

## 1. Identification

**Product identifier** 896-1001 CHROMA-CHEM® RED IRON OXIDE ARO  
**Other means of identification**  
     SAP Specification 000000139367  
**Recommended use** Aqueous industrial colorant  
**Recommended restrictions** None known.  
**Manufacturer/Importer/Supplier/Distributor information**  
**Manufacturer**  
     **Company** Chromaflo Technologies Corporation  
     2600 Michigan Avenue  
     Ashtabula, OH 44005-0816  
     USA  
**Telephone** 440-997-5137  
**Telefax** 440-992-3613  
**US: CHEMTREC** 800-424-9300  
**EMERGENCY NUMBER**  
**CANADA: CANUTEC** 613-996-6666  
**EMERGENCY NUMBER**  
**Product Regulatory Services** 440-536-9691

014000139367

## 2. Hazard(s) identification

**Physical hazards** Flammable liquids Category 4  
**Health hazards** Skin corrosion/irritation Category 2  
     Serious eye damage/eye irritation Category 2A  
     Germ cell mutagenicity Category 1B  
     Carcinogenicity Category 1B  
     Reproductive toxicity (the unborn child) Category 2  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Danger

**Hazard statement** Combustible liquid. Causes skin irritation. Causes serious eye irritation. May cause genetic defects. Suspected of damaging the unborn child.

### Precautionary statement

#### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

#### Storage

Store in a well-ventilated place. Keep cool. Store locked up.

#### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

If product is in liquid or paste form, physical or health hazards listed related to dust are not considered significant. However, product may contain substances that could be potential hazards if caused to become airborne due to grinding, sanding or other abrasive processes.

### 3. Hazardous components

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Iron Oxide		1309-37-1	40 - 60
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether		111-77-3	2.5 - 10
2-butoxyethanol; ethylene glycol monobutyl ether		111-76-2	1 - 2.5
5020P*		Proprietary*	1 - 2.5
Aluminum oxide		1344-28-1	1 - 2.5
Other components below reportable levels			40 - 60

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash 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. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. 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	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed.
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	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Combustible liquid.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. 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	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.  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 discharge into drains, water courses or onto the ground.

## 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. Keep away from open flames, hot surfaces and sources of ignition. Do not get this material in contact with skin. Avoid contact with eyes. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value	Form
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	PEL	240 mg/m <sup>3</sup>	
Aluminum oxide (CAS 1344-28-1)	PEL	50 ppm 5 mg/m <sup>3</sup>	Respirable fraction.
Iron Oxide (CAS 1309-37-1)	PEL	15 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Total dust. Fume.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	20 ppm	
Aluminum oxide (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Iron Oxide (CAS 1309-37-1)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	24 mg/m <sup>3</sup>	
Iron Oxide (CAS 1309-37-1)	TWA	5 ppm 5 mg/m <sup>3</sup>	Dust and fume.

### Biological limit values

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

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

### Exposure guidelines

#### US - California OELs: Skin designation

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Skin designation applies.

#### US - Tennessee OELs: Skin designation

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

#### US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

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

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls	Good general ventilation 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 must 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).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to vapor/mist at levels exceeding the exposure limits.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. 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	Red.
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	864.56 °F (462.53 °C) estimated
Flash point	187.6 °F (86.5 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	38.894 lbs/gal
Flammability class	Combustible IIIA 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	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Eye contact	Causes serious eye irritation.
-------------	--------------------------------

**Symptoms related to the physical, chemical and toxicological characteristics**  
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Product	Species	Test Results
896-1001 CHROMA-CHEM® RED IRON OXIDE	ARO (CAS Mixture)	
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	16552.3242 mg/kg estimated
<i>Inhalation</i>		
LC50	Mouse	31401.4004 mg/l, 7 Hours estimated
	Rat	20186.6133 mg/l, 4 Hours estimated
<i>Oral</i>		
LD50	Guinea pig	38.8527 g/kg estimated
	Mouse	53.831 g/kg estimated
	Rabbit	13.549 g/kg estimated
	Rat	21956.6504 mg/kg estimated
<i>Other</i>		
LD100	Rat	3797.4683 g/kg estimated
LD50	Mouse	32080.9004 mg/kg estimated
	Rabbit	12553.7256 mg/kg estimated
	Rat	7772.6626 mg/kg estimated
Components	Species	Test Results

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	6540 mg/kg
<i>Oral</i>		
LD50	Guinea pig	4160 mg/kg
	Mouse	4.16 g/kg
	Mouse	8222 mg/kg
	Rabbit	7.19 g/kg
	Rat	5500 mg/kg
<i>Other</i>		
LD50	Mouse	2611 mg/kg
	Rat	2722 mg/kg

Components	Species	Test Results
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)		
<i>Acute</i>		
<i>Dermal</i>		
LD50	Rabbit	400 mg/kg
<i>Inhalation</i>		
LC50	Mouse	700 mg/l, 7 Hours
	Rat	450 mg/l, 4 Hours
<i>Oral</i>		
LD50	Guinea pig	1.2 g/kg
	Mouse	1.2 g/kg
	Rabbit	0.32 g/kg
	Rat	560 mg/kg
<i>Other</i>		
LD50	Mouse	1130 mg/kg
	Rabbit	280 mg/kg
	Rat	340 mg/kg

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

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	May cause genetic defects.
<b>Carcinogenicity</b>	May cause cancer.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
Iron Oxide (CAS 1309-37-1)	3 Not classifiable as to carcinogenicity to humans.

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

Not listed.

<b>Reproductive toxicity</b>	Suspected of damaging the unborn child.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. May be harmful if absorbed through skin.
	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
896-1001 CHROMA-CHEM® RED IRON OXIDE	ARO (CAS Mixture)	
Fish	LC50	3039.3689 mg/l, 96 hours estimated
Components	Species	Test Results
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)		
<b>Aquatic</b>		
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> ) 7500 mg/l, 96 hours

Components	Species	Test Results
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)		
Aquatic		
Fish	LC50	Inland silverside (Menidia beryllina) 1250 mg/l, 96 hours

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

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol / water (log Kow)</b>	
2-butoxyethanol; ethylene glycol monobutyl ether	0.83
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	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

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

Not regulated as dangerous goods.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

### 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.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3) Listed.

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Listed.

#### SARA 304 Emergency release notification

Not regulated.

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

Not listed.

#### 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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	111-77-3	2.5 - 10
2-butoxyethanol; ethylene glycol monobutyl ether	111-76-2	1 - 2.5
Aluminum oxide	1344-28-1	1 - 2.5
Zinc naphthenate-2-ethylhexanoate	12001-85-3	0.1 - 1

Other federal regulations

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

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

5020P (CAS Proprietary)

Aluminum oxide (CAS 1344-28-1)

Iron Oxide (CAS 1309-37-1)

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

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3) 500 lbs

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) 500 lbs

Aluminum oxide (CAS 1344-28-1) 500 lbs

US. Pennsylvania RTK - Hazardous Substances

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

5020P (CAS Proprietary)

Aluminum oxide (CAS 1344-28-1)

Iron Oxide (CAS 1309-37-1)

US. Rhode Island RTK

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

Aluminum oxide (CAS 1344-28-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
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)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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 05-11-2015  
Revision date 05-14-2015  
Version # 02

### Disclaimer

The information contained herein is based on data believed to be reliable and the manufacturer disclaims any liability incurred from the use or reliance upon the same. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text. This safety information is not a license to use this material as claimed by any patents of third parties. The user alone must finally determine whether a contemplated use of this material will infringe any such patents, and for obtaining any required licenses. The information in the sheet was written based on the best knowledge and experience currently available.