



# SAFETY DATA SHEET

## DDP SPECIALTY ELECTRONIC MATERIALS US 9, LLC

**Product name:** MOLYKOTE® P-40 Paste V1

**Issue Date:** 08/30/2022

**Print Date:** 01/26/2024

DDP SPECIALTY ELECTRONIC MATERIALS US 9, 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.

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## 1. IDENTIFICATION

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**Product name:** MOLYKOTE® P-40 Paste V1

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Lubricants and lubricant additives

### COMPANY IDENTIFICATION

DDP SPECIALTY ELECTRONIC MATERIALS  
US 9, LLC  
974 Centre Road  
Wilmington DE 19805  
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

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Skin irritation - Category 2

Eye irritation - Category 2A

### Label elements

**Hazard pictograms**



Signal word: **WARNING!**

**Hazards**

Causes skin irritation.  
Causes serious eye irritation.

**Precautionary statements****Prevention**

Wash skin thoroughly after handling.  
Wear protective gloves/ eye protection/ face protection.

**Response**

IF ON SKIN: Wash with plenty of soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If skin irritation occurs: Get medical advice/ attention.  
If eye irritation persists: Get medical advice/ attention.  
Take off contaminated clothing and wash before reuse.

**Other hazards**

No data available

**Further information**

The values listed below represent the percentages of ingredients of unknown toxicity.  
The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 1.2 %

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** Lubricants and lubricant additives

This product is a mixture.

Component	CASRN	Concentration
Solvent dewaxed residual oil (petroleum)	64742-62-7	>= 40.0 - < 50.0 %
Zinc oxide	1314-13-2	>= 1.0 - < 5.0 %
C12-C14-Alkyl amines, isooctyl phosphates	68187-67-7	>= 1.0 - < 5.0 %

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### 4. FIRST AID MEASURES

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**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:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists.

Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

**Eye contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**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:** Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## **5. FIREFIGHTING MEASURES**

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**Suitable extinguishing media:** Water spray Alcohol-resistant foam Carbon dioxide (CO<sub>2</sub>) Dry chemical

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** Oxides of phosphorus Carbon oxides Nitrogen oxides (NO<sub>x</sub>) Fluorine compounds Metal oxides

**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:** Wipe up or scrape up and contain for salvage or 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. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, 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 get on skin or clothing. Do not swallow. Do not get in eyes. 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. 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.

Component	Regulation	Type of listing	Value
Solvent dewaxed residual oil (petroleum)	OSHA Z-1	TWA Mist	5 mg/m <sup>3</sup>
	ACGIH	TWA Inhalable particulate matter	5 mg/m <sup>3</sup>
	Further information: URT irr: Upper Respiratory Tract irritation; A4: Not classifiable as a human carcinogen		
	NIOSH REL	TWA Mist	5 mg/m <sup>3</sup>
	NIOSH REL	ST Mist	10 mg/m <sup>3</sup>
	OSHA P0	TWA Mist	5 mg/m <sup>3</sup>
Zinc oxide	ACGIH	TWA Respirable particulate matter	2 mg/m <sup>3</sup>

	ACGIH	STEL Respirable particulate matter	10 mg/m3
	OSHA P0	TWA Total dust	10 mg/m3
	OSHA P0	TWA respirable dust fraction	5 mg/m3
	OSHA P0	TWA Fumes	5 mg/m3
	OSHA P0	STEL Fumes	10 mg/m3

**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. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

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

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. 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:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance**

Physical state	paste
Color	light brown
Odor	slight
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	closed cup 272 °C ( 522 °F)
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable

<b>Relative Vapor Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	1.0
<b>Water solubility</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Kinematic Viscosity</b>	No data available
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.
<b>Molecular weight</b>	No data available
<b>Particle size</b>	No data available

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

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## 10. STABILITY AND REACTIVITY

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**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:** 1-Butene. Hexafluoroethane. Hydrogen Fluoride. 1,1,1,3,3,3-Hexafluoro-2-propanone. Carbonic difluoride. Carbon monoxide. Fluorinated hydrocarbons.

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## 11. TOXICOLOGICAL INFORMATION

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

### Acute toxicity

#### Acute oral toxicity

Product test data not available. Refer to component data.

#### Acute dermal toxicity

Product test data not available. Refer to component data.

#### Acute inhalation toxicity

Product test data not available. Refer to component data.

**Skin corrosion/irritation**

Product test data not available. Refer to component data.

**Serious eye damage/eye irritation**

Product test data not available. Refer to component data.

**Sensitization**

Product test data not available. Refer to component data.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Product test data not available. Refer to component data.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Product test data not available. Refer to component data.

**Carcinogenicity**

Product test data not available. Refer to component data.

**Teratogenicity**

Product test data not available. Refer to component data.

**Reproductive toxicity**

Product test data not available. Refer to component data.

**Mutagenicity**

Product test data not available. Refer to component data.

**Aspiration Hazard**

Product test data not available. Refer to component data.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Solvent dewaxed residual oil (petroleum)**

**Acute oral toxicity**

LD50, Rat, male and female, > 5,000 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, male and female, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, dust/mist, > 5.53 mg/l No deaths occurred at this concentration.

