



# MATERIAL SAFETY DATA SHEET

Revision date: 08-Aug-2012

Supercedes: 19-Jan-2009

MSDS Number: 10475

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

**Product name:** DAPRO® 5005

**Product Use Description:** Coating compound  
Surface coating  
Paint

<b>Company/Undertaking Identification:</b>	Elementis Specialties, Inc.	Elementis UK Ltd.
	469 Old Trenton Road	c/o Elementis GmbH
	East Windsor, NJ 08512	Stolberger Str. 370
	USA	50933 Cologne, Germany
	Tel: 1 (609) 443-2000	Tel. +49 (0) 221 2923 2000

**Emergency telephone number:** For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at: 1-800-424-9300 or 1-703-527-3887

For ALL other inquiries about this product, call Elementis Specialties at: 1-609-443-2000 (USA) or +(49)-221-2923-2000 (EU)

Product\_Stewardship@elementis.com

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

<b>Appearance:</b>	Liquid
<b>Color:</b>	Amber
<b>Odor:</b>	Aromatic

### DANGER

#### FLAMMABLE LIQUID

Harmful by inhalation and if swallowed  
 Irritating to eyes and skin  
 Risk of serious damage to eyes  
 May cause irritation of respiratory tract  
 Vapours may cause drowsiness and dizziness  
 Long term exposure to airborne concentrations may cause lung damage

#### Potential health effects:

<b>Eye contact:</b>	Causes eye burns. Risk of serious damage to eyes. Signs and symptoms include burning, tearing, redness and swelling.
<b>Skin contact:</b>	Irritating to skin and mucous membranes. Repeated exposure may cause skin dryness or cracking.
<b>Inhalation:</b>	Harmful by inhalation. Irritating to respiratory system. Vapors may cause drowsiness and dizziness. Long term exposure to airborne concentrations may cause lung damage.
<b>Ingestion:</b>	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Routes of exposure:** Inhalation, Skin, Ingestion

**Target Organs:** Skin, Eyes, 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 %
Stoddard solvent (< 0.1% Benzene)	8052-41-3	2.5 - 10%
2-Ethylhexanoic acid	149-57-5	< 2.5%
n-Butanol	71-36-3	25 - 50%
Ethyl benzene	100-41-4	2.5 - 10%
Xylenes (o-, m-, p- isomers)	1330-20-7	25 - 50%
1,10-Phenanthroline	66-71-7	2.5 - 10%

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

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen.
<b>Skin contact:</b>	Wash off immediately with soap and plenty of water. If a person feels unwell or symptoms of skin irritation appear, consult a physician.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
<b>Ingestion:</b>	If swallowed, seek medical advice immediately and show this container or label

### 5. FIRE-FIGHTING MEASURES

**Flash Point:** 81 °F / 27 °C

**Flash Point Method:** ASTM D3278

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<b>Autoignition temperature:</b>	Not selfigniting
<b>Explosive properties:</b>	LEL: 1.0 Vol% UEL: 9.4 Vol%
<b>Unusual Fire and Explosion Hazards:</b>	Emits toxic fumes under fire conditions.
<b>Reactivity Hazard:</b>	None known
<b>Suitable extinguishing media:</b>	Carbon dioxide (CO <sub>2</sub> ); Dry powder; Dry sand; Alcohol-resistant foam
<b>Hazardous combustion products:</b>	Carbon monoxide, Carbon dioxide (CO <sub>2</sub> ), Nitrogen oxides (NO <sub>x</sub> ).
<b>Special Fire Fighting Procedure:</b>	Wear self contained breathing apparatus for fire fighting if necessary

## 6. ACCIDENTAL RELEASE MEASURES

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

## 7. HANDLING AND STORAGE

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

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering measures:</b>	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, Neoprene 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
Xylenes (o-, m-, p- isomers)	220 mg/m <sup>3</sup> 50 ppm	441 mg/m <sup>3</sup> 100 ppm

