



SAFETY DATA SHEET
DDP SPECIALTY ELECTRONIC MATERIALS
US 9, LLC

Product name: MOLYKOTE® D Paste

Issue Date: 10/17/2018

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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.

1. IDENTIFICATION

Product name: MOLYKOTE® D Paste

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

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Inorganic and organic compounds, in mineral oil

This product is a mixture.

Component

CASRN

Concentration

| | | |
|--|------------|---------------------|
| White mineral oil (petroleum) | 8042-47-5 | >= 20.0 - <= 30.0 % |
| Distillates (petroleum), hydrotreated heavy naphthenic | 64742-52-5 | >= 10.0 - <= 14.0 % |
| Distillates, petroleum, solvent-refined heavy naphthenic | 64741-96-4 | >= 4.0 - <= 6.0 % |
| Solvent dewaxed heavy paraffinic distillates | 64742-65-0 | >= 1.9 - <= 2.8 % |
| Paraffin/Hydrocarbon waxes | 8002-74-2 | >= 1.2 - <= 2.2 % |
| Lithium 12-hydroxyoctadecanoate | 7620-77-1 | >= 1.2 - <= 1.7 % |
| Petroleum Distillates, Hydrotreated, Heavy Paraffinic | 64742-54-7 | >= 0.9 - <= 1.2 % |

4. FIRST AID MEASURES

Description of first aid measures

General advice:

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: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

Ingestion: No emergency medical treatment necessary.

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: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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: Metal oxides Carbon oxides Oxides of phosphorus
Formaldehyde

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

Advice for firefighters

Fire Fighting Procedures: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions: Discharge into the environment must be avoided. 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: Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.
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/Notation |
|--|------------|-------------------------|----------------|
| White mineral oil (petroleum) | OSHA P0 | TWA | 5 mg/m3 |
| | OSHA Z-1 | TWA Mist | 5 mg/m3 |
| | ACGIH | TWA Inhalable fraction | 5 mg/m3 |
| Distillates (petroleum), hydrotreated heavy naphthenic | OSHA Z-1 | TWA Mist | 5 mg/m3 |
| | ACGIH | TWA Inhalable fraction | 5 mg/m3 |
| Distillates, petroleum, solvent-refined heavy naphthenic | OSHA Z-1 | TWA Mist | 5 mg/m3 |
| | ACGIH | TWA Inhalable fraction | 5 mg/m3 |
| Solvent dewaxed heavy paraffinic distillates | OSHA P0 | TWA Mist | 5 mg/m3 |
| | OSHA Z-1 | TWA Mist | 5 mg/m3 |
| | ACGIH | TWA Inhalable fraction | 5 mg/m3 |
| Paraffin/Hydrocarbon waxes | ACGIH | TWA | 2 mg/m3 |
| | OSHA P0 | TWA | 2 mg/m3 |
| | ACGIH | TWA Fumes | 2 mg/m3 |
| Lithium 12-hydroxyoctadecanoate | ACGIH | TWA Inhalable fraction | 10 mg/m3 |
| | ACGIH | TWA Respirable fraction | 3 mg/m3 |
| Petroleum Distillates, Hydrotreated, Heavy Paraffinic | OSHA Z-1 | TWA Mist | 5 mg/m3 |
| | ACGIH | TWA Inhalable fraction | 5 mg/m3 |
| | CAL PEL | PEL particulate | 5 mg/m3 |

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

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 when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). 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: Wear clean, body-covering clothing.

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. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

| | |
|--|---|
| Physical state | paste |
| Color | off-white |
| Odor | slight |
| Odor Threshold | No data available |
| pH | Not applicable |
| Melting point/range | No data available |
| Freezing point | No data available |
| Boiling point (760 mmHg) | Not applicable |
| Flash point | Not applicable |
| Evaporation Rate (Butyl Acetate = 1) | Not applicable |
| 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 |
| Relative Vapor Density (air = 1) | No data available |
| Relative Density (water = 1) | 1.27 |
| Water solubility | No data available |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | No data available |

| | |
|----------------------------------|--|
| Decomposition temperature | No data available |
| Dynamic Viscosity | Not applicable |
| Kinematic Viscosity | Not applicable |
| Explosive properties | Not explosive |
| Oxidizing properties | The substance or mixture is not classified as oxidizing. |
| Molecular weight | No data available |
| Particle size | 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

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.
As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause moderate eye irritation.
Corneal injury is unlikely.

