










安全資料表

危害物料資料

1. 產品與用途								
1.1 物料名稱	Formula 1150 (Cooling Water Inhibitor)							
1.2 用途	水冷處理							
2. 危害成份								
2.1 危害分類及標籤：								
	有害	有毒	腐蝕性	易燃	刺激性	爆炸性	助燃	
	()	()	()	()	()	()	()	
2.2 酸鹼值(pH)	13.2 ± 0.2			2.3 曝露限制(OEL)：		無資料		
2.4 致癌物質	有			2.5 其他危害：				
2.5 潛在危害	皮膚接觸：長期接觸會刺激皮膚							
	食入：因屬強鹼性，會嚴重刺激腸內組織							
	眼睛接觸：對眼睛造成刺激							
3. 火警和爆炸資料								
3.1 燃燒物成份比例	無資料		3.2 沸點()	>212		3.3 溶點	無資料	
3.4 閃點()	沒有		3.5 比重	1.181-1.189		3.6 氣壓力	無資料	
3.7 爆炸極限(濃度)	無資料		3.8 溶解度	可溶於水		3.9 氣味	輕微	
3.10 滅火設備	水劑、泡沫劑、化學粉末、二氧化碳							
4. 急救處理								
4.1 眼睛接觸	立即翻開上下眼瞼,用流動清水或生理鹽水沖洗至少 15 分鐘,就醫。							
4.2 皮膚接觸	使用大清水或肥皂水沖洗接觸身體部位。							
4.3 吸入	不適用							
4.4 食入	不要強行嘔吐出來，飲用大量清水，並即時尋求醫療護理。							
5. 個人防護裝備								
<input checked="" type="checkbox"/> 橡膠手套		<input checked="" type="checkbox"/> 防化學品護眼罩			<input type="checkbox"/> 口罩			
6. 處理及使用應知事項								
6.1 儲存注意事項:	<ul style="list-style-type: none"> • 儲存於陰涼、通風庫房 • 保持瓶蓋密封及乾爽 							
6.2 意外洩漏處理的方法:	如輕微洩漏，使用以大量清水稀釋沖入去水渠 如大量洩漏，以沙土或布巾吸收洩漏物，並將用完吸收的物料 遵從化學廢物處理程序棄置							
7. 其他資料								
- 不適用								

Safety Data Sheet

FORMULA 1150-A

1. IDENTIFICATION

Product Name: FORMULA 1150-A

Revised: 10/24/14

Chemical Name: Not Applicable

Description: Clear pale golden to amber liquid with characteristic odor.

Recommended Use: Cooling Water Treatment

Restrictions on Use: For industrial use only. Not for use in treating drinking water

COMPANY IDENTIFICATION

CLEARWATER INDUSTRIES, INC.
415 BRIDGEPORT AVENUE
SHELTON, CT 06484

PHONE NUMBER: (203) 944-0066

EMERGENCY PHONE NUMBERS

CHEMTREC (800) 424-9300
Outside USA: CHEMTREC COLLECT (703) 527-3887

2. HAZARD(S) IDENTIFICATION

GHS Classification:

Serious eye damage/irritation - Category 1

Skin corrosion/irritation - Category 1C

Specific target organ toxicity, single exposure - Category 1

Specific target organ toxicity, single exposure - Category 1

Acute toxicity, oral - Category 4

Signal Word: Danger

Symbol(s):



Hazard Statements:

Causes severe skin burns and eye damage.

Causes damage to digestive system if swallowed

Causes damage to respiratory system if inhaled

Harmful if swallowed

Precautionary Statements:

Prevention

Keep container tightly closed. Keep only in original container. Do not breathe dusts or mists. Do not get in eyes, on skin, or on clothing. Wash hands, forearms, gloves and contaminated surfaces thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection and protective industrial rubber gloves. When conditions warrant use, add face shield, apron, and/or rubber boots.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CONTROL CENTER or doctor for treatment advice.

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. Immediately call a POISON CONTROL CENTER or doctor for treatment advice.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CONTROL CENTER or doctor for treatment advice.

Specific treatment (see First Aid on SDS or on this label).

Take off contaminated clothing and wash it before reuse.

IF exposed or concerned: Call a POISON CONTROL CENTER or doctor for treatment advice.

Storage
Store in a secure manner.

Disposal
Dispose of in accordance with local, regional, national and international regulations.

Hazards Not Otherwise Classified: None Known.

