

**Denspartic AS**

Version 1.0

Revision Date 08/02/2016

Print Date 14/06/2016

**1. Identification**

**Dencoat**

**E-mail:** [info@dencoat.com](mailto:info@dencoat.com)

**Website:** [www.dencoat.com](http://www.dencoat.com)

**TRANSPORTATION EMERGENCY**

CALL CHEMTREC:

(800) 424-9300

INTERNATIONAL:

(703) 527-3887

**NON-TRANSPORTATION**

Emergency Phone:

Call Chemtrec

Information Phone:

(844) 646-0545

**Product Name:**

Denspartic AS

**Material Number:**

05465931

**Chemical Family:**

Aspartic Ester

**Use:**

Raw material for coatings, inks, adhesives, sealants, or elastomers in industrial applications

**Restrictions on use:**

Do-It-Yourself Applications

**2. Hazards Identification**

**GHS Classification**

Skin sensitisation:

Category 1

**GHS Label Elements**

Hazard pictograms:



Signal word:

Warning

Hazard statements:

May cause an allergic skin reaction.

Precautionary statements:

**Prevention:**

Wear protective gloves.

Avoid breathing dust, mist, gas, vapors or spray.

Contaminated work clothing must not be allowed out of the workplace.

Avoid breathing dust, mist, gas, vapors or spray.

Contaminated work clothing must not be allowed out of the workplace.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical attention.

Wash contaminated clothing before reuse.

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**Disposal:**

Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

**3. Composition/Information on Ingredients**

**Hazardous Components**

| <b>Concentration</b> | <b>Components</b>          | <b>CAS-No.</b> |
|----------------------|----------------------------|----------------|
| 95 - 100%            | Aspartic Ester             | 136210-30-5    |
| 1 - 5%               | Aliphatic Carboxylic Ester | 623-91-6       |

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

**4. First Aid Measures**

**Most Important Symptom(s)/Effect(s)**

**Acute:** May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash., May cause skin irritation with symptoms of reddening, itching, and swelling., May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

**Eye Contact**

In case of contact, flush eyes with plenty of lukewarm water. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention if irritation develops.

**Skin Contact**

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

**Inhalation**

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if irritation develops.

**Ingestion**

If ingested, do not induce vomiting unless directed to do so by medical personnel. Give two glasses of water for dilution. Call a physician immediately. Never give anything by mouth to an unconscious person.

**5. Firefighting Measures**

**Suitable Extinguishing Media:** All extinguishing media are suitable.

**Unsuitable Extinguishing Media** No Data Available

**Fire Fighting Procedure**

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

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**Hazardous Decomposition Products**

By Fire and Thermal Decomposition: Carbon oxides, Nitrogen oxides (NOx), Amines, other aliphatic fragments which have not been determined, Ammonia gas may be liberated at high temperatures.

**Unusual Fire/Explosion Hazards**

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

**6. Accidental Release Measures**

**Spill and Leak Procedures**

Evacuate and keep unnecessary people out of spill area. Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Prevent from entering open drains and waterways. Ventilate area to remove vapors or dust.

**7. Handling and Storage**

**Handling/Storage Precautions**

Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use. Do not breathe vapours or spray mist. Store in a dry place away from excessive heat. Material is hygroscopic and may absorb small amounts of atmospheric moisture. Do not reseal container if contamination is suspected.

**Storage Period:**

6 Months: Following day of shipment

**Storage Temperature**

**Minimum:** 0 °C (32 °F)

**Maximum:** 30 °C (86 °F)

**Storage Conditions**

Store separate from food products.

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**Substances to Avoid**

Oxidizing agents, Acids, Isocyanates

**8. Exposure Controls/Personal Protection**

The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart I.

**Exposure Limits**

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

**Industrial Hygiene/Ventilation Measures**

General dilution and local exhaust ventilation as necessary to control airborne vapors, aerosols (e.g., dusts, mists) and thermal decomposition products. Heating may result in generation of airborne vapors and/or

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aerosols.

**Respiratory Protection**

If vapors form, respiratory protection is recommended., The use of a positive pressure supplied air respirator is recommended if the airborne concentration is unknown or if spraying is performed in a confined space or area with limited ventilation., In spray applications, an organic vapor/particulate respirator or air supplied unit is necessary.

**Hand Protection**

Ensure gloves remain in good condition during use and replace if any deterioration is observed.

Permeation resistant gloves., Viton gloves., 4H laminate gloves., Butyl rubber gloves., Nitrile rubber gloves.

**Eye Protection**

Chemical safety goggles or safety glasses with side-shields., Chemical safety goggles in combination with a full face shield if a splash hazard exists.

**Skin Protection**

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., Where spray mist/vapor is anticipated, permeation resistant clothing is recommended.

