper management of any residuals remaining in container.

Section 14: TRASPOT INFORMATION

DOT shipping information:

DOT (Ground shipments only) : Not regulated.
IATA (Air Shipments) :UN3082, Environmentally hazardous substance, liquid, N.O.S., (Cationic polymer), Class9, P.G. III, Marine pollutant, (ERG Guide 171, (ERG Code 9I)

IMO/IMDG shipping information:

UN3082, Environmentally hazardous substance, liquid, N.O.S., (Cationic polymer), Class 9, P.G. III, Marine pollutant, (EmS No. F-S, S-F, ERG Guide 171, Hazmat Code 4960131)

IATA shipping information:

UN3082, Environmentally hazardous substance, liquid, N.O.S., (Cationic polymer), Class 9, P.G. III, Marine pollutant, (ERG Guide 171, EERG Code 9I)

DOT "RQ" : NONE

Section 15: REGULATORY INFORMATION

The following Regulations are known to apply to the use and disposal of this product Additional Federal, State and Local regulations may also be applicable.

SARA (Superfund Amendments and Reauthorization Act)

SARA 302 extremely hazardous substances list...
No components of this product are listed.
SARA 312 hazardous category...
Immediate (acute) health hazard
SARA 313 toxic chemicals list...
No components of this product are present above the *de minimus* levels.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)

No components of this product are present above the *de minimus* levels.

RCRA (Resource Conservation and Recovery Act) Listed Hazardous Waste

No components of this product are listed.

CWA (Clean Water Act)

No components of this product are listed.

FDA (Food and Drug Act)

This product is not allowed for food contact uses.

NSF (National Sanitation Foundation)

This product is listed by the NSF under NSF/ANSI Standard 60 for use in potable water applications with the following maximum allowable use rates: Concentrations of 2-5 ppm can be Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200)
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used at the initiation of treatment for up to 21 days. Thereafter, the maximum use rate is 0.5 ppm for potable water systems.

TSCA (Toxic Substances Control Act) Applicability

All components may be listed on the TSCA Inventory. Registered pesticides are exempt from the requirements of the TSCA.

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act)

This product is a registered pesticide. EPA Reg. No. 1448-42

HMIS/NPAC Rating	Health: 1	Flammability: 1	Reactivity: 0
NFPA Ratings	Health: 1	Flammability: 1	Reactivity: 0

State Regulations

Various State Right To Know Acts...

Section 16: OTHER INFORMATION

Indication of changes	: Revision 2.0
Revision date	: September 15, 2016
Other information	: ERM

NFPA health hazard	: 1
NFPA fire hazard	: 1
NFPA reactivity	: 0

HMIS Rating

Health	: 1
Flammability	: 1
Physical	: 0

NOTE TO EMPLOYER

This Safety Data Sheet contains environmental, health and toxicology information for your employees. Please ensure this information is provided to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this SDS must be given to the buyer or the information incorporated in your SDS. Discard any previous edition of this SDS.

DISCLAIMER

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, Chemical Equipment Labs, LLC makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for the reliance thereon. Chemical Equipment Labs, LLC assumes no responsibility for any injury or loss resulting from the use of the product described herein. User should satisfy himself that he has all current data relevant to his particular use.

End of Safety Data Sheet

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September 15, 2016

TOXICITY TESTING RESULTS

Client:	Compliance Plus Services, Inc. 455 Business Center Drive STE 250 Horsham, PA 19044
Contact:	Matt Lapp (215) 734-1414
Manufacturer:	Chemical Equipment Labs, LLC
Laboratory:	American Aquatic Testing, Inc. 890 North Graham St. Allentown, PA 18109
Contact:	Christopher Nally (610) 434 - 9015

CHEMICAL PRODUCT IDENTIFICATION

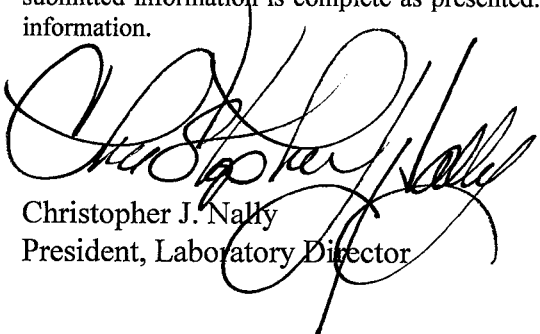
PRODUCT NAME: COOLING TREAT 101

TESTING SUMMARY:

