

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	1 / 11

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.

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	2 / 11

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

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	3 / 11

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 CO₂.

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.

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	4 / 11

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/m³
100 ppm
525 mg/m³

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/m³
15 mg/m³
Total dust.

Time Weighted Average (TWA):(ACGIH)
PEL:(OSHA Z1)

- **Aluminum hydroxide**

CAS-No. 21645-51-2
10 mg/m³

Time Weighted Average (TWA):(ACGIH)

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	5 / 11

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/(%SiO₂), using a value of 100% SiO₂. Lower values of % SiO₂ 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.

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	6 / 11

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: Setaflash 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

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

Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	7 / 11

NJTSR No.56705700001-5384P
Trade Secret
LD50 Rat: > 2000 mg/kg

Component Acute inhalation toxicity

Titanium dioxide
13463-67-7
LC50 Rat: > 6820 mg/m3 / 4 h

LC50 (rat) > 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: > 5500 mg/m3 / 4 h

Component Acute dermal toxicity

Titanium dioxide
13463-67-7
LD50 Rabbit: > 10000 mg/kg

2-methoxy-1-methylethyl acetate
108-65-6
LD50 Rabbit: > 19000 mg/kg
(calculated)
(literature value)

Synthetic Amorphous Silica, Precipitated
112926-00-8
LD50 Rabbit: > 2000 mg/kg

Stoddard solvent; Low boiling point naphtha - unspecified
8052-41-3
LD50 Rabbit: > 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

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	8 / 11

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.

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	9 / 11

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

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	10 / 11

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.

MATERIAL SAFETY DATA SHEET

844-0061 CHROMA-CHEM®TITANIUM WHITE

TW



Material no.		Version	1.32 / US
Specification	139869	Revision date	10/31/2008
Order Number		Print Date	03/30/2009
		Page	11 / 11

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.