**Additional Protective Measures**

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

**9. Physical and Chemical Properties**

|                                                |                                                                                                                          |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>State of Matter:</b>                        | liquid                                                                                                                   |
| <b>Color:</b>                                  | Light yellow                                                                                                             |
| <b>Odor:</b>                                   | Mild                                                                                                                     |
| <b>Odor Threshold:</b>                         | No Data Available                                                                                                        |
| <b>pH:</b>                                     | not established                                                                                                          |
| <b>Melting Point:</b>                          | ca. -2 °C (28.4 °F) (EG A1)                                                                                              |
| <b>Boiling Point:</b>                          | @ 1,013 hPa (EG A2) not applicable, decomposition                                                                        |
| <b>Flash Point:</b>                            | ca. 100 °C (212 °F) @ 1,013 hPa (DIN EN 22719)                                                                           |
| <b>Evaporation Rate:</b>                       | No Data Available                                                                                                        |
| <b>Lower explosion limit:</b>                  | No Data Available                                                                                                        |
| <b>Upper Explosion Limit:</b>                  | No Data Available                                                                                                        |
| <b>Vapor Pressure:</b>                         | Approximately 20 mbar @ 55 °C (131 °F)<br>Approximately 17 mbar @ 50 °C (122 °F)<br>Approximately 8 mbar @ 20 °C (68 °F) |
| <b>Vapor Density:</b>                          | No Data Available                                                                                                        |
| <b>Density:</b>                                | ca. 1.08 g/cm <sup>3</sup> @ 20 °C (68 °F) (DIN 51757)                                                                   |
| <b>Relative Vapor Density:</b>                 | No Data Available                                                                                                        |
| <b>Specific Gravity:</b>                       | No Data Available                                                                                                        |
| <b>Solubility in Water:</b>                    | Insoluble                                                                                                                |
| <b>Partition Coefficient: n-octanol/water:</b> | logPow: ca. 5.16 @ 20 °C (68 °F) (value calculated)                                                                      |
| <b>Auto-ignition Temperature:</b>              | ca. 375 °C (707 °F) @ 1,013 hPa (DIN 51794)                                                                              |
| <b>Decomposition Temperature:</b>              | ca. 234 °C (453.2 °F)                                                                                                    |
| <b>Unblocking Temperature:</b>                 | No Data Available                                                                                                        |

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|                             |                                              |
|-----------------------------|----------------------------------------------|
| <b>Dynamic Viscosity:</b>   | 850 - 1,800 mPa.s @ 25 °C (77 °F) (ISO 3219) |
| <b>Kinematic Viscosity:</b> | No Data Available                            |
| <b>Bulk Density:</b>        | No Data Available                            |
| <b>Molecular Weight:</b>    | No Data Available                            |
| <b>Corrosion of Metals:</b> | Not corrosive to metals.                     |
| <b>Self Ignition:</b>       | not applicable                               |

## 10. Stability and Reactivity

### Hazardous Reactions

Hazardous polymerisation does not occur.

### Stability

Stable

### Materials to Avoid

Oxidizing agents, Acids, Isocyanates

### Conditions to Avoid

Avoid extreme heat.

### Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Amines, other aliphatic fragments which have not been determined, Ammonia gas may be liberated at high temperatures.

## 11. Toxicological Information

|                                   |                                                        |
|-----------------------------------|--------------------------------------------------------|
| <b>Likely Routes of Exposure:</b> | Skin Contact<br>Eye Contact<br>Inhalation<br>Ingestion |
|-----------------------------------|--------------------------------------------------------|

### Health Effects and Symptoms

**Acute:** May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash., May cause skin irritation with symptoms of reddening, itching, and swelling., May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

**Chronic:** Not expected to cause adverse chronic health effects.

### Toxicity Data for: Denspartic AS

#### Acute Oral Toxicity

Acute toxicity estimate: > 5,000 mg/kg (Calculation method)

### Toxicity Data for: Aspartic Ester

#### Toxicity Note

Toxicity data is based on a similar product.

#### Acute Oral Toxicity

LD50: > 2,000 mg/kg (rat) (Directive 67/548/EEC, Annex V, B.1.)

Studies of a comparable product.

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**Acute Inhalation Toxicity**

LC50: > 4.224 mg/l, 4 h, dust/mist (rat, male/female) (OECD Test Guideline 403)  
Toxicological studies of a comparable product.

**Acute Dermal Toxicity**

LD50: > 2,000 mg/kg (rat) (Directive 67/548/EEC, Annex V, B.3.)  
Studies of a comparable product.

**Skin Irritation**

OECD Test Guideline 404, slight irritant

**Eye Irritation**

rabbit, OECD Test Guideline 405, Slightly irritating  
Toxicological studies of a comparable product.

Rat,

Effect on the respiratory tract: slight irritant

**Sensitization**

Skin sensitisation according to Magnusson/Kligmann (maximizing test):: positive (Guinea pig, OECD Test Guideline 406)  
Toxicological studies of a comparable product.

**Repeated Dose Toxicity**

Subacute oral toxicity: NOAEL: > 1,000 mg/kg, (rat, Male/Female)  
Toxicological studies of a comparable product.

**Mutagenicity**

Genetic Toxicity in Vitro:  
Chromosome aberration test in vitro: negative  
Toxicological studies of a comparable product.  
Salmonella/microsome test (Ames test): No indication of mutagenic effects.  
Toxicological studies of a comparable product.