Sensitization

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.
Contains component(s) which have not demonstrated the potential for contact allergy in mice.

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)

Contains component(s) which have been reported to cause effects on the following organs in animals:
Liver.

Carcinogenicity

Contains component(s) which did not cause cancer in laboratory animals.

Teratogenicity

Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother. Contains component(s) which did not cause birth defects in laboratory animals.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

Mutagenicity

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains component(s) which were negative in animal genetic toxicity studies.

Aspiration Hazard

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

COMPONENTS INFLUENCING TOXICOLOGY:

White mineral oil (petroleum)

Acute inhalation toxicity

LC50, Rat, male and female, 4 Hour, dust/mist, > 5 mg/l OECD Test Guideline 403

Distillates (petroleum), hydrotreated heavy naphthenic

Acute inhalation toxicity

LC50, Rat, 4 Hour, dust/mist, > 5.53 mg/l OECD Test Guideline 403

Distillates, petroleum, solvent-refined heavy naphthenic**Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, dust/mist, > 5 mg/l

Solvent dewaxed heavy paraffinic distillates**Acute inhalation toxicity**

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

Paraffin/Hydrocarbon waxes**Acute inhalation toxicity**

The LC50 has not been determined.

Lithium 12-hydroxyoctadecanoate**Acute inhalation toxicity**

The LC50 has not been determined.

Petroleum Distillates, Hydrotreated, Heavy Paraffinic**Acute inhalation toxicity**

For this family of materials: LC50, Rat, 4 Hour, vapour, 2.18 mg/l

12. ECOLOGICAL INFORMATION

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

Toxicity**White mineral 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, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

LL50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 100 mg/l, OECD Test Guideline 201

Chronic toxicity to fish

NOEC, Oncorhynchus mykiss (rainbow trout), 28 d, 1,000 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, 1,000 mg/l

Distillates (petroleum), hydrotreated heavy naphthenic**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), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EL50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants

EL50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

NOELR, Pseudokirchneriella subcapitata (green algae), 72 Hour, 100 mg/l, OECD Test Guideline 201

Toxicity to bacteria

NOEC, 10 min, >= 1.93 mg/l

Chronic toxicity to aquatic invertebrates

NOELR, Daphnia magna (Water flea), 21 d, 10 mg/l

Distillates, petroleum, solvent-refined heavy naphthenic

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

Acute toxicity to aquatic invertebrates

Gammarus fasciatus (freshwater shrimp), semi-static test, 96 Hour, > 1,000 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), Static, 72 Hour, Growth rate, > 100 mg/l

Toxicity to bacteria

Based on data from similar materials

NOEC, 10 min, > 1.93 mg/l, DIN 38 412 Part 8

Chronic toxicity to aquatic invertebrates

Based on data from similar materials

NOEC, Daphnia magna (Water flea), 21 d, 10 mg/l

Solvent dewaxed heavy paraffinic distillates

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 test, 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates

EL50, Daphnia magna (Water flea), static test, 48 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants

NOEC, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate, > 100 mg/l

Toxicity to bacteria

Based on data from similar materials

NOEC, 10 min, > 1.93 mg/l, DIN 38 412 Part 8

Chronic toxicity to aquatic invertebrates

Based on data from similar materials

NOEC, Daphnia magna (Water flea), 21 d, 10 mg/l

Paraffin/Hydrocarbon waxes

Acute toxicity to fish

Based on information for component(s):

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).

Lithium 12-hydroxyoctadecanoate

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).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate, > 160 mg/l, OECD Test Guideline 201

Petroleum Distillates, Hydrotreated, Heavy Paraffinic

Acute toxicity to fish

Typical for this family of materials.

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).