Components	OSHA STEL	OSHA PEL	OSHA TWA	OSHA Ceiling
Stoddard solvent (< 0.1% Benzene)		2900 mg/m <sup>3</sup> 500 ppm	525 mg/m <sup>3</sup> 100 ppm	
n-Butanol		300 mg/m <sup>3</sup> 100 ppm	300 mg/m <sup>3</sup> 100 ppm	150 mg/m <sup>3</sup> 50 ppm
Ethyl benzene	125 ppm 545 mg/m <sup>3</sup>	100 ppm 435 mg/m <sup>3</sup>	435 mg/m <sup>3</sup> 100 ppm	
Xylenes (o-, m-, p- isomers)	150 ppm 655 mg/m <sup>3</sup>	100 ppm 435 mg/m <sup>3</sup>	435 mg/m <sup>3</sup> 100 ppm	

Components	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	ACGIH - Carcinogens	ACGIH - Threshold Limit Values TLV Basis - Critical Effects
Stoddard solvent (< 0.1% Benzene)	100 ppm				CNS impairment eye, kidney and skin damage nausea
2-Ethylhexanoic acid	5 mg/m <sup>3</sup> (inhalable fraction and vapor)				teratogenic effects
n-Butanol	20 ppm				eye and upper respiratory tract irritation
Ethyl benzene	20 ppm			A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	upper respiratory tract irritation kidney damage (nephropathy) cochlear impairment

Components	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	ACGIH - Carcinogens	ACGIH - Threshold Limit Values TLV Basis - Critical Effects
Xylenes (o-, m-, p-isomers)	100 ppm 435 mg/m <sup>3</sup>	150 ppm 651 mg/m <sup>3</sup>		A4 Not Classifiable as a Human Carcinogen	CNS impairment eye and upper respiratory tract irritation

Components	ACGIH - Skin Absorption Designation	ACGIH - Biological Exposure Indices (BEI)	ACGIH - Sensitization (SEN) Notations	ACGIH - Simple Asphyxiants	ACGIH - Sensitization (SEN) Notations
Ethyl benzene		0.7 g/g creatinine urine end of shift at end of workweek Sum of mandelic acid and phenylglyoxylic acid nonspecific, semi-quantitative end-exhaled air not critical Ethyl benzene semi-quantitative			
Xylenes (o-, m-, p-isomers)		1.5 g/g creatinine urine end of shift Methylhippuric acids			

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Liquid
<b>Color:</b>	Amber
<b>Odor:</b>	Aromatic
<b>Physical state:</b>	Liquid
<b>Vapor pressure:</b>	6.0 mm Hg @ 25°C 10.0 hPa @ 20°C
<b>Vapor density:</b>	3.1
<b>Boiling point/range:</b>	219 °F / 104 °C
<b>Solubility:</b>	Water insoluble
<b>Density:</b>	0.85 g/cm <sup>3</sup>
<b>Bulk density:</b>	7.1 lbs/gal

<b>Flash Point:</b>	81 °F / 27 °C
<b>Ignition temperature:</b>	230 (°C)
<b>Explosive properties:</b>	Vapors may form explosive mixtures with air
<b>Explosion limits:</b>	LEL: 1.0 Vol% UEL: 9.4 Vol%
<b>Solvent content:</b>	
<b>Percent Volatile:</b>	80 - 90 %
<b>VOC content:</b>	744 g/L
<b>Evaporation rate:</b>	< 1.0

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable at normal conditions
<b>Conditions to avoid:</b>	Heat, flames and sparks
<b>Materials to avoid:</b>	Oxidizing agents
<b>Hazardous decomposition products:</b>	No decomposition if stored normally
<b>Possibility of Hazardous Reactions:</b>	None known

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Components	LC50/inhalation/4h/Rat	LD50/Dermal/Rat	LD50/Oral/Rat
Stoddard solvent (< 0.1% Benzene)	> 5500 mg/m <sup>3</sup>	> 3000 mg/kg (rabbit)	> 5000 mg/kg (rat)
2-Ethylhexanoic acid	2.36 mg/L	> 2000 mg/kg	2000 - 3000 mg/kg
n-Butanol	8000 mg/L	3400 mg/kg	790 mg/kg
Ethyl benzene	17.2 mg/L	15354 mg/kg (rabbit)	3500 mg/kg (rat)
Xylenes (o-, m-, p- isomers)	5000 ppm 4hr 47635 mg/L 4hr	> 1700 mg/kg (rabbit)	4300 mg/kg (rat)
1,10-Phenanthroline	No data available	No data available	500 mg/kg (mouse)

**Product Information:** No data available

### Local effects

<b>Skin irritation:</b>	Irritating to skin and mucous membranes.
<b>Eye irritation:</b>	Causes burns. Risk of serious damage to eyes.