Genetic Toxicity in Vivo:

Micronucleus test: negative (Mouse)  
Toxicological studies of a comparable product.  
negative

**Toxicity to Reproduction/Fertility**

Two-generation study, Oral, (rat, male/female) Toxicological studies of a comparable product.

**Developmental Toxicity/Teratogenicity**

rat, female, Oral, NOAEL (teratogenicity): 1,000 mg/kg, NOAEL (maternal): 1,000 mg/kg, Studies of a comparable product.

**Toxicity Data for: Aliphatic Carboxylic Ester**

**Acute Oral Toxicity**

LD50: 1,367 mg/kg (rat, female) (OECD Test Guideline 401)

**Skin Irritation**

reconstructed human epidermis (RhE), irritating  
Studies at the product.

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**Eye Irritation**

In vitro test system, Non-irritating

**Sensitization**

positive (In vitro test system, OECD Test Guideline 442E)

positive (In vitro test system, OECD Test Guideline 442D)

positive (In vitro test system, OECD Test Guideline 442C)

**Repeated Dose Toxicity**

6 weeks, Oral: NOAEL: < 11 mg/kg, (rat, male/female)

**Mutagenicity**

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Chromosome aberration test: positive (Chinese hamster cells, Metabolic Activation: with/without)

**Toxicity to Reproduction/Fertility**

Fertility Screening, Oral, (rat, male/female) NOAEL (parental): 11 mg/kg,

**Carcinogenicity:**

No carcinogenic substances as defined by IARC, NTP and/or OSHA

**12. Ecological Information**

**Ecological Data for: Denspartic AS**

Data on the product is not available. Please find the data available for the components.

**Ecological Data for Aspartic Ester**

**Biodegradation**

13 %, Exposure time: 28 d, i.e. not readily degradable

Ecotoxicological reports on a comparable product

0 %, Exposure time: 28 d, i.e. not inherently degradable

Ecotoxicological studies of the product

**Bioaccumulation**

value calculated, 1,872 BCF

The substance hydrolyzes rapidly in water. An accumulation in aquatic organisms is not to be expected.

**Acute and Prolonged Toxicity to Fish**

LC50: 66 mg/l (Danio rerio (zebra fish), 96 h)

Ecotoxicological reports on a comparable product

**Acute Toxicity to Aquatic Invertebrates**

EC50: 88.6 mg/l (Daphnia magna (Water flea), 48 h)

Studies of a comparable product.

**Toxicity to Aquatic Plants**

IC50: 113 mg/l, (scenedesmus subspicatus, 72 h)

Ecotoxicological reports on a comparable product

# SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006

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### Toxicity to Terrestrial Plants

NOEC:  $\geq 100$  mg/kg, End Point: seedling emergence (Avena sativa (oats))

Studies of a comparable product.

NOEC:  $\geq 100$  mg/kg, End Point: seedling emergence (Allium cepa (onion))

Studies of a comparable product.

NOEC:  $\geq 100$  mg/kg, End Point: seedling emergence (Brassica napus (rape))

Studies of a comparable product.

### Toxicity to Microorganisms

EC50: 3,110 mg/l, (activated sludge, 3 h)

Ecotoxicological reports on a comparable product

### Ecological Data for Aliphatic Carboxylic Ester

#### **Biodegradation**

92 - 95 %, i.e. readily biodegradable

### **Acute and Prolonged Toxicity to Fish**

LC50: 38 mg/l (Fathead minnow (Pimephales promelas), 96 h)

## 13. Disposal Considerations

### **Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

### **Empty Container Precautions**

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

## 14. Transportation Information

### Land transport (DOT)

Non-Regulated

### Sea transport (IMDG)

Non-Regulated

### Air transport (ICAO/IATA)

Non-Regulated

## 15. Regulatory Information

### United States Federal Regulations

**US. Toxic Substances Control Act:** Listed on the Active Portion of the TSCA Inventory.

No substances are subject to TSCA 12(b) export notification requirements.

### **US. EPA CERCLA Hazardous Substances (40 CFR 302) Components:**

None

# SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006

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### SARA Section 311/312 Hazard Categories:

Refer to hazard classification information in Section 2.

### **US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:**

None

### **US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:**

None

### **US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):**

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

### State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

### **Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

| <u>Concentration</u> | <u>Components</u>          | <u>CAS-No.</u> |
|----------------------|----------------------------|----------------|
| 60 - 100%            | Aspartic Ester             | 136210-30-5    |
| 1 - 5%               | Aliphatic Carboxylic Ester | 623-91-6       |

### **California Proposition 65 List:**

None.

### **CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals**

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

## 16. Other Information

The method of hazard communication for Dencoat™ is comprised of product labels and safety data sheets. Safety data sheets for all of our products and general product declarations are available for download at [www.productsafetyfirst.covestro.com](http://www.productsafetyfirst.covestro.com).

The handling of two component systems containing reactive aspartic esters in combination with isocyanate hardeners requires appropriate protective measures referred to in this SDS. These systems are therefore recommended only for use in industrial or trade (commercial) applications. They are not suitable for use in Do-It-Yourself applications.

Contact: Product Safety Department  
Telephone: +45 88442227  
Version Date: 05/06/2022

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SDS Version: 2.14

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