For this family of materials:

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates

For this family of materials:

EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, > 100 mg/l

Acute toxicity to algae/aquatic plants

NOELR, Pseudokirchneriella subcapitata (green algae), 72 Hour, >100, OECD Test Guideline 201

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, >100, OECD Test Guideline 201

Toxicity to bacteria

Based on data from similar materials

NOEC, 10 min, > 1.93 mg/l, DIN 38 412 Part 8

Chronic toxicity to aquatic invertebrates

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

Persistence and degradability

White mineral oil (petroleum)

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

10-day Window: Fail

Biodegradation: 0 - 24 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 3.50 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 1.291 d

Method: Estimated.

Distillates (petroleum), hydrotreated heavy naphthenic

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

Biodegradation: 31 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

Distillates, petroleum, solvent-refined heavy naphthenic

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

Biodegradation: 2 - 4 %

Exposure time: 28 d

Solvent dewaxed heavy paraffinic distillates

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

Biodegradation: 2 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

Paraffin/Hydrocarbon waxes

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

10-day Window: Pass

Biodegradation: 80 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Lithium 12-hydroxyoctadecanoate

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

10-day Window: Pass

Biodegradation: 78 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Petroleum Distillates, Hydrotreated, Heavy Paraffinic

Biodegradability: For this family of materials: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
10-day Window: Fail
Biodegradation: 1.5 - 29 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Bioaccumulative potential

White mineral oil (petroleum)

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 5.18 Measured
Bioconcentration factor (BCF): 1,900 Fish

Distillates (petroleum), hydrotreated heavy naphthenic

Bioaccumulation: No relevant data found.

Distillates, petroleum, solvent-refined heavy naphthenic

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 3 - 6 Estimated.

Solvent dewaxed heavy paraffinic distillates

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 3.9 - 6 Estimated.

Paraffin/Hydrocarbon waxes

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient: n-octanol/water(log Pow): > 6 Calculated.

Lithium 12-hydroxyoctadecanoate

Bioaccumulation: No relevant data found.

Petroleum Distillates, Hydrotreated, Heavy Paraffinic

Bioaccumulation: For this family of materials: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

Mobility in soil

White mineral oil (petroleum)

Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 510 Estimated.

Distillates (petroleum), hydrotreated heavy naphthenic

No relevant data found.

Distillates, petroleum, solvent-refined heavy naphthenic

No relevant data found.

Solvent dewaxed heavy paraffinic distillates

No relevant data found.

Paraffin/Hydrocarbon waxes

No relevant data found.

Lithium 12-hydroxyoctadecanoate

No relevant data found.

Petroleum Distillates, Hydrotreated, Heavy Paraffinic

No relevant data found.

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

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.

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

No SARA Hazards

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 Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

| Components | CASRN |
|--|--------------|
| Calcium hydroxide | 1305-62-0 |
| White mineral oil (petroleum) | 8042-47-5 |
| Distillates (petroleum), hydrotreated heavy naphthenic | 64742-52-5 |
| Hydroxylapatite | 1306-06-5 |
| Distillates, petroleum, solvent-refined heavy naphthenic | 64741-96-4 |
| Solvent dewaxed heavy paraffinic distillates | 64742-65-0 |
| Paraffin/Hydrocarbon waxes | 8002-74-2 |
| Petroleum Distillates, Hydrotreated, Heavy Paraffinic | 64742-54-7 |

California Prop. 65

WARNING: This product can expose you to chemicals including Solvent dewaxed heavy paraffinic distillates, Petroleum Distillates, Hydrotreated, Heavy Paraffinic, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

United States TSCA Inventory (TSCA)

The product contains an intentional component that is subject to a restriction. Production and/or use is limited by the conditions of the restriction.

16. OTHER INFORMATION

Hazard Rating System

NFPA

| Health | Flammability | Instability |
|--------|--------------|-------------|
| 0 | 1 | 0 |

HMIS

| Health | Flammability | Physical Hazard |
|--------|--------------|-----------------|
| 0/ | 1 | 0 |

Revision

Identification Number: 1288466 / A776 / Issue Date: 10/17/2018 / Version: 5.0

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) |
| CAL PEL | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| OSHA P0 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000 |
| OSHA Z-1 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| PEL | Permissible exposure limit |
| TWA | 8-hour, time-weighted average |

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.

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