TEST SPECIES	<i>C. dubia</i>
COMMON NAME	Water flea
TEST DATE	7 July, 2021
TEST ENDPOINT	LC ₅₀
TEST RESULT	1.63 mg/L
CONFIDENCE LIMITS	1.41-1.92
NOEL (No-Observed-Effect-Level)	1.25 mg/L
TEST PARAMETERS	See Table I

REPORT CERTIFICATION

I certify under penalty of law that this report is an accurate and truthful representation of the toxicity testing which was performed by American Aquatic Testing, Inc., located at 890 North Graham St. Allentown, Pennsylvania. I further certify that I have personally examined and am familiar with the information submitted in this document and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is complete as presented. I am aware that there are significant penalties for submitting false information.



Christopher J. Nally
President, Laboratory Director

TABLE I: Summary of Conditions for *C. dubia* Toxicity Test [1]*

1.	Test type;	Static, non-renewal
2.	Temperature;	20.0 +/- 1.0 ° C
3.	Light quality;	Wide-spectrum fluorescent illumination
4.	Light intensity;	50 - 100 foot-candles
5.	Photoperiod;	16 hours light, 08 hours dark
6.	Test chamber size;	100 mL
7.	Test solution volume;	80 mL
8.	Renewal;	None
9.	Age of test organisms;	< 1 day
10.	Number organisms / replicate;	10
11.	Replicates;	2
12.	Feeding;	YWT/algae solution prior to test initiation
13.	Cleaning;	None
14.	Aeration;	None unless dissolved oxygen concentrations ≤ 40 % saturation, then ~ 100 bubbles / min.
15.	Dilution water;	EPA Moderately hard water
16.	Test media concentrations;	0, 0.625, 1.25, 2.5, 5, 10 mg/L
17.	Water quality;	Alkalinity, dissolved oxygen, pH, temperature
18.	Test duration;	48 hours
19.	Effects measured;	LC ₅₀ and NOEL
20.	Test acceptability;	Minimum control survival 90 %

* Test conducted according to AAT, Inc. Standard Operating Procedure (SOP) GENCHR001.1, with references to SOP's GENTOX001.1, GENTOX002.1, GENLAB002.0, GENCUL002.0

REFERENCES

[1] **Weber, Cornelius I.**, et al. 1993 Methods for Measuring the Acute Toxicity of effluents and Receiving Waters to Freshwater and Marine Organisms, 4th Edition, EPA/600/4-90-027F, Environmental Monitoring Systems Laboratory, Office of Research and Development Cincinnati, Ohio 45268

APPENDIX A

RAW DATA – TOXICITY TESTING

COOLING TREAT 101

Freshwater Acute Test

American Aquatic Testing, Inc.

Job #: 388-01-07

Start Date: 7-7-21 1528
Time

Species: C. dubia

End Date Time: 7-9-21 1430

Dilution Water: EPA Mod. Hard

Test Type: 48hr. SDR

Concentration ppm	Rep.	Dissolved Oxygen (mg/L)			Temperature (C)			Live Count		
		0 hr.	24 hr.	48 hr.	0 hr.	24 hr.	48 hr.	0 hr.	24 hr.	48 hr.
Control	A	8.6	8.3	8.8	20.0	20.0	20.0	10	10	10
	B	8.6	8.3	8.7	20.0	20.0	20.0	10	10	10
0.625	A	8.6	8.3	8.8	20.0	20.0	20.0	10	10	10
	B	8.6	8.3	8.7	20.0	20.0	20.0	10	10	10
1.25	A	8.6	8.3	8.7	20.0	20.0	20.0	10	9 ¹	8 ¹
	B	8.6	8.3	8.7	20.0	20.0	20.0	10	10	9 ¹
2.5	A	8.6	8.3	8.7	20.0	20.0	20.0	10	1 ⁹	0 ¹
	B	8.6	8.3	8.8	20.0	20.0	20.0	10	2 ⁸	1 ¹
5	A	8.6	8.6 ⁰	-	20.0	20.0 ⁰	-	10	0 ¹⁰	-
	B	8.6	8.6 ⁰	-	20.0	20.0 ⁰	-	10	0 ¹⁰	-
10	A	8.6	8.6 ⁰	-	20.0	20.0 ⁰	-	10	0 ¹⁰	-
	B	8.6	8.5 ⁰	-	20.0	20.0 ⁰	-	10	0 ¹⁰	-
Initials		TRP	TRP	UD	TRP	TRP	UD	TRP	TRP	UD
Date		7/7	7/8	7/9	7/7	7/8	7/9	7/7	7/8	7/9

