

**MATERIAL SAFETY DATA SHEET****844-0061 CHROMA-CHEM®TITANIUM WHITE TW**

Material no.	Version	1.32 / US
Specification	Revision date	10/31/2008
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**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name : 844-0061 CHROMA-CHEM®TITANIUM WHITE TW  
Use of the Substance / Preparation : Non-aqueous colorant  
Manufactured by Evonik

Company : Evonik Degussa Corporation  
379 Interpace Parkway  
Parsippany, NJ 07054  
USA

Telephone : 973-541-8000

Telefax : 973-541-8040

**US: CHEMTREC EMERGENCY NUMBER** : 800-424-9300

**CANADA: CANUTEC EMERGENCY NUMBER** : 613-996-6666

Product Regulatory Services : 973-541-8060

**2. HAZARDS IDENTIFICATION****\*\*\* EMERGENCY OVERVIEW \*\*\***

*Form-paste Color-white Odor-Sweet ether-like odor.*

May cause eye, skin and respiratory tract irritation.  
Combustible liquid and vapor.

**POTENTIAL HEALTH EFFECTS****Eye contact**

Irritating.  
May cause tearing, reddening and/or swelling.  
May cause conjunctivitis.

**Skin Contact**

A moderate skin irritant based on testing of similar CHROMA-CHEM® base mixtures. Prolonged or repeated contact may cause irritation.  
Prolonged skin contact with large amounts of ether acetates may cause drowsiness.

**Inhalation**

Possibly irritating.  
Excessive inhalation of solvent vapors may cause nasal and respiratory irritation and central

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nervous system effects including dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even death.

**Ingestion**

May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

**Chronic Health Hazard**

High vapor concentrations (3000 ppm) of propylene glycol monomethyl ether acetate caused upper respiratory irritation and liver and kidney effects in subchronic animal testing. The relevance of these results to humans is not known.

Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

High concentrations of titanium dioxide dust caused microscopic lung tumors in rats in lifetime inhalation studies. However, DuPont, the primary US manufacturer, based on a review of the test data and based on an epidemiological study of employees, concludes that titanium dioxide pigment will not cause chronic respiratory disease in humans at concentrations experienced in the workplace.

Because this product is a free-flowing liquid or paste, dust inhalation is not an expected route of exposure.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Information on ingredients / Hazardous components**

Titanium dioxide			
CAS-No.	13463-67-7	Percent (Wt./ Wt.)	30 - 60 %
2-methoxy-1-methylethyl acetate			
CAS-No.	108-65-6	Percent (Wt./ Wt.)	10 - 30 %
Aluminum hydroxide			
CAS-No.	21645-51-2	Percent (Wt./ Wt.)	5 - 10 %
Synthetic Amorphous Silica, Precipitated			
CAS-No.	112926-00-8	Percent (Wt./ Wt.)	5 - 10 %
Stoddard solvent; Low boiling point naphtha - unspecified			
CAS-No.	8052-41-3	Percent (Wt./ Wt.)	5 - 10 %
NJTSR No.56705700001-5384P			
CAS-No.	Trade Secret	Percent (Wt./ Wt.)	1 - 5 %

**Other information**

This material is classified as hazardous under OSHA regulations.

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**4. FIRST AID MEASURES****Inhalation**

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

**Skin contact**

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly wash clothing, shoes and protective equipment before reuse or discard. Get medical attention if irritation develops or persists.

**Eye contact**

In case of contact, immediately flush eyes with plenty of water for at least 30 minutes, while holding eyelids apart.  
Do not allow contaminated water to contact the unaffected eye or face during irrigation of an affected eye.  
Obtain medical attention immediately.

**Ingestion**

Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.  
If the heart has stopped or breathing has stopped, trained personnel should begin cardiopulmonary resuscitation or artificial respiration immediately.

**5. FIRE-FIGHTING MEASURES**

Flash point 42.22 °C , 108 °F  
Method: Setaflash Closed Cup

OSHA Flammability Classification Combustible Liquid

**Suitable extinguishing media**

Use water spray or fog, foam, dry chemical or CO<sub>2</sub>.

**Specific hazards during fire fighting**

Combustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

**Further information**

As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

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**6. ACCIDENTAL RELEASE MEASURES****Additional advice**

Absorb spill with inert material, then place in a chemical waste container. After removal, flush contaminated area with water and collect for disposal. Clean up spills immediately. Remove sources of ignition and ventilate area. Use a respirator and other protective equipment as outlined in Section 8. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

**7. HANDLING AND STORAGE****Handling****Safe handling advice**

Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.

