



MATERIAL SAFETY DATA SHEET

Revision date: 29-Jun-2010

Supercedes: 12-Jun-2007

MSDS Number: 10640

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name: TINT-AYD® EP 30-01 Rutile Titanium Dioxide

Product Use Description: Pigment dispersion

Company/Undertaking Identification	Elementis Specialties, Inc.	Elementis UK Ltd.
	329 Wyckoffs Mill Road	c/o Elementis Specialties
	Hightstown, NJ 08520	Stolberger Str. 370
	Tel: (609) 443-2000	50933 Cologne, Germany
		Tel. +49 (0) 221 2923 2000

Emergency telephone number: CHEMTREC Emergency Response Number: 1-800-424-9300 (1-703-527-3887)
SGS Emergency Response Number: + 32 (0)3 575 55 55

Product_Stewardship@elementis.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance:	Liquid
Color:	White
Odor:	Aliphatic

WARNING

FLAMMABLE LIQUID

Harmful by inhalation and if swallowed
May cause slight eye irritation
May cause irritation of respiratory tract
May cause skin irritation and/or dermatitis
CONTAINS TITANIUM DIOXIDE WHICH MAY CAUSE CANCER
Risk of cancer depends on level and duration of exposure
Long term exposure to airborne concentrations may cause lung damage

Potential health effects:

Eye contact: May cause slight eye irritation. Signs and symptoms include burning, tearing, redness and swelling.

Skin contact: May cause skin irritation and/or dermatitis.

Inhalation: Harmful by inhalation. Irritating to respiratory system. Vapors may cause drowsiness and dizziness. Long term exposure to airborne concentrations may cause lung damage.

Ingestion: Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Routes of exposure: Inhalation, Skin, Ingestion

Target Organs: Respiratory system, Central nervous system

See Sections 11 & 12 for additional toxicological and ecological information

Environmental hazard: See Section 12, below

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Components	CAS-No	Weight %
Titanium dioxide	13463-67-7	50 - 100%
Ethyl benzene	100-41-4	2.5 - 10%
Xylene, Mixed isomers, pure	1330-20-7	10 - 25%
n-Butanol	71-36-3	2.5 - 10%

This product is considered hazardous as defined under OSHA's Hazard Communication Standard (29 CFR 1910.1200).

4. FIRST AID MEASURES

Inhalation: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen.

Skin contact: Wash off immediately with soap and plenty of water. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Eye contact: Rinse immediately with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flash Point: 80 °F / 26 °C

Flash Point Method: Closed Cup (CC)

Lower Flammable Limit: 1.0 Vol%

Upper Flammable Limit: 7.0 Vol%

Autoignition temperature: Not selfigniting

Unusual Fire and Explosion Hazards:	Emits toxic fumes under fire conditions
Reactivity Hazard:	None known
Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Hazardous combustion products:	Carbon monoxide, Carbon dioxide (CO ₂), Nitrogen oxides (NO _x).
Special Fire Fighting Procedure:	Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment.
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.
Clean-up methods:	Soak up with inert absorbent material and dispose of as hazardous waste. Sweep up and shovel into suitable containers for disposal. Prevent product from entering drains. Clean spill area thoroughly. Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

Handling:	Remove all sources of ignition. Avoid contact with skin, eyes and clothing. Avoid breathing mists, dusts, or vapors. Wash hands thoroughly after handling.
Storage:	Keep containers tightly closed in a cool, well-ventilated place. Keep product and empty container away from heat and sources of ignition.
Additional Storage:	Not required under normal use

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures:	Maintain adequate ventilation to keep hazardous ingredients below their PELs or TLVs. Use NIOSH/MSHA approved respirator whenever exposure limits exceeded.
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Personal Protective Equipment

Eye protection:	Tightly fitting safety goggles
Skin and body protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place
Respiratory protection:	In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hand protection: Protective gloves, Solvent-resistant gloves, Nitrile rubber