Percentages of Components with Unknown Acute Toxicity:

Dermal: 33%
Inhalation: 33%

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL INGREDIENTS	CAS NO.*	PERCENT (%)**
A. Hazardous Ingredients		
POTASSIUM HYDROXIDE	1310-58-3	12% - 22%
TOLYLTRIAZOLE, SODIUM SALT	64665-57-2	< 5%
B. Other Ingredients		
ACRYLATE COPOLYMER		M
MOLYBDATE SALT	10102-40-6	M
HYDROXYETHYLIDENE DIPHOSPHONIC ACID	2809-21-4	M
SODIUM BENZOTRIAZOLE		M
POLYPHOSPHATE SALT	7320-34-5	M

Legend: L=<1%; M=1-10%; H=>10%

* Exposure limit and regulatory information in Sections 8 & 15

** Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with a directed stream of cool, clear water for at least 30 minutes. Forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Do not allow individual to rub their eyes. Get medical attention urgently, preferably from an ophthalmologist. Do not transport the victim until the recommended flushing period is completed, unless a portable emergency eye wash bottle is immediately available.

Skin Contact: Immediately wash skin with soap and plenty of water while removing contaminated clothing, for at least 15-20 minutes. Call a poison control center or doctor for treatment advice. Do not take contaminated clothing home to be laundered. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be immediately available.

Inhalation: No adverse effects anticipated by this route of exposure. If effects occur, remove patient to fresh air and give artificial respiration via a suitable mechanical device such as a bag and mask if required and get medical attention. Do not use mouth-to-mouth resuscitation.

Ingestion: Do not induce vomiting. Rinse mouth with copious quantities of water first and get immediate medical attention. Drink several glasses of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep airways clear.

Note to Physician: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Aspiration may cause lung damage. Probable mucosal damage may contraindicate the use of gastric lavage.

Most Important Symptoms/Effects:

Eye Contact: May cause severe irritation or burns. Prolonged contact may cause irreversible damage and/or blindness.

Skin Contact: Prolonged contact may cause severe irritation or burns. Severity is generally determined by concentration of solution and duration of contact.

Inhalation: Inhalation of mist may be irritating; a stinging sensation may be experienced. May cause damage to the upper respiratory tract and lungs under severe conditions.

Ingestion: May be toxic. May cause severe irritation or burns of the mouth, throat, and internal tissues resulting in possible nausea and/or vomiting. Large amounts can result in acute toxic effects which may be fatal.

Indication of Immediate Medical Attention and Special Treatment, if Necessary:

Other than acute, none known. See section 11 for toxicological information.

5. FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Any media suitable for the surrounding fire.

Specific Hazards Arising from the Chemical: Product is corrosive to eyes, skin, and respiratory system. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat. If evaporated to dryness, some product residuals may burn. Thermal decomposition may release oxides of carbon and nitrogen.

Special Protective Equipment and Precautions for Fire-Fighters: Wear self-contained breathing apparatus and full turn-out gear. Approach fire from upwind direction. If possible, move containers away from fire. Cool fire exposed containers with water spray. If containers rupture or leak, product may evolve irritating or toxic gas under extreme heat. Contain runoff

6. ACCIDENTAL RELEASE MEASURES

Spill Containment and Clean-up Instructions:

Wear suitable protective equipment found in section 8. Small spills may be flushed with copious quantities of water, preferably to a sanitary sewer or waste treatment facility. Larger spills may be absorbed in sawdust or other absorbent and sweepings disposed of in an approved landfill. The area may then be flushed with copious quantities of water. Floor may be slippery; use care to avoid falling. Avoid release of this product into the environment to prevent contamination of soil, sewers, natural waterways and/or groundwater. See Section 12 for Ecological Information.

7. HANDLING AND STORAGE

Handling and Storage:

Store in a cool, dry, well ventilated area, between 10°C and 49°C. Keep containers tightly closed when not in use and follow all recommended safety precautions when handling the material. Keep out of sun and away from heat or open flame. Keep away from incompatible materials. See Section 10 for incompatible materials.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: General ventilation expected to be satisfactory

PERSONAL PROTECTION EQUIPMENT

Respiratory: Not normally required.

Eyes and Face: Chemical resistant goggles or face shield.

Hands and Skin: Chemical resistant rubber, neoprene latex or PVC

Other Protective Equipment: Eyewash station in area of use. Wear long sleeve shirt, long pants, and boots.

