# SAFETY DATA SHEET

**DDP SPECIALTY ELECTRONIC MATERIALS US 5, LLC**

**Product name: NEOLONE™ BIO T Preservative**

**Issue Date:** 01/10/2019
**Print Date:** 01/16/2020

DDP SPECIALTY ELECTRONIC MATERIALS US 5, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. IDENTIFICATION

**Product name:** NEOLONE™ BIO T Preservative

**Recommended use of the chemical and restrictions on use**
**Identified uses:** Personal care

**COMPANY IDENTIFICATION**
DDP SPECIALTY ELECTRONIC MATERIALS US 5,
LLC
400 ARCOLA ROAD
COLLEGEVILLE PA 19426-2914
UNITED STATES

**Customer Information Number:** 833-338-7668
SDSQuestion-NA@dupont.com

**EMERGENCY TELEPHONE NUMBER**
**24-Hour Emergency Contact:** 1 800 424 9300
**Local Emergency Contact:** 800-424-9300

## 2. HAZARDS IDENTIFICATION

**Hazard classification**
GHS classification in accordance with 29 CFR 1910.1200
Serious eye damage - Category 1

**Label elements**
**Hazard pictograms**

Signal word: **DANGER!**

**Hazards**
Causes serious eye damage.

**Precautionary statements**

**Prevention**
Wear eye protection/ face protection.

**Response**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

**Other hazards**
No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

| Component | CASRN | Concentration |
|---|---|---|
| Ethyl N2-dodecanoyl-L-argininate hydrochloride | 60372-77-2 | > 85.0 % |
| Water | 7732-18-5 | < 5.0 % |
| N2-lauroyl-L-arginine (LAS) | 42492-22-8 | < 3.0 % |
| Lauric acid | 143-07-7 | < 5.0 % |
| Ethyl laurate | 106-33-2 | < 3.0 % |

## 4. FIRST AID MEASURES

**Description of first aid measures**
**General advice:**
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** No emergency medical treatment necessary.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Suitable emergency safety shower facility should be available in work area.

**Eye contact:** Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation,

preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed:**
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**
**Notes to physician:** Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

## 5. FIREFIGHTING MEASURES

**Suitable extinguishing media:** Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the substance or mixture**
**Hazardous combustion products:** Carbon oxides Nitrogen oxides (NOx) Hydrogen chloride.

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health.

**Advice for firefighters**
**Fire Fighting Procedures:** Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Do not release the product to the aquatic environment above defined regulatory levels Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Sweep up or vacuum up spillage and collect in suitable container for disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
See sections: 7, 8, 11, 12 and 13.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Do not swallow. Do not get in eyes. Avoid prolonged or repeated contact with skin. Keep container tightly closed. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**Conditions for safe storage:** Keep in properly labelled containers. Keep tightly closed. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers**:** None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

**Exposure controls**
**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

**Individual protection measures**

**Eye/face protection:** Use chemical goggles.

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Under intended handling conditions, no respiratory protection should be needed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Appearance** | |
| **Physical state** | solid |
| **Color** | white |
| **Odor** | No Data |
| **Odor Threshold** | No data available |
| **pH** | No data available |
| **Melting point/range** | No data available |
| **Freezing point** | No data available |
| **Boiling point (760 mmHg)** | No data available |
| **Flash point** | Not applicable |
| **Evaporation Rate (Butyl Acetate = 1)** | No data available |
| **Flammability (solid, gas)** | No data available |
| **Lower explosion limit** | No data available |
| **Upper explosion limit** | No data available |
| **Vapor Pressure** | 5.45 Pa at 25 °C (77 °F) |
| **Relative Vapor Density (air = 1)** | No data available |
| **Relative Density (water = 1)** | No data available |
| **Water solubility** | >247 g/L |
| **Partition coefficient: n-octanol/water** | No data available |
| **Auto-ignition temperature** | No data available |
| **Decomposition temperature** | No data available |
| **Kinematic Viscosity** | No data available |
| **Explosive properties** | No data available |
| **Oxidizing properties** | No data available |
| **Molecular weight** | No data available |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

## 10. STABILITY AND REACTIVITY

**Reactivity:** Not classified as a reactivity hazard.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents.

**Conditions to avoid:** None known.

**Incompatible materials:** Oxidizing agents

**Hazardous decomposition products**
No hazardous decomposition products are known.

## 11. TOXICOLOGICAL INFORMATION

*Toxicological information appears in this section when such data is available.*

**Acute toxicity**

**Acute oral toxicity**
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
As product: Single dose oral LD50 has not been determined.

