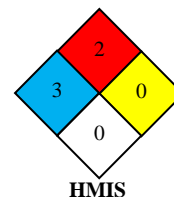


SAFETY DATA SHEET

Global Harmonized System



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier TRC895, TRC898, TRC899, TRC899CNO				[HMIS Classification] Health - 3 Flammability - 2 Physical Hazard - 0	
Product Use The most common uses for this product are for the production of cutting oils, specialty soaps, and chain terminators.					
Manufacturer's Name Twin Rivers Technologies			Supplier's Name Twin Rivers Technologies		
Street Address 780 Washington Street			Street Address 780 Washington Street		
City Quincy		Province MA	City Quincy		Province MA
Postal Code 02169		Emergency Telephone 617-413-5339		Postal Code 02169	
				Emergency Telephone 617-413-5339	
Date SDS Prepared Sept 29,2017		SDS Prepared By Twin Rivers Technologies		Phone Number 617-472-9200	

2. GHS HAZARDS IDENTIFICATION



GHS05, H314 May causes severe skin burns and eye damage

European Hazard Classification: This product is classified as C – Corrosive; R34 – Causes burns, R38 – irritating to eyes and skin

• Emergency Overview:

DANGER : CORROSIVE

CAUTION: Concentrated product causes severe burns.

Avoid contact with eyes, skin or clothing. Wash thoroughly after handling.

• Potential Health Effects:

- Eye: May cause severe or permanent damage
- Skin: causes burns
- Inhalation: May elicit pulmonary irritation if mist or vapors are formed.
May cause coughing or difficult breathing.
- Ingestion: Causes burns to mucous membranes

If product is heated, vaporization can occur. Eye, skin, and upper respiratory irritation may occur.

• Physical/Chemical Hazards:

None identified

• Environmental Hazards:

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation(mixture): Substance

	CAS No.	Wt/Wt %	EC-No.	EC Symbols	EC R-phrases
Octanoic Acid	124-07-2	95 - 100	2046775	C	R34

Occupational exposure limits, if applicable, are listed in Section 8.
 LC/LD50 information is listed in Section 11.
 Full text of R phrase(s) are listed in section 16.

4. FIRST AID MEASURES

- Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
- Skin: Wash skin with soap and water upon contact. Remove contaminated clothing. Get medical attention. Wash clothing before reuse.
- Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion: Remove material from mouth. Drink plenty of water. Do not induce vomiting. Obtain medical attention immediately.

5. FIRE FIGHTING MEASURES

- Extinguishing Media: SMALL FIRES: Use CO2 or dry chemical.
LARGE FIRES: Use foam.
- Unsuitable extinguishing media: Do not use water as an extinguishing media.
- Flash Point and method: 276° F (135.6° C) PMCC
- Explosive limits in air: Upper: Not available
Lower: Not available
- Auto-ignition temperature: Not available.
- Sensitivity to mechanical impact/static discharge: Not available.
- Special Protective Equipment: Wear self-contained breathing apparatus and full protective clothing.
- Other Fire Fighting Considerations: Cool containers with flooding quantities of water until well after fire is out.
- Exposure hazards: Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions: An appropriate NIOSH/MSHA approved respirator should be used if a mist, vapor or dust is generated. Wear suitable gloves and eye/face protection. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Environmental Precautions: Minimize contamination of drains, surface and ground waters.
- Procedures for Spill/Leak Clean-up: Absorb spillage onto inert materials (eg. sand) and collect into suitably labeled containers for disposal at an approved site. Residues and small spillages may be washed away with water and detergent.
OR
Cover contaminated surface with soda ash or sodium bicarbonate. Mix. Flood with water and flush down drain. Wash site with sodium bicarbonate solution.

Refer to Section 8 for additional personal protection information.
Refer to Section 13 for disposal considerations.

7. HANDLING AND STORAGE

- Handling: Handle in accordance with good hygiene and safety procedures. Avoid contact with eyes, skin, and clothing. Prevent formation of dust. Wash thoroughly after handling. Since empty containers contain product residue and can be dangerous, follow all hazard warnings and precautions even after container is emptied. Keep away from sources of ignition.
- Storage: Keep away from possible contact with incompatible substances. Store in acid resistant vessels such as stainless steel, aluminum, or steel coated with resin lining such as Lithcote LC-19 or Kanigen. Do not store near sources of ignition.
- Specific use(s): Follow bulk handling and storage procedures as noted above.

