



SAFETY DATA SHEET
DDP SPECIALTY ELECTRONIC MATERIALS US,
INC.

Product name: BETASEAL™ X2500 B PRIME

Issue Date: 10/17/2018

Print Date: 05/28/2020

DDP SPECIALTY ELECTRONIC MATERIALS US, INC. 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: BETASEAL™ X2500 B PRIME

Recommended use of the chemical and restrictions on use

Identified uses: An adhesive -- For use in automotive applications.

COMPANY IDENTIFICATION

DDP SPECIALTY ELECTRONIC MATERIALS US,
INC.

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

This product is a mixture.

Component

CASRN

Concentration

Glycerol, propylene oxide, ethylene oxide polymer	9082-00-2	> 40.0 - < 50.0 %
2-Propenenitrile, polymer with ethenylbenzene	9003-54-7	> 20.0 - < 30.0 %
Ceramic materials and wares, chemicals	66402-68-4	> 10.0 - < 20.0 %
Carbon black	1333-86-4	> 5.0 - < 15.0 %
Diisononyl phthalate	28553-12-0	< 10.0 %
1,2-Benzenedicarboxylic acid, di-C8-10-alkyl esters	71662-46-9	< 10.0 %

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: 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: 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 fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in accordance with good manufacturing practices.

Storage stability**Storage temperature:**

> 5 - < 35 °C (> 41 - < 95
°F)

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.

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 safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). 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: 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. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	paste
Color	black
Odor	characteristic
Odor Threshold	No test data available
pH	No test data available
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	closed cup No test data available
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	No test data available
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.3 <i>Calculated.</i>
Water solubility	No test data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Dynamic Viscosity	No test data available
Kinematic Viscosity	No test data available
Explosive properties	No test data available
Oxidizing properties	No test data available
Molecular weight	No test data available
Volatile Organic Compounds	No test data available

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

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Will not occur by itself.

Conditions to avoid: Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Alcohols. Ethers. Hydrocarbons. Ketones. Polymer fragments.

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. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Single dose oral LD50 has not been determined.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD50 has not been determined.

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material may cause respiratory irritation. This material contains mineral and/or inorganic fillers. There is essentially no potential for inhalation exposure to these fillers incidental to industrial handling due to the physical state.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness. Material may stick to skin causing irritation upon removal.

Serious eye damage/eye irritation

May cause eye irritation.

Sensitization

For skin sensitization:

For the component(s) tested:

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)

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

Kidney.

Liver.

Carcinogenicity

For the phthalate ester(s): Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans. Liver effects and/or tumors have been observed in rats. These effects are believed to be species specific and unlikely to occur in humans.

Teratogenicity

Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

Reproductive toxicity

For the phthalate ester(s): In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring. There were no effects on fertility at any dose.

Mutagenicity

Contains a component(s) which were negative in in vitro genetic toxicity studies. 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:**Glycerol, propylene oxide, ethylene oxide polymer****Acute oral toxicity**

Typical for this family of materials. LD50, Rat, > 2,000 mg/kg Estimated. No deaths occurred at this concentration.

Acute dermal toxicity

Typical for this family of materials. LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

The LC50 has not been determined.

2-Propenenitrile, polymer with ethenylbenzene**Acute oral toxicity**

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

Acute dermal toxicity

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

Acute inhalation toxicity

The LC50 has not been determined.

Ceramic materials and wares, chemicals**Acute oral toxicity**

LD50, Rat, female, > 2,000 mg/kg OECD Test Guideline 425 No deaths occurred at this concentration.

Acute dermal toxicity

For similar material(s): LD50, Rat, male and female, > 2,500 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

Acute inhalation toxicity

The LC50 has not been determined.

Carbon black**Acute oral toxicity**

LD50, Rat, > 8,000 mg/kg

Acute dermal toxicity

LD50, Rabbit, > 3,000 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity

LC50, Rat, 1 Hour, dust/mist, 27 mg/l No deaths occurred at this concentration.

Diisononyl phthalate**Acute oral toxicity**

LD50, Rat, > 10,000 mg/kg

Acute dermal toxicity

LD50, Rabbit, > 3,160 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity

LC50, Rat, male and female, 4 Hour, dust/mist, > 4.4 mg/l No deaths occurred following exposure to a saturated atmosphere.

1,2-Benzenedicarboxylic acid, di-C8-10-alkyl esters**Acute oral toxicity**

LD50, Rat, > 2,000 mg/kg

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

The LC50 has not been determined.

12. ECOLOGICAL INFORMATION

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

Toxicity**Glycerol, propylene oxide, ethylene oxide polymer****Acute toxicity to fish**

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).

Acute toxicity to aquatic invertebrates

For this family of materials:

LC50, Daphnia magna (Water flea), static test, 48 Hour, 384 mg/l

Acute toxicity to algae/aquatic plants

For this family of materials:

ErC50, alga Scenedesmus sp., static test, 72 Hour, Growth rate, > 100 mg/l

2-Propenenitrile, polymer with ethenylbenzene

Acute toxicity to fish

No relevant data found.