**Acute dermal toxicity**
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
As product: The dermal LD50 has not been determined.

**Acute inhalation toxicity**
No adverse effects are anticipated from inhalation.
As product: The LC50 has not been determined.

**Skin corrosion/irritation**
Brief contact may cause slight skin irritation with local redness.

**Serious eye damage/eye irritation**
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

**Sensitization**
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Carcinogenicity**
No relevant data found.

**Teratogenicity**
No relevant data found.

**Reproductive toxicity**
No relevant data found.

**Mutagenicity**
In vitro genetic toxicity studies were negative.

**Aspiration Hazard**
Based on physical properties, not likely to be an aspiration hazard.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Ethyl N2-dodecanoyl-L-argininate hydrochloride**

**Acute oral toxicity**
LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 423 No deaths occurred at this concentration.

**Acute dermal toxicity**
LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 402

**Acute inhalation toxicity**
LC50, Rat, male and female, 4 Hour, dust/mist, 28.15 mg/l OECD Test Guideline 403

**N2-lauroyl-L-arginine (LAS)**

**Acute oral toxicity**
Single dose oral LD50 has not been determined.

**Acute dermal toxicity**
The dermal LD50 has not been determined.

**Acute inhalation toxicity**
The LC50 has not been determined.

**Lauric acid**

**Acute oral toxicity**
LD50, Rat, male and female, > 5,000 mg/kg OECD 401 or equivalent

**Acute dermal toxicity**
For similar material(s): LD50, Rabbit, male and female, > 2,000 mg/kg

**Acute inhalation toxicity**
For similar material(s): LC50, Rat, male and female, 4 Hour, vapour, > 0.162 mg/l

**Ethyl laurate**

**Acute oral toxicity**
Single dose oral LD50 has not been determined.

For similar material(s): LD50, Rat, > 5,000 mg/kg

**Acute dermal toxicity**
The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, > 2,000 mg/kg Estimated.

**Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to mist. For similar material(s): Based on available data, repeated exposures are not expected to cause significant adverse effects except at very high aerosol concentrations. Repeated excessive aerosol exposures may cause respiratory tract irritation and even death.

The LC50 has not been determined.

## 12. ECOLOGICAL INFORMATION

*Ecotoxicological information appears in this section when such data is available.*

**Toxicity**

**Ethyl N2-dodecanoyl-L-argininate hydrochloride**

**Acute toxicity to fish**
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Danio rerio (zebra fish), flow-through, 96 Hour, 8.36 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**
EC50, Daphnia magna (Water flea), Static, 48 Hour, 6.54 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**
EC50, Pseudokirchneriella subcapitata (green algae), Static, 72 Hour, Growth rate, 0.461 mg/l, OECD Test Guideline 201
NOEC, Pseudokirchneriella subcapitata (green algae), Static, 72 Hour, Growth rate, 0.243 mg/l, OECD Test Guideline 201

**N2-lauroyl-L-arginine (LAS)**

**Acute toxicity to fish**
No relevant data found.

**Lauric acid**

**Acute toxicity to fish**
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
LC50, Oryzias latipes (Orange-red killifish), semi-static test, 96 Hour, 5 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**
EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, 3.6 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**
EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, > 7.6 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**
Pseudomonas putida, Respiration inhibition, 0.5 Hour, Respiration rates., 1,000 mg/l

**Chronic toxicity to fish**
NOEC, Danio rerio (zebra fish), flow-through, 28 d, mortality, 2 mg/l

**Chronic toxicity to aquatic invertebrates**
NOELR, Daphnia magna (Water flea), semi-static test, 21 d, mortality, >= 1.294 mg/l

**Ethyl laurate**

**Acute toxicity to fish**
For similar material(s):
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
For similar material(s):
LC50, Lepomis macrochirus (Bluegill sunfish), 96 Hour, > 1,000 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**
For similar material(s):
EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 0.255 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**
For similar material(s):
ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 0.324 mg/l, OECD Test Guideline 201
For similar material(s):
NOEC, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate, 0.0396 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**
For similar material(s):
IC50, Bacteria, 16 Hour, Respiration rates., < 10,000 mg/l