**Storage****Requirements for storage areas and containers**

Keep in a dry, cool place.

Keep container closed when not in use.

Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Component occupational exposure guidelines****• Stoddard solvent; Low boiling point naphtha - unspecified**

CAS-No. 8052-41-3

Control parameters 100 ppm

500 ppm

2900 mg/m<sup>3</sup>

100 ppm

525 mg/m<sup>3</sup>

Time Weighted Average (TWA):(ACGIH)

PEL:(OSHA Z1)

Time Weighted Average (TWA)

Permissible Exposure Limit (PEL):(US CA  
OEL)**• Titanium dioxide**

CAS-No. 13463-67-7

10 mg/m<sup>3</sup>15 mg/m<sup>3</sup>

Total dust.

Time Weighted Average (TWA):(ACGIH)

PEL:(OSHA Z1)

**• Aluminum hydroxide**

CAS-No. 21645-51-2

10 mg/m<sup>3</sup>

Time Weighted Average (TWA):(ACGIH)

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Inhalable particulate.

3 mg/m3  
Respirable.

Time Weighted Average (TWA):(ACGIH)

1 mg/m3  
Respirable fraction.

Time Weighted Average (TWA):(ACGIH)

**• Synthetic Amorphous Silica, Precipitated**

CAS-No. 112926-00-8

5 mg/m3  
Respirable fraction.

PEL:(OSHA Z1)

15 mg/m3  
Total dust.

PEL:(OSHA Z1)

20millions of particles  
per cubic foot of air  
0.8 mg/m3

Time Weighted Average (TWA):(Z3)

Time Weighted Average (TWA):(Z3)

The exposure limit is calculated from the equation, 80/(%SiO<sub>2</sub>), using a value of 100% SiO<sub>2</sub>. Lower values of % SiO<sub>2</sub> will give higher exposure limits.**Other information**

Exposure values for mineral spirits (CAS Nr 8052-41-3) are given as Stoddard solvent.  
The AIHA WEEL for propylene glycol monomethyl ether acetate is 50 ppm TWA.

**Engineering measures**

Use explosion-proof ventilation equipment.

**Personal protective equipment****Respiratory protection**

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

**Hand protection**

Use impermeable gloves.

**Eye protection**

Chemical resistant goggles must be worn.

**Skin and body protection**

A safety shower and eye wash fountain should be readily available.

To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

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**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	paste
Color	white
Odor	Sweet ether-like odor.

**Safety data**

Boiling point/range	> 143 °C
Flash point	42.22 °C Method: Setafash Closed Cup
Relative density	1 (25 °C)
Solubility/qualitative	Solubility in water: Negligible.
Viscosity, dynamic	85 - 105 KU (25 °C)
Solvents and Volatiles Data	% VOC (gm/l) 387.44
Evaporation rate	Slower than butyl acetate

**10. STABILITY AND REACTIVITY**

Conditions to avoid	Avoid high temperatures and sources of ignition.
Materials to avoid	oxidizing substances

**11. TOXICOLOGICAL INFORMATION**

Component	Acute oral toxicity	Titanium dioxide 13463-67-7 LD50 Rat: > 24000 mg/kg
		2-methoxy-1-methylethyl acetate 108-65-6 LD50 Rat: 8532 mg/kg
		Synthetic Amorphous Silica, Precipitated 112926-00-8 LD50 Rat: > 31600 mg/kg
		Stoddard solvent; Low boiling point naphtha - unspecified 8052-41-3 LD50 Rat: > 5000 mg/kg

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Trade Secret

LD50 Rat: &gt; 2000 mg/kg

Component Acute inhalation toxicity

Titanium dioxide  
13463-67-7

LC50 Rat: &gt; 6820 mg/m3 / 4 h

LC50 (rat) &gt; 4345 ppm, 6 hours, vapor

related to substance: 2-methoxy-1-methylethyl acetate

Stoddard solvent; Low boiling point naphtha - unspecified  
8052-41-3

LC50 Rat: &gt; 5500 mg/m3 / 4 h

Component Acute dermal toxicity

Titanium dioxide  
13463-67-7

LD50 Rabbit: &gt; 10000 mg/kg

2-methoxy-1-methylethyl acetate  
108-65-6

LD50 Rabbit: &gt; 19000 mg/kg

(calculated)

(literature value)

Synthetic Amorphous Silica, Precipitated  
112926-00-8

LD50 Rabbit: &gt; 2000 mg/kg

Stoddard solvent; Low boiling point naphtha - unspecified  
8052-41-3

LD50 Rabbit: &gt; 3000 mg/kg

Component Repeated dose toxicity

Titanium dioxide  
13463-67-7

High concentrations of titanium dioxide dust caused microscopic lung tumors in rats in lifetime inhalation studies. However, DuPont, the primary US manufacturer, based on a review of the test data and based on an epidemiological study of employees, concludes that titanium dioxide pigment will not cause chronic respiratory disease in humans at concentrations experienced in the workplace.