Ceramic materials and wares, chemicals

Acute toxicity to fish

No relevant data found.

Carbon black

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, Leuciscus idus (Golden orfe), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 24 Hour, > 5,600 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

NOEC, Desmodesmus subspicatus (green algae), 72 Hour, 10,000 mg/l, OECD Test Guideline 201

Diisononyl phthalate

Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.
LC50, Danio rerio (zebra fish), 96 Hour, > 102 mg/l, Directive 67/548/EEC, Annex V, C.1.

Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility
EC50, Daphnia magna (Water flea), 48 Hour, > 74 mg/l, Directive 67/548/EEC, Annex V, C.2.

Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility
EC50, Desmodesmus subspicatus (green algae), 72 Hour, > 88 mg/l, Directive 67/548/EEC, Annex V, C.3.
NOEC, Desmodesmus subspicatus (green algae), 72 Hour, 88 mg/l, Directive 67/548/EEC, Annex V, C.3.

Toxicity to bacteria

Based on data from similar materials
EC50, 30 min, > 83.9 mg/l, OECD Test Guideline 209

Chronic toxicity to fish

Based on data from similar materials
NOEC, Oryzias latipes (Orange-red killifish), 284 d, 18.5 - 24.5 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, > 101 mg/l

1,2-Benzenedicarboxylic acid, di-C8-10-alkyl esters

Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

Chronic toxicity to fish

For similar material(s):

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), flow-through, 155 d, Growth rate inhibition, > 0.3 mg/l

Chronic toxicity to aquatic invertebrates

For similar material(s):

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, number of offspring, 0.1 mg/l

Persistence and degradability**Glycerol, propylene oxide, ethylene oxide polymer**

Biodegradability: For this family of materials: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

2-Propenenitrile, polymer with ethenylbenzene

Biodegradability: No appreciable biodegradation is expected.

Ceramic materials and wares, chemicals

Biodegradability: Biodegradation is not applicable.

Carbon black

Biodegradability: Biodegradation is not applicable.

Diisononyl phthalate

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Not applicable

Biodegradation: 74 %

Exposure time: 28 d

Method: OECD Test Guideline 301C or Equivalent

10-day Window: Not applicable

Biodegradation: > 99 %

Exposure time: 28 d

Method: OECD Test Guideline 302A or Equivalent

10-day Window: Not applicable

Biodegradation: 70.5 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 2.64 mg/mg

Stability in Water (1/2-life)

Hydrolysis, half-life, 3.4 year, pH 7, Half-life Temperature 25 °C, Estimated.

Hydrolysis, half-life, 0.34 year, pH 8, Half-life Temperature 25 °C, Estimated.

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 5.487 Hour
Method: Estimated.

1,2-Benzenedicarboxylic acid, di-C8-10-alkyl esters

Biodegradability: Material is expected to be readily biodegradable.
10-day Window: Not applicable
Biodegradation: 76 %
Exposure time: 28 d
Method: OECD Test Guideline 303A or Equivalent

Photodegradation

Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 0.7 d
Method: Estimated.

Bioaccumulative potential

Glycerol, propylene oxide, ethylene oxide polymer

Bioaccumulation: For this family of materials: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

2-Propenenitrile, polymer with ethenylbenzene

Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

Ceramic materials and wares, chemicals

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

Carbon black

Bioaccumulation: No relevant data found.

Diisononyl phthalate

Bioaccumulation: Based on data from similar materials Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient: n-octanol/water(log Pow): 8.8 - 9.7 OECD Test Guideline 117 or Equivalent
Bioconcentration factor (BCF): < 3 Oncorhynchus mykiss (rainbow trout)

1,2-Benzenedicarboxylic acid, di-C8-10-alkyl esters

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient: n-octanol/water(log Pow): 9.98 Measured

Mobility in soil

Glycerol, propylene oxide, ethylene oxide polymer

No relevant data found.

2-Propenenitrile, polymer with ethenylbenzene

No relevant data found.

Ceramic materials and wares, chemicals

No relevant data found.

Carbon black

No relevant data found.

Diisononyl phthalate

Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient (Koc): > 5000 Estimated.**1,2-Benzenedicarboxylic acid, di-C8-10-alkyl esters**

No data available.

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.

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):

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Not regulated for transport

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) 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.

Pennsylvania Worker and Community Right-To-Know Act:

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

Components	CASRN
Carbon black	1333-86-4
Diisononyl phthalate	28553-12-0
1,2-Benzenedicarboxylic acid, di-C8-10-alkyl esters	71662-46-9

California Prop. 65

WARNING: This product can expose you to chemicals including Carbon black, Diisononyl phthalate, Acrylonitrile, 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)

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.

16. OTHER INFORMATION

Revision

Identification Number: 99017787 / A749 / Issue Date: 10/17/2018 / Version: 3.1

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, INC. 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



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Option 8 for 24/7 Service



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