EXPOSURE GUIDELINES**Exposure Limits:**

COMPONENT	TLV
POTASSIUM HYDROXIDE	2mg/m ³ /15M
MOLYBDATE SALT	0.5 mg/m ³ (Mo)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Clear pale golden to amber liquid with characteristic odor.		
Odor Threshold:	N.D.	Vapor Pressure:	N.A.
pH (undiluted):	> 13.5	Vapor Density:	<1
Freeze Point:	<-5°C(24°F)	Specific Gravity(@22°C):	1.317 - 1.327
Boiling Point:	>100°C (212°F)	Solubility in Water:	Complete
Flash Point:	None	Partition Coefficient:	N.D. (n-octanol/water)
		Auto-Ignition Temperature:	N.D.
Evaporation Rate:	1.0	Decomposition Temperature:	N.D.
Flammability (solid, gas):	No	Viscosity:	N.D.
Flammable Limits in Air:	LFL – UFL – N.A.		

10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive at normal temperatures and pressure.

Chemical Stability: Stable under normal conditions

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions.

Conditions to Avoid: Avoid excessive heat, sparks or open flames.

Incompatible Materials: Concentrated acids or oxidizing agents.

Hazardous Decomposition Products: Thermal decomposition may release oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

Ingestion Testing: Rat, LD50: 647 mg/kg*

Skin Testing: None established for this product.

Inhalation Testing: None established for this product.

*Calculated based on GHS acute toxicity formula.

CHRONIC TOXICITY DATA

Sensitization Testing: None established for this product.

Other Testing: None established for this product.

Routes of Exposure: Eyes, Ingestion, Inhalation, Skin.

Eye Contact: May cause severe irritation or burns. Prolonged contact may cause irreversible damage and/or blindness.

Skin Contact: Prolonged contact may cause severe irritation or burns. Severity is generally determined by concentration of solution and duration of contact.

Inhalation: Inhalation of mist may be irritating; a stinging sensation may be experienced. May cause damage to the upper respiratory tract and lungs under severe conditions.

Ingestion: May be toxic. May cause severe irritation or burns of the mouth, throat, and internal tissues resulting in possible nausea and/or vomiting. Large amounts can result in acute toxic effects which may be fatal.

Medical Conditions Aggravated by Exposure: None known.

Chronic Effects from Repeated Overexposure: Other than short term effects, none established.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity Data:

Fish: Rainbow trout, LC50/96hr: 141 mg/l*

*Calculated based on GHS acute aquatic toxicity formula.

Product Fate Data: None established for this product.

Biodegradation Data: None established for this product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with local, regional, national and international regulations.

Contact the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse container (or equivalent) promptly after emptying and offer for reconditioning if appropriate. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal.

14. TRANSPORT INFORMATION

US DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION

UN/NA ID Number: UN3266

Proper Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (CONTAINS POTASSIUM HYDROXIDE)

Hazard Class: 8

Packing Group: PGII

VESSEL TRANSPORT (IMO/IMDG)

UN/NA ID Number: UN3266

Proper Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (CONTAINS POTASSIUM HYDROXIDE)

Hazard Class: 8

Packing Group: PGII

Marine Pollutant: No

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA: All ingredients listed or exempt from listing.

CERCLA and/or SARA RQ: No ingredients listed in this section.

SARA Section 302 Hazard Class: No ingredients listed in this section.

SARA Section 311/312 Chemicals:

Acute Health Hazard: Yes

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactive Hazard: Yes

SARA Section 313 Chemicals: No ingredients listed in this section.

STATE REGULATIONS

This product does not contain any ingredients known to the State of California to cause cancer.

16. OTHER INFORMATION

HAZARD RATING SUMMARY

Hazard Rating System:	NFPA	CODE TRANSLATION
Health:	2	0 = Minimal Hazard
Flammability:	0	1 = Slight Hazard
Reactivity:	1	2 = Moderate Hazard
Special:		3 = Severe Hazard
		4 = Extreme Hazard

Other Precautions: This product has been designed for use in specific types of cooling water circuits and should be used only in accordance with the instructions provided by the technical representative servicing the facility. It may not be used for the treatment of potable water.

MSDS REVISION SUMMARY

Revised Date	Revision Notes
10/24/14	GHS Version 1.0: Supersedes: 9/5/13

ABBREVIATION CODE SUMMARY

N.A.	– Not Applicable
N/A	– Not Available
N.D.	– Not Determined
N.E.	– None Established

Disclaimer: The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.