1. Product and Company Identification

Material name	**844-0061 CHROMA-CHEM®TITANIUM WHITE TW**
Version #	03
Issue date	06-13-2014
Revision date	10-09-2014
Supersedes date	06-13-2014
CAS #	Mixture
SAP Specification	000000139869
Product use	Non-aqueous colorant
Manufacturer	
Company	Chromaflo Technologies Corporation 2600 Michigan Avenue Ashtabula,OH 44005-0816 USA
Telephone	440-997-5137
Telefax	440-992-3613
US: CHEMTREC EMERGENCY NUMBER	800-424-9300
CANADA: CANUTEC EMERGENCY NUMBER	613-996-6666
Product Regulatory Services	440-536-9691

2. Hazards Identification

Emergency overview

WARNING

FLAMMABLE LIQUID AND VAPOR.
Harmful in contact with eyes.

Prolonged exposure may cause chronic effects. 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.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure	Inhalation. Eye contact.
Eyes	Eye contact may result in corneal injury. Contact may irritate or burn eyes. Do not get this material in contact with eyes.
Skin	Health injuries are not known or expected under normal use.
Inhalation	Prolonged inhalation may be harmful. Avoid breathing dust/fume/gas/mist/vapors/spray.
Ingestion	Health injuries are not known or expected under normal use.
Target organs	Eyes. Respiratory system.
Chronic effects	Conjunctiva.
Signs and symptoms	Corneal damage. Conjunctivitis.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Hazardous components

Components	CAS #	Percent
Titanium dioxide	13463-67-7	40 - 60
2-methoxy-1-methylethyl acetate	108-65-6	10 - 20

Components	CAS #	Percent
Aluminum hydroxide	21645-51-2	2.5 - 10
Solvent naphtha (petroleum), medium aliph.; Straight run kerosine	64742-88-7	2.5 - 10
Synthetic Amorphous Silica, Precipitated	112926-00-8	2.5 - 10

4. First Aid Measures

First aid procedures

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 immediately.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower.

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Notes to physician Symptoms may be delayed.

General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties Flammable by OSHA criteria. Heat may cause the containers to explode. Runoff to sewer may cause fire or explosion hazard.

Extinguishing media

Suitable extinguishing media Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.

Environmental precautions Do not contaminate water.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up

Extinguish all flames in the vicinity. Should not be released into the environment.

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. 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 MSDS.

7. Handling and Storage

Handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. All equipment used when handling the product must be grounded. Do not get this material in contact with eyes. Avoid prolonged exposure. Use only in area provided with appropriate exhaust ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage

The pressure in sealed containers can increase under the influence of heat. Keep away from heat and sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the MSDS). Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum hydroxide (CAS 21645-51-2)	TWA	1 mg/m3	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Synthetic Amorphous Silica, Precipitated (CAS 112926-00-8)	TWA	0.8 mg/m3 20 millions of particle

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

2-methoxy-1-methylethyl acetate (CAS 108-65-6) Can be absorbed through the skin.

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. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye / face protection

Wear safety glasses with side shields (or goggles). Do not get in eyes. Eye wash fountain is recommended.

Skin protection

Wear suitable protective clothing.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygiene considerations	When using do not smoke.

9. Physical & Chemical Properties

Appearance	Not available.
Physical state	Liquid.
Form	Liquid.
Color	White
Odor	Sweet ether-like odor.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Boiling point	> 289.4 °F (> 143 °C)
Melting point/Freezing point	Not available.
Solubility (water)	Not available.
Specific gravity	Not available.
Relative density	1
Relative density temperature	77 °F (25 °C)
Flash point	108.0 °F (42.2 °C)
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Other data	
Flammability class	Combustible II estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of ignition.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Fluorine. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Product	Species	Test Results
844-0061 CHROMA-CHEM®TITANIUM WHITE	TW (CAS Mixture)	
Acute		
Oral		
LD50	Rat	62785.457 mg/kg estimated
Other		
LD50	Rat	17842.6602 mg/kg estimated

Components	Species	Test Results
Aluminum hydroxide (CAS 21645-51-2)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
Other		
LD50	Rat	1100 mg/kg
Synthetic Amorphous Silica, Precipitated (CAS 112926-00-8)		
Acute		
Oral		
LD50	Mouse	> 15000 mg/kg
	Rat	> 22500 mg/kg

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

Local effects Contact may irritate or burn eyes.

Chronic effects Hazardous by OSHA criteria. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Carcinogenicity Possible cancer hazard - may cause cancer based on animal data.

ACGIH Carcinogens

Aluminum hydroxide (CAS 21645-51-2)	A4 Not classifiable as a human carcinogen.
Titanium dioxide (CAS 13463-67-7)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Synthetic Amorphous Silica, Precipitated (CAS 112926-00-8)	3 Not classifiable as to carcinogenicity to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

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

Not listed.

12. Ecological Information

Ecotoxicological data

Product		Species	Test Results
844-0061 CHROMA-CHEM®TITANIUM WHITE		TW (CAS Mixture)	
Crustacea	EC50	Daphnia	1824.8175 mg/l, 48 hours estimated
Fish	LC50	Fish	1824.8175 mg/l, 96 hours estimated

Components		Species	Test Results
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

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

Ecotoxicity Contains a substance which causes risk of hazardous effects to the environment.

Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and degradability Not available.

13. Disposal Considerations

Waste codes D001: Waste Flammable material with a flash point <140 F
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

Waste from residues / unused products 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).

Contaminated packaging	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

UN number	UN1263
UN proper shipping name	Paint related material
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Special provisions	B1, B52, IB3, T2, TP1, TP29
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242

DOT BULK

BULK

UN number	UN1263
UN proper shipping name	Paint related material
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Special provisions	B1, B52, IB3, T2, TP1, TP29
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242

IATA

UN number	UN1263
UN proper shipping name	Paint related material
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1263
UN proper shipping name	PAINT RELATED MATERIAL
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

DOT; DOT Bulk packaging type

IATA; IMDG

15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

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

Not regulated.

CERCLA (Superfund) reportable quantity

None

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

Section 302 extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes

Country(s) or region	Inventory name	On inventory (yes/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).

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

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

Titanium dioxide (CAS 13463-67-7) Listed: September 2, 2011 Carcinogenic.

US - New Jersey RTK - Substances: Listed substance

Synthetic Amorphous Silica, Precipitated (CAS 112926-00-8) Listed.

Titanium dioxide (CAS 13463-67-7) Listed.

US. Massachusetts RTK - Substance List

Synthetic Amorphous Silica, Precipitated (CAS 112926-00-8)

Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania RTK - Hazardous Substances

Titanium dioxide (CAS 13463-67-7) Listed.

US. Rhode Island RTK

Not regulated.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 2*
Flammability: 2
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 2
Instability: 0

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This data sheet contains changes from the previous version in section(s):
Product and Company Identification: Product and Company Identification
Hazards Identification: Emergency overview
Exposure Controls / Personal Protection: Engineering controls