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Safety Data Sheet (SDS)

International (GHS)

Revision date: 2020-07-21

SECTION 1: Identification

Product identifiers:

Product trade name: OMICURE* DDA5
Company product number: DDA5
Other means of identification: Not Available

Recommended use of the chemical and restrictions on use:

Uses: Curing agent
Restrictions on use: None identified

Details of the supplier:

Manufacturer/Supplier: CVC Thermoset Specialties
2980 Route 73 North
Maple Shade, New Jersey 08052 United States
Customer service telephone: +1-856-533-3000
For further information about this SDS: Email: cts.customerservice@huntsman.com

Emergency telephone number:

ChemTel (24 hours): 1-800-255-3924 (USA); +1-813-248-0585 (outside USA);
1-300-954-583 (Australia); 000-800-100-4086 (India).

SECTION 2: Hazard(s) identification

Classification of the substance or mixture:

Not classified as hazardous under any GHS hazard class (UN GHS).

Label elements:

Hazard pictogram(s): Not Applicable
Signal word: Not Applicable
Hazard statements: Not Applicable
Precautionary statements: Not Applicable
Supplemental information: No Additional Information

Other hazards: May form explosible dust-air mixture if dispersed.

See Section 11 for toxicological information.

SECTION 3: Composition/information on ingredients

Mixture:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Weight%</u>
Proprietary	Silica-amorphous	1-<5

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4: First-aid measures

Description of first aid measures:

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. Get medical attention if

symptoms occur.

Skin contact: Wash the affected area thoroughly with plenty of soap and water. Get medical attention if symptoms occur.

Inhalation: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Most important symptoms and effects, both acute and delayed: Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact. See section 11 for additional information.

Indication of any immediate medical attention and special treatment needed, if necessary: Treat symptomatically.

SECTION 5: Fire-fighting measures

Extinguishing media:

Suitable: Carbon dioxide, foam, dry chemical, water.

Unsuitable: Avoid hose streams or any method which will create dust clouds.

Special hazards arising From the chemical:

Unusual fire/explosion hazards: Concentrated dust/air combinations may produce explosive conditions. As with all organic dusts, fine particles suspended in air in critical proportions and in the presence of an ignition source may ignite and/or explode. Dust may be sensitive to ignition by electrostatic discharge, electrical arcs, sparks, welding torches, cigarettes, open flame, or other significant heat sources. As a precaution, implement standard safety measures for handling finely divided organic powders. See Section 7 for suggested measures.

Hazardous combustion products: Irritating or toxic substances will be emitted upon burning, combustion or decomposition. See section 10 (Hazardous decomposition products) for additional information.

Special protective equipment and precautions for fire-fighters: Avoid hose streams or any method which will create dust clouds. Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Avoid raising powdered material due to explosion hazard. Use spark-proof and explosion-proof equipment. If inhalation of dust cannot be avoided, wear an approved particulate respirator.

Environmental precautions: Do not flush product into public sewer, water systems or surface waters.

Methods and materials for containment and cleaning up: Contain spill. Wear proper personal protective clothing and equipment. Using care to avoid dust generation, vacuum or sweep into a closed container for reuse or disposal. Use approved industrial vacuum cleaner for removal. Avoid causing dust. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

SECTION 7: Handling and storage

Precautions for safe handling: As with any chemical product, use good laboratory/workplace procedures. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid drinking, tasting, swallowing or ingesting this product. Avoid routine inhalation of dust of any kind. Exercise care when emptying containers, sweeping, mixing or doing other tasks which can create dust. Wash contaminated clothing before reuse. Discard shoes contaminated with this product. Provide eyewash fountains and safety showers in the work area. As a precaution to control dust explosion potential, implement the following safety

measures: Eliminate ignition sources (e.g., sparks, static buildup, excessive heat, etc.). In general, dust of organic materials is a static charge generator which may be ignited by electrostatic discharge, electrical arcs, sparks, welding torches, cigarettes, open flame, or other significant heat sources. Use spark-proof tools and equipment. Bond, ground and properly vent conveyors, dust control devices and other transfer equipment. Prohibit flow of polymer, powder or dust through non-conductive ducts, vacuum hoses or pipes, etc.; only use grounded, electrically conductive transfer lines when pneumatically conveying product. Good housekeeping and controlling of dusts are necessary for safe handling of product. Prevent accumulation of dust (e.g., well-ventilated conditions, promptly vacuuming spills, cleaning overhead horizontal surfaces, etc.).

Conditions for safe storage, including any incompatibilities: Store cool and dry, under well-ventilated conditions. Keep away from heat, sparks and open flames. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use.