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Exposure controls

Components	OEL - Long-term TWA	OES - Short-term STEL
Xylene, Mixed isomers, pure	220 mg/m ³ 50 ppm	441 mg/m ³ 100 ppm

Components	OSHA STEL	OSHA PEL	OSHA TWA	ACGIH STEL	ACGIH TWA
Titanium dioxide		15 mg/m ³ (total dust)	15 mg/m ³ (total dust)		10 mg/m ³ (total dust)
Ethyl benzene	125 ppm 545 mg/m ³	100 ppm 435 mg/m ³	435 mg/m ³ 100 ppm	125 ppm	100 ppm
Xylene, Mixed isomers, pure	655 mg/m ³ 150 ppm	100 ppm 435 mg/m ³	435 mg/m ³ 100 ppm	150 ppm 651 mg/m ³	100 ppm 435 mg/m ³
n-Butanol		300 mg/m ³ 100 ppm	300 mg/m ³ 100 ppm		20 ppm

Components	OSHA Ceiling	ACGIH Ceiling	WEEL Ceiling
n-Butanol	150 mg/m ³ 50 ppm		

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid
Color: White
Odor: Aliphatic
Physical state: Liquid
Vapor pressure: 4 mm Hg @ 25 °C
Vapor density: 3.7
Boiling point/range: 243 - 288 °F / 117 - 142 °C
Solubility: Water insoluble
Density: 1.8 g/cm³
Bulk density: 15.0 lbs/gal
Flash Point: 80 °F / 26 °C
Solvent content:
 Percent Volatile: 20 %
 Water content: Not applicable
VOC content: 360 g/L
Evaporation rate: < 1.0

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions
Conditions to avoid: Heat, flames and sparks

Materials to avoid:	Oxidizing agents
Hazardous decomposition products:	No decomposition if stored normally
Possibility of Hazardous Reactions:	Will not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components	LC50/inhalation/4h/Rat	LD50/Dermal/Rat	LD50/Oral/Rat
Titanium dioxide	>100 µg/kg	>10 g/m ³	>24 g/kg
Ethyl benzene	17.2 mg/L	15.35 g/kg (rabbit)	3500 mg/kg (rat)
Xylene, Mixed isomers, pure	5334 mg/L	4350 mg/kg (rabbit)	4300 mg/kg (rat)
n-Butanol	8000 mg/L	3400 mg/kg	790 mg/kg

Local effects

Skin irritation:	May cause skin irritation and/or dermatitis.
Eye irritation:	Contact with eyes may cause irritation.
Inhalation:	May cause irritation of respiratory tract.
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic toxicity:	Long-term chronic toxicity studies to evaluate the carcinogenic potential of this product have not been conducted; See table and/or data, below, of individual components

Components	NTP	IARC	OSHA
Titanium dioxide		Group 2B- Possibly Carcinogenic to Humans	Present
Ethyl benzene		Group 2B - Possibly Carcinogenic to Humans	Present
Xylene, Mixed isomers, pure		Group 3- Unclassifiable as to Carcinogenicity to Humans	

Specific effects

Carcinogenic effects: Titanium Dioxide showed an increased incidence of lung cancer in rats of both sexes if inhaled at high concentrations. In a re-evaluation, the IARC group has reclassified Titanium Dioxide (TiO₂) as an group 2B carcinogen - possible carcinogen to humans.

Ethyl Benzene has been reviewed by IARC. There is inadequate evidence in humans for the carcinogenicity of Ethyl Benzene, sufficient evidence in experimental animals. Therefore, Ethyl Benzene is possible carcinogen in humans (Group 2B).