<b>Inhalation:</b>	Harmful by inhalation. May cause irritation of respiratory tract. Vapors may cause drowsiness and dizziness.
<b>Ingestion:</b>	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>Sensitization:</b>	No sensitizing effects known.
<b>Chronic toxicity:</b>	No data is available on the product itself

### Specific effects

**Carcinogenic effects:** This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

Components	NTP	IARC	OSHA
Stoddard solvent (< 0.1% Benzene)		Group 3 - Unclassifiable as to carcinogenicity to humans	
Ethyl benzene		Group 2B - Possibly Carcinogenic to Humans	Present
Xylenes (o-, m-, p- isomers)		Group 3 - Unclassifiable as to Carcinogenicity to Humans	
1,10-Phenanthroline		Group 3- Unclassifiable as to carcinogenicity to humans	

**Target Organs:** Skin, Eyes, 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)
Stoddard solvent (< 0.1% Benzene)	> 1000 mg/L (fish)	> 1000 mg/L	No data available	No data available
2-Ethylhexanoic acid	270 mg/L (fresh water, fish)	85.4 mg/L (Daphnia magna; 48hr) 61 mg/L (S. subspicatus; 72hr) 41 mg/L (S. subspicatus; 96hr)	No data available	No data available
n-Butanol	1730 mg/L (fathead minnow)	2337 mg/L (Daphnia magna; 48hr) 500 mg/L (Algae)	No data available	No data available

Components	LC50/96hr/48hr/24hr	EC50/96hr/48hr/24hr	Bioaccumulation Concentration Factor	No Observable Effect Concentration/96hr/48hr/24hr (NOEC)
Ethyl benzene	150 mg/L (L. macrochirus; 96hr)	438 mg/L (S. capricornutum; 96hr)	No data available	No data available
Xylenes (o-, m-, p- isomers)	13.5 mg/L (Rainbow trout)	3.82 mg/L (water flea; 48hr)	No data available	No data available
1,10-Phenanthroline	No data available	No data available	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:** `FLAMMABLE LIQUID, N.O.S. (XYLENE, BUTANOL)`  
**UN-No:** 1993  
**Packing group:** III  
**Hazard Class:** 3  
**DOT RQ (lbs):** RQ for product = 254 lbs (RQ Xylene = 100 lbs)  
**Marine pollutant:** NO

**International Air Transportation (ICAO/IATA):**

**Proper shipping name:** `FLAMMABLE LIQUID, N.O.S. (XYLENE, BUTANOL)`



UN-No: 1993  
 Packing group: III  
 Hazard Class: 3

**International Maritime Organization (IMO/IMDG):**

Proper shipping name: `FLAMMABLE LIQUID, N.O.S. (XYLENE, BUTANOL)`  
 UN-No: 1993  
 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: 1993  
 Packing group: III  
 Hazard Class: 3  
 Proper shipping name: `FLAMMABLE LIQUID, N.O.S. (XYLENE, BUTANOL)`

## 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
NECSI/ (TAIWAN)	Listed		

**U.S. Regulations**

**TSCA Section 12(b) Export Notification**

Xylenes (o-, m-, p- isomers) (CAS # Section 4 (as p-Xylene CAS# 106-42-3);  
 1330-20-7) **1% de minimus concentration**

**TSCA Section 5(a)(2) Proposed  
Significant New Use Rules  
(SNURs):**

**Not applicable**

**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):

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

Xylenes (o-, m-, p- isomers) (CAS # 1330-20-7)  
*Listed*

Ethyl benzene (CAS # 100-41-4)  
*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

Benzene

Components	Carcinogen	Reproductive toxicity	No significant risk level
Ethyl benzene	Listed		54 µg/day 41 µg/day
2-Ethylhexanoic acid		Developmental toxicity	

**Canada**

**WHMIS hazard class:** B2 Flammable liquid

D2A

D2B

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

**This Material Safety Data Sheet contains changes from the previous version in Sections:** 1 - 15

**Previous Revision Date:** 19-Jan-2009

**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.

ELEMENTIS SPECIALTIES warrants only that its products conform with their published specifications, and no other express warranty is made with regards thereof. We do not guarantee favorable results, and we assume no liability in connection with the use of the products. They are intended for use by persons having technical skill and knowledge, at their own discretion and risk.