**Chronic toxicity to aquatic invertebrates**
For similar material(s):
NOEC, Daphnia magna (Water flea), flow-through test, 21 d, number of offspring, 0.0814 mg/l

**Persistence and degradability**

**Ethyl N2-dodecanoyl-L-argininate hydrochloride**
**Biodegradability:** Material is expected to be readily biodegradable.
10-day Window: Pass
**Biodegradation:** 88 %
**Exposure time:** 29 d
**Method:** OECD Test Guideline 301B

**N2-lauroyl-L-arginine (LAS)**
**Biodegradability:** No relevant data found.

**Lauric acid**
**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
**Biodegradation:** 86 %
**Exposure time:** 30 d
**Method:** OECD Test Guideline 301
10-day Window: Pass

**Biodegradation:** 62 %
**Exposure time:** 30 d
**Method:** OECD Test Guideline 301

**Theoretical Oxygen Demand:** 2.02 mg/g Calculated.

**Ethyl laurate**

**Biodegradability:** For similar material(s): Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

**Theoretical Oxygen Demand:** 2.80 mg/g Calculated.

**Photodegradation**
**Test Type:** Half-life (indirect photolysis)
**Sensitization:** OH radicals
**Atmospheric half-life:** 0.731 d
**Method:** Estimated.

**Bioaccumulative potential**

**Ethyl N2-dodecanoyl-L-argininate hydrochloride**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient: n-octanol/water(log Pow):** 1.43 OECD Test Guideline 107

**N2-lauroyl-L-arginine (LAS)**

**Bioaccumulation:** No relevant data found.

**Lauric acid**

**Bioaccumulation:** Based on data from similar materials Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
**Partition coefficient: n-octanol/water(log Pow):** 4.6
**Bioconcentration factor (BCF):** 234 - 288 Fish

**Ethyl laurate**

**Bioaccumulation:** Potential for mobility in soil is slight (Koc between 2000 and 5000). Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
**Partition coefficient: n-octanol/water(log Pow):** 5.71 at 25 °C Measured
**Bioconcentration factor (BCF):** 114.9 Estimated.

**Mobility in soil**

**Ethyl N2-dodecanoyl-L-argininate hydrochloride**

Potential for mobility in soil is high (Koc between 50 and 150).
**Partition coefficient (Koc):** 58 OECD 121: HPLC Method

**N2-lauroyl-L-arginine (LAS)**

No relevant data found.

**Lauric acid**

No relevant data found.

**Ethyl laurate**

Potential for mobility in soil is slight (Koc between 2000 and 5000).
**Partition coefficient (Koc):** 2361 Estimated.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

**Contaminated packaging:** Empty containers retain product residues. Follow label warnings even after container is emptied. Improper disposal or reuse of this container may be dangerous and illegal. Refer to applicable federal, state and local regulations.

## 14. TRANSPORT INFORMATION

**DOT**

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

| | |
|---|---|
| **Proper shipping name** | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Ethyl N2-dodecanoyl-L-argininate hydrochloride, Ethyl laurate) |
| **UN number** | UN 3077 |
| **Class** | 9 |
| **Packing group** | III |
| **Marine pollutant** | Ethyl N2-dodecanoyl-L-argininate hydrochloride, Ethyl laurate |
| **Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code** | Consult IMO regulations before transporting ocean bulk |

**Classification for AIR transport (IATA/ICAO):**

| | |
|---|---|
| **Proper shipping name** | Environmentally hazardous substance, solid, n.o.s.(Ethyl N2-dodecanoyl-L-argininate hydrochloride, Ethyl laurate) |
| **UN number** | UN 3077 |
| **Class** | 9 |
| **Packing group** | III |

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. REGULATORY INFORMATION

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**
Serious eye damage or eye irritation

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103**
This material does not contain any components with a CERCLA RQ.

**Pennsylvania**
Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

**California Prop. 65**
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**United States TSCA Inventory (TSCA)**
The product is used in a food, drug or cosmetic application and is subject to the applicable regulation. The product may only be used in the exempt application.

## 16. OTHER INFORMATION

**Hazard Rating System**
**HMIS**

| Health | Flammability | Physical Hazard |
|---|---|---|
| 2 | 0 | 0 |

**Revision**
Identification Number: 99119661 / A746 / Issue Date: 01/10/2019 / Version: 1.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Full text of other abbreviations**
AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP

- Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DDP SPECIALTY ELECTRONIC MATERIALS US 5, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US