Refer to Section 6 for clean-up of spillages.
Refer to Section 13 for disposal considerations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

• General Precautions:		Good industrial hygiene should be followed. Avoid breathing (heated) vapors. Avoid eye and skin contact.
• Exposure Limit Values:		Not established
• Exposure Controls:		
Engineering Controls:	Ventilation:	Local exhaust: preferred Mechanical: may be necessary if working at elevated temperatures or in enclosed areas.
Personal Protective Equipment:	Eye:	Goggles or face shield with goggles, dependent upon potential exposure.
	Skin:	Protective gloves: Rubber or plastic Dependent upon degree of potential exposure, additional personal protective equipment may be required, such as chemical boots and full protective clothing.
	Inhalation:	None required for ambient temperature, although an appropriate NIOSH/MSHA approved air-purifying respirator should be used if a mist, vapor or dust is generated. A NIOSH/MSHA approved self-contained breathing apparatus or air-supplied respirator is recommended if the concentration exceeds the capacity of cartridge respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
Other Controls:		Boots, eye wash fountain, safety shower, apron, protective clothing.
• Environmental Exposure Controls:		Contact Twin Rivers Technologies for specific Community information.

9. PHYSICAL AND CHEMICAL PROPERTIES

- General Information:

Physical State at 72° F (22° C):	Liquid
Appearance:	Water white to light yellow
Odor:	Musty, rancid
Odor Threshold:	Not available

- Important health, safety and environmental information:

pH:	3 – 4 (non-aqueous)
Boiling point/Boiling range:	>450°F (>232°C) @ 760 mm Hg (101.3kPa)
Flash Point & Method:	276° F (135.6° C) PMCC
Flammability (solid, gas):	Not available
Explosive properties:	Not available
Oxidizing properties:	Not available
Vapor pressure:	@ 72° F (22° C) < 1 mm Hg
Relative density:	0.9 @ 72°F/22° C
Freezing point:	Not available
Solubility:	Water solubility: Negligible @ 72° F (22° C) Fat solubility (solvent-oil to be specified): Not available
Partition coefficient: n-octanol/water:	Not available
Viscosity:	Not available
Vapor density:	Not available
Evaporation Rate (nBuOAc=1):	Not available
Explosive Limits:	Not available
Auto ignition temperature:	Not available
Coefficient of water/oil distribution:	Not available

10. STABILITY AND REACTIVITY

• Stability:	Stable under normal operational procedures.
• Conditions to Avoid:	None identified.
• Materials to Avoid:	Avoid strong oxidizing agents.
• Hazardous Decomposition Products:	Does not decompose up to 400° F (204° C). Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.
• Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA

LD50 skin, rabbit
LD50 oral, rat

HEXANOIC ACID

630 mg/kg
3000 mg/kg

OCTANOIC ACID

>5g/kg
> 10g/kg

DECANOIC ACID

>5g/kg
> 10g/kg

IRRITATION DATA

Skin, rabbit
Eye, rabbit

HEXANOIC ACID

10 mg/24H OPEN MLD
695 ug SEV

OCTANOIC ACID

Corrosive
Corrosive

Acute Oral Toxicity (Rats)

The LD50 for albino rats was 12.6 gm/kg of body weight.

Eye Irritation (Rabbits)

Undiluted TRC625 with no rinsing of the eyes produced severe ocular damage whereas rinsing the eyes with water after instillation of the test material reduced involvement to mild to moderate but transient irritation.

Eye Irritation (Monkeys)

Undiluted TRC625, with no rinsing of the eyes with water after instillation, produced superficial corneal effects and rather severe congestion of the conjunctiva. All eyes were normal within nine days after instillation of the test material.