Component carcinogenicity assessment

Titanium dioxide  
13463-67-7

Contains a component which is classified as an IARC 2B carcinogen (possibly carcinogenic to humans).

Component General Toxicity Information

2-methoxy-1-methylethyl acetate  
108-65-6

High vapor concentrations (3000 ppm) of propylene glycol monomethyl ether acetate caused upper respiratory irritation and liver and kidney effects in subchronic animal testing. The relevance of these results to

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humans is not known.

**12. ECOLOGICAL INFORMATION**

General Ecological Information No ecotoxicological studies are available.

**13. DISPOSAL CONSIDERATIONS****WASTE DISPOSAL**

Advice on disposal

Waste must be disposed of in accordance with federal, state, provincial and local regulations. **CONTAINER DISPOSAL:** Empty containers by removing the top and inverting to allow all free-flowing product to drain. To meet regulatory criteria, the container is considered empty when less than 3% remains in the container. Additional special handling is not typically required and the empty container can be discarded with other non-hazardous trash. Note: Local disposal regulations may be more stringent and require additional restrictions or precautions. Customers should check with their local disposal company, municipal or state authority. Recycle of plastic or metal containers may require clean rather than empty containers. In this case the containers can be rinsed with mineral spirits until the containers are considered generally product free.

**14. TRANSPORT INFORMATION****Sea transport IMDG-Code**

Class	3
UN-No	1263
Packaging group	III
EmS	F-E, S-E

Proper technical name (Proper shipping name)

PAINT RELATED MATERIAL

**Air transport ICAO-TI/IATA-DGR**

Class	3
UN-No	1263
Packaging group	III

Proper technical name (Proper shipping name)

Paint related material

**Loading instructions/Remarks**

IATA\_C ERG-Code 3L

IATA\_P ERG-Code 3L

CFR\_INWTR In the U.S. this material may be classified as combustible liquid. Combustible liquids are not regulated in packages 450 liters or less. This applies for shipments by road and rail only.



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CFR\_RAIL In the U.S. this material may be classified as combustible liquid.  
Combustible liquids are not regulated in packages 450 liters or less.  
This applies for shipments by road and rail only.

CFR\_ROAD In the U.S. this material may be classified as combustible liquid.  
Combustible liquids are not regulated in packages 450 liters or less.  
This applies for shipments by road and rail only.

**15. REGULATORY INFORMATION****Information on ingredients / Non-hazardous components**

This product contains the following non-hazardous components

Acrylic Polymer			
CAS-No.		Percent (Wt./ Wt.)	5 - 10 %
NJTSR No.56705700001-5067P			
CAS-No.	Trade Secret	Percent (Wt./ Wt.)	1 - 5 %

**US Federal Regulations****OSHA**

If listed below, chemical specific standards apply to the product or components:

- None listed

**Clean Air Act Section (112)**

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None listed

**CERCLA Reportable Quantities**

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed

**SARA Title III Section 311/312 Hazard Categories**

The product meets the criteria only for the listed hazard classes:

- Acute Health Hazard
- Chronic Health Hazard
- Fire Hazard

**SARA Title III Section 313 Reportable Substances**

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None listed

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**Toxic Substances Control Act (TSCA)**

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

**State Regulations****California Proposition 65**

A warning under the California Drinking Water Act is required only if listed below:

- None listed

**International Chemical Inventory Status**

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact the Product Regulatory Services Department.

- |                          |                           |
|--------------------------|---------------------------|
| • Europe (EINECS/ELINCS) | Listed/registered         |
| • USA (TSCA)             | Listed/registered         |
| • Canada (DSL)           | Listed/registered         |
| • Australia (AICS)       | Not listed/Not registered |
| • Japan (MITI)           | Not listed/Not registered |
| • Korea (TCCL)           | Listed/registered         |
| • Philippines (PICCS)    | Not listed/Not registered |
| • China                  | Listed/registered         |
| • New Zealand            | Not listed/Not registered |

**16. OTHER INFORMATION****HMIS Ratings**

Health :	2*
Flammability :	2
Physical Hazard :	0

**Further information**

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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

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