Concentration	Alkalinity (mg/L)			Hardness (mg/L)			Chlorine (mg/L)
	0 hr.	24 hr.	48 hr.	0 hr.	24 hr.	48 hr.	Sample 1
Control							
100%							
Initials							
Date							

Concentration ppm	pH (std units)			Conductivity (umhos)			
	0 hr.	24 hr.	48 hr.	0 hr.	24 hr.	48 hr.	
Control	8.0	7.9	7.9	257	261	266	
0.625	8.0	7.9	7.9	257	261	267	
1.25	8.0	7.9	7.9	257	261	266	
2.5	8.0	7.9	8.0	257	261	266	
5	8.0	8.0 ⁰	-	257	268 ⁰	-	
10	8.0	8.0 ⁰	-	258	270 ⁰	-	
Initials		TRP	TRP	UD	TRP	KB	UD
Date		7/7	7/8	7/9	7/7	7/8	7/9

Observations: Reading done prior to exchange due to total mortality - TRP 7/8

Acute Fish Test-48 Hr Survival

Start Date: 7/7/2021 Test ID: 3380102Cd Sample ID: Cooling Treat 101
 End Date: 7/9/2021 Lab ID: AAT, INC Sample Type: PREPARED
 Sample Date: Protocol: EPAA 91-EPA/600/4-90/027F Test Species: C dubia
 Comments:

Conc-mg/L	1	2
Control	1.0000	1.0000
0.625	1.0000	1.0000
1.25	0.8000	0.9000
2.5	0.0000	0.1000
5	0.0000	0.0000
10	0.0000	0.0000

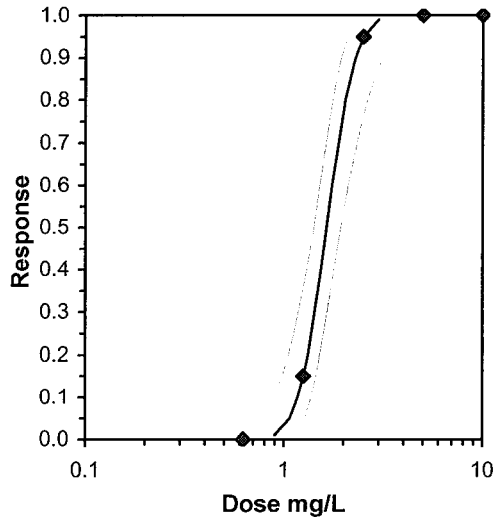
Conc-mg/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
Control	1.0000	1.0000	1.41202	0	20	20			0	20
0.625	1.0000	1.0000	1.41202	0	20	20	1.0000	0.0500	0	20
1.25	0.8500	0.8500	1.1781	3	17	20	0.1154	0.0500	3	20
*2.5	0.0500	0.0500	0.24027	19	1	20	0.0000	0.0500	19	20
5	0.0000	0.0000	0.15878	20	0	20			20	20
10	0.0000	0.0000	0.15878	20	0	20			20	20

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	1.25	2.5	1.76777	
Treatments vs Control				

Parameter	Value	SE	95% Fiducial Limits		Maximum Likelihood-Probit						
			Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter		
Slope	8.92015	1.91995	5.15706	12.6832	0	0.00216	7.81472	1	0.21331	0.11211	3
Intercept	3.09721	0.47303	2.17007	4.02435							

Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	0.89643	0.5695	1.10289
EC05	3.355	1.06885	0.76128	1.26578
EC10	3.718	1.17394	0.88475	1.36828
EC15	3.964	1.25062	0.97634	1.44629
EC20	4.158	1.31511	1.05338	1.51498
EC25	4.326	1.37309	1.12194	1.57982
EC40	4.747	1.53078	1.30053	1.77551
EC50	5.000	1.63423	1.40842	1.92227
EC60	5.253	1.74468	1.51448	2.09597
EC75	5.674	1.94504	1.68633	2.45229
EC80	5.842	2.03079	1.7537	2.61907
EC85	6.036	2.13552	1.83228	2.83298
EC90	6.282	2.27501	1.93202	3.13388
EC95	6.645	2.49868	2.08331	3.65117
EC99	7.326	2.97928	2.38495	4.89313

Significant heterogeneity detected (p < 0.01)



APPENDIX – B
CHAIN-OF-CUSTODY
DOCUMENTATION