Skin Irritation (Four-Hour Test)*

	Primary Irritation Index	Degree of Irritancy
Rabbits	4.5	Moderate
Guinea Pigs	0.5	Slight
Humans	2.3	Moderate



GHS05, H314 May causes severe skin burns and eye damage

* "Interspecies Comparisons of Skin Irritancy", by G. A. Nixon, C. A. Tyson and W.C. Wertz;
Tox. & Appld. Pharm. 31: 481-490 (1975)

12. ECOLOGICAL INFORMATION**HEXANOIC ACID**

Fathead minnow	96h LC50	88 mg/l
Red killifish	LC50: in seawater	235 mg/l
	in freshwater	80 mg/l
Daphnia magna	24h LC50	22 mg/l
Gammarus	96h LC50	235 mg/l

Octanoic acid:

Daphnia magna	24h EC50:	550 mg/l
Leuciscus idus	48h LC50:	173 mg/l
Red killifish	96h LC50: in seawater	105 mg/l
	in freshwater	57 mg/l
Bluegill sunfish	96h LC50:	39.9 mg/l

Algae:

Nitzschia closterium	72h EC50:	144 mg/l
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OCTANOIC ACID

Daphnia magna	24h EC50:	550 mg/l
Leuciscus idus	48h LC50:	173 mg/l
Red killifish	96h LC50:	in seawater 105 mg/l
		in freshwater 57 mg/l
Bluegill sunfish	96h LC50	39.9 mg/l

Algae:

Nitzschia closterium	72h EC50	144 mg/l
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13. DISPOSAL CONSIDERATIONS

DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS. Do not dispose of via sinks, drains or into the immediate environment.

14. TRANSPORT INFORMATION**U.S. DOT:** Corrosive liquid, acidic, organic, n.o.s. (Octanoic acid), 8, UN3265, III**Land Transport (ADR/RID)**

Class/Packaging group	8/III
Hazard ID No.	80
UN No.	3265
Proper Shipping name	Corrosive liquid, acidic, organic, n.o.s. (Octanoic acid)

Sea Transport (IMDG)

Class/Packaging group	8/III
UN No.	3265
EmS	8-15
MFAG	760 + Subsection 4.3
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s. (Octanoic acid)
Marine Pollutant	No

Air transport (ICAO/IATA)

UN No.	3265
Class/Packing group	8/III
Proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (Octanoic acid)

15. ADDITIONAL REGULATORY INFORMATION

INVENTORY STATUS: Listed on TSCA, EINECS, NDSL (Canada)*, Korea, Philippines, China
 * NOTE: All components are listed on DSL.

EC LABELING AND CLASSIFICATION:

According to Directives 67/548/EEC and 1999/45/EC

		Contains hexanoic and octanoic acids
- Symbol:	C	Corrosive
- Risk phrase(s):	R34	Causes burns.
	R38	irritating to eyes and skin
- Safety phrase(s):	S36/37/39	Wear suitable protective clothing, gloves, eye/face protection
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S28	After contact with skin, wash immediately with plenty of soap and water.
	S45	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

Canada**HAZARDOUS INGREDIENTS – WHMIS (Canadian Workplace Hazardous Materials Information System)**

This product when tested as a whole is considered a controlled substance, Class D, Division 2, Subdivision B (skin and eye irritant, toxic) within the meaning of the Hazardous Products Act.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

US OSHA Labeling:

CAUTION: Can cause severe burns
Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

In case of contact:

EYES- Immediately flush with plenty of water.
Get medical attention.

SKIN- Wash with soap and plenty of water. Wash clothing before reuse.
Discard contaminated shoes.

EUROPE

According to Directives 67/548/EEC and 1999/45/EC, 2001/58/EC.

- Symbol: C Corrosive

- R-phrases: R34 Causes burns.
R38 irritating to eyes and skin

- Safety phrase(s): S36/37/39 Wear suitable protective clothing, gloves, eye/face protection
S26 In case of contact with eyes, rinse immediately with plenty of water
and seek medical advice.
S28 After contact with skin, wash immediately with plenty of soap and water.
S45 In case of accident or if you feel unwell seek medical advice immediately
(show the label where possible).

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"Safety Studies on a Series of Fatty Acids", by G.B. Briggs, R.L. Doyle and J.A.
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K. Verschueren. Handbook of environmental data on organic chemicals, 3rd ed. (1998).

The submission of the SDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied are for use only in connection with occupational safety and health.

The information contained herein has been compiled from sources considered by Twin Rivers Technologies to be dependable and is accurate to the best of the Company's knowledge. The information relates to the specific product designated herein, and does not relate to use in combination with any other material or any other process. Twin Rivers Technologies assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the controlled product.

This Safety Data Sheet complies with OSHA/EPA/EU Standards and Requirements

- **CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300**
- **International CHEMTREC, call: 1-703-527-3887**