Xylene has been reviewed by IARC. There is inadequate evidence in humans and inadequate evidence in experimental animals for the carcinogenicity of Xylene. Therefore, Xylene is not classifiable as to its carcinogenicity to humans (Group 3). Under the conditions of the 2 year studies by the NTP, there was no evidence of carcinogenicity of xylenes for male and female rats and mice. Therefore, Xylene is not classifiable as to its carcinogenicity to humans (Group 3)

Target Organs: Respiratory system, Central nervous system

12. ECOLOGICAL INFORMATION

Aquatic toxicity:

Components	LC50/96hr/48hr/24hr:	EC50/96hr/48hr/24hr	Bioaccumulation Concentration Factor	No observable Effect Concentration/96hr/48hr/24hr (NOEC)
Titanium dioxide	>1000 mg/L (fathead minnows)	No data available	No data available	No data available
Ethyl benzene	150 mg/L (L. macrochirus; 96hr)	438 mg/L (S. capricornutum; 96hr)	No data available	No data available
n-Butanol	1730 mg/L (fathead minnow)	2337 mg/L (Daphnia magna; 48hr) 500 mg/L (Algea)	No data available	No data available
Xylene, Mixed isomers, pure	13.5 mg/L (Rainbow trout)	3.82 mg/L (water flea; 48hr)	No data available	No data available

Persistence and degradability: No data available

Environmental Fate and Pathways:

Mobility: No data available

Biodegradability: No data available

Bioaccumulative potential: No data available

Physical / Chemical: No data available

BOD/COD:

COD-value: No data available

BOD5-value: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of in accordance with Local and National regulations.

RCRA Hazardous Waste:

RCRA: Characteristic Waste - D001 (ignitable)

14. TRANSPORT INFORMATION**U.S. Department of Transportation Ground (49 CFR):**

Proper shipping name: PAINT
UN-No: 1263
Packing group: III
Hazard Class: 3
Hazard Class: 3
Marine pollutant: NO

International Air Transportation (ICAO/IATA):

Proper shipping name: PAINT
UN-No: 1263
Packing group: III
Hazard Class: 3

International Maritime Organization (IMO/IMDG):

Proper shipping name: PAINT
UN-No: 1263
Packing group: III
Hazard Class: 3
EmS: F-E, S-E
IMDG - Marine Pollutants: NO

Surface Shipments in Europe (ADR/RID):

ADR/RID: 3 Flammable liquids
UN-No: 1263
Packing group: III
Hazard Class: 3
Proper shipping name: PAINT

15. REGULATORY INFORMATION

Heavy metals:

Heavy metals content (ppm): Not applicable

International Inventories

TSCA/ (USA)	Listed	EINECS/ (EU)	Listed
DSL/ (CANADA)	Listed	NDSL/ (CANADA)	Not applicable
ENCS/ (JAPAN)	Listed	IECSC/ (CHINA)	Listed
PICCS/ (PHILLIPINES)	Listed	KECL (KOREA)	Listed
AICS/ (AUSTRALIA)	Listed	HSNO/ New Zealand:	Listed

U.S. Regulations

TSCA Section 12(b) Export Notification

Xylene, Mixed isomers, pure (CAS # 1330-20-7)

Section 4 (as p-Xylene CAS# 106-42-3), 1% de minimus concentration

SARA Title III:

Section 302 EHS: None

Section 311/312: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Section 313: This product contains the following chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

Xylene, Mixed isomers, pure (CAS # 1330-20-7)

Listed

Ethyl benzene (CAS # 100-41-4)

Listed

n-Butanol (CAS # 71-36-3)

Listed

California Prop. 65:

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This Product contains the following Substance (s) known to the state of California to cause cancer and/or developmental effects.

Toluene

Components	Carcinogen	Reproductive toxicity	No significant risk level
Ethyl benzene	Listed		41 µg/day 54 µg/day

Canada**WHMIS hazard class:**

B3 Combustible liquid

D2B Skin or Eye irritation

D2A Possible, probable or known human carcinogen according to classifications by IARC or ACGIH.

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION**HMIS:**

Health: 2 *
Flammability: 3
Reactivity: 0

Previous Revision Date: 12-Jun-2007**Key/Legend:**

N/A: Not applicable
N/D: Not determined
ppm: Parts per million
X: Listed

Prepared by: Product Stewardship

The data set forth in these sheets are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. ELEMENTIS SPECIALTIES makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereon.

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