**Skin corrosion/irritation**

Prolonged contact may cause moderate skin irritation with local redness.

**Serious eye damage/eye irritation**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**Sensitization**

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

Did not cause allergic skin reactions when tested in humans.

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)**

In animals, effects have been reported on the following organs:  
Liver.

**Carcinogenicity**

No relevant information found.

**Teratogenicity**

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction.

**Mutagenicity**

In vitro genetic toxicity studies were negative in some cases and positive in other cases.  
Animal genetic toxicity studies were negative.

**Aspiration Hazard**

Based on available information, aspiration hazard could not be determined.

**Zinc oxide**

**Acute oral toxicity**

LD50, Rat, > 5,000 mg/kg

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 5 mg/l No deaths occurred at this concentration.

**Skin corrosion/irritation**

Prolonged contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**Sensitization**

For skin sensitization:  
No relevant data found.

For respiratory sensitization:  
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Carcinogenicity**

Available data are inadequate to evaluate carcinogenicity.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

**Mutagenicity**

In vitro genetic toxicity studies were negative in some cases and positive in other cases.

**Aspiration Hazard**

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

**C12-C14-Alkyl amines, isooctyl phosphates**

**Acute oral toxicity**

LD50, Rat, 1,000 mg/kg

**Acute dermal toxicity**

Information given is based on data obtained from similar substances. LD50, Rabbit, 2,000 mg/kg OECD Test Guideline 402

**Acute inhalation toxicity**

The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

**Serious eye damage/eye irritation**

May cause severe eye irritation.

**Sensitization**

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

**Specific Target Organ Systemic Toxicity (Single Exposure)**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

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**12. ECOLOGICAL INFORMATION**

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

**Toxicity**

**Solvent dewaxed residual oil (petroleum)**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LL50, Pimephales promelas (fathead minnow), Static, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

LL50, scud Gammarus sp., semi-static test, 48 Hour, > 10,000 mg/l, OECD Test Guideline 202 or Equivalent  
EL50, water flea Daphnia magna, Static, 48 Hour, > 10,000 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

NOEC, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), Static, 72 Hour, Growth rate inhibition, > 100 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

Based on data from similar materials  
NOEC, 10 min, > 1.93 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna, semi-static test, 21 d, number of offspring, 10 mg/l

**Zinc oxide**

**Acute toxicity to fish**

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).  
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 0.14 - 1.1 mg/l  
LC50, Danio rerio (zebra fish), 96 Hour, 1 - 10 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, 1 - 10 mg/l

**Acute toxicity to algae/aquatic plants**

IC50, Selenastrum capricornutum (green algae), 72 Hour, Growth rate, 0.136 mg/l

**Toxicity to bacteria**

Based on data from similar materials  
EC50, 3 Hour, 5.2 mg/l, OECD Test Guideline 209

**Chronic toxicity to fish**

NOEC, Danio rerio (zebra fish), 32 d, mortality, >= 0.540 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 0.04 mg/l

**C12-C14-Alkyl amines, isoctyl phosphates**

**Acute toxicity to aquatic invertebrates**

Information given is based on data obtained from similar substances.  
EC50, Daphnia magna (Water flea), 48 Hour, 17 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

Information given is based on data obtained from similar substances.

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 0.8 mg/l, OECD Test Guideline 201  
Information given is based on data obtained from similar substances.  
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 0.32 mg/l, OECD Test Guideline 201

**Persistence and degradability**

**Solvent dewaxed residual oil (petroleum)**

**Biodegradability:** Based on information for a similar material: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

**Zinc oxide**

**Biodegradability:** Biodegradability is not applicable to inorganic substances.

**C12-C14-Alkyl amines, isooctyl phosphates**

**Biodegradability:** Not readily biodegradable.

**Biodegradation:** 35 %

**Exposure time:** 28 d

**Bioaccumulative potential**

**Solvent dewaxed residual oil (petroleum)**

**Bioaccumulation:** No relevant data found.

**Zinc oxide**

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

**Bioconcentration factor (BCF):** 177 Fish

**Mobility in soil**

**Solvent dewaxed residual oil (petroleum)**

No relevant data found.

**Zinc oxide**

No relevant data found.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed,

permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

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## 14. TRANSPORT INFORMATION

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### DOT

Not regulated for transport

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

Not regulated for transport

**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):

Not regulated for transport

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.

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## 15. REGULATORY INFORMATION

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### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Skin corrosion or irritation

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

The following components are subject to reporting levels established by SARA Title III, Section 313:

#### Components

Zinc oxide

#### CASRN

1314-13-2

**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)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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**16. OTHER INFORMATION**


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**Hazard Rating System****NFPA**

Health	Flammability	Instability
2	1	0

**HMIS**

Health	Flammability	Physical Hazard
2/	1	0

**Revision**

Identification Number: 12019572 / A776 / Issue Date: 08/30/2022 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	USA. NIOSH Recommended Exposure Limits
OSHA P0	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ST	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
STEL	Short-term exposure limit
TWA	8-hour time weighted average

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals 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 9, 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