SECTION 8: Exposure controls / personal protection

Control parameters:

Occupational exposure limits (OEL):

<u>Chemical Name</u>	<u>ACGIH - TWA/Ceiling</u>	<u>ACGIH - STEL</u>		
Silica-amorphous	N/E	N/E		
<u>Chemical Name</u>	<u>Australia</u>	<u>New Zealand</u>	<u>Korea</u>	<u>Indonesia</u>
Silica-amorphous	10 mg/m ³ TWA (inhalable)	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA
<u>Chemical Name</u>	<u>Japan ISHL</u>	<u>Japan JSOH</u>	<u>Taiwan</u>	<u>Malaysia</u>
Silica-amorphous	N/E	N/E	N/E	10 mg/m ³ TWA
<u>Chemical Name</u>	<u>Philippines</u>	<u>Singapore</u>		
Silica-amorphous	N/E	10 mg/m ³ PEL		

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

PNOS: ACGIH has recommended the following exposure limits for Particulates (insoluble or poorly soluble) not otherwise specified (PNOS): 10 mg/m³ TWA (inhalable particles), 3 mg/m³ TWA (respirable particles).

Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw dust away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Eliminate ignition sources (e.g., sparks, static buildup, excessive heat, etc.). Prohibit flow of powder or dust through non-conductive ducts, vacuum hoses, or pipes, etc. Bond, ground, and properly vent conveyors, dust control devices and other transfer equipment.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear eye protection.

Skin and body protection: Wear chemical resistant (impervious) gloves. Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: Respiratory protection is not needed with proper ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. If inhalation of dust cannot be avoided, wear an approved particulate respirator.

Dust production: dust mask with filter type P1 or P2.

Further information: Eyewash fountains and safety showers are recommended in the work area.

SECTION 9: Physical and chemical properties

Form:	Crystalline Powder	pH:	Not Available
Appearance:	White	Relative density:	1.4
Odor:	Slight	Partition coefficient (n-octanol/water):	-1 @ 20°C
Odor threshold:	Not Available	% Volatile by weight:	Not Available
Solubility in water:	Soluble	VOC:	Not Available
Evaporation rate:	Not Available	Boiling point °C:	Not Available
Vapor pressure:	Not Available	Boiling point °F:	Not Available
Vapor density:	Not Available	Flash point:	Not Applicable
Viscosity:	Not Available	Auto-ignition temperature:	>360°C (>680°F)

SDS Name: OMICURE* DDA5

Melting point/Freezing point: 207-212 °C (404-414 °F)

Flammability (solid, gas): Not flammable (may form combustible dust concentrations in air)

Oxidizing properties: Not oxidizing

Flammability or explosive limits: LFL/LEL: Not Available

Explosive properties: Not explosive

UFL/UEL: Not Available

Decomposition temperature: Not Available

Surface tension:

Other information: Amounts specified are typical and do not represent a specification.

Dust combustibility data: CYANOQUANIDINE: Particle size variation is considered a critical factor in regards to dust explosion hazard information. Results applicable as follows: sample particle size <75 um, 0.3% moisture content. Sample tested may not be typical of product.:

- Maximum rate of pressure rise: 440 bars/sec
- Maximum pressure of explosion: 9.5 bars
- Deflagration Index, Kst (estimate): 119 bar-m/sec

SECTION 10: Stability and reactivity

Reactivity: None known.

Chemical stability: This product is stable.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Avoid dust formation.

Incompatible materials: Avoid strong acids, bases, and oxidizing agents. Avoid strong oxidizers such as chlorates, bromates, and nitrates.

Hazardous decomposition products: Carbon dioxide, carbon monoxide, oxides of nitrogen, hydrogen cyanides, isocyanates and amines.

SECTION 11: Toxicological information

Information on likely routes of exposure:

General: Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure. CYANOQUANIDINE: At higher concentrations, may cause blood effects including formation of methaemoglobin (cyanosis), based on animal data.

Eyes: Solid particles on the eye (powder/dust) may cause pain and be accompanied by irritation.

Skin: Repeated or prolonged skin contact may cause irritation.

Inhalation: Dust inhalation may cause respiratory irritation.

Ingestion: Ingestion may cause irritation.

Acute toxicity information: Not classified (based on available data, the classification criteria are not met). ATEmix (oral): >5000 mg/kg. ATEmix (dermal): >2000 mg/kg. ATEmix (inhal.): >259 mg/m³, 4 hours.

<u>Chemical Name</u>	<u>Inhalation LC50</u>	<u>Species</u>	<u>Oral LD50</u>	<u>Species</u>	<u>Dermal LD50</u>	<u>Species</u>
Silica-amorphous	>2.2 mg/L (1 hour, no mortalities)	Rat/ adult	>5000 mg/kg	Rat/ adult	>5000 mg/kg	Rabbit/ adult

Skin corrosion/irritation: Not classified (based on available data, the classification criteria are not met).

<u>Chemical Name</u>	<u>Skin irritation</u>	<u>Species</u>
Silica-amorphous	Non-irritant	Rabbit/ adult

Serious eye damage/irritation: Not classified (based on available data, the classification criteria are not met).

<u>Chemical Name</u>	<u>Eye irritation</u>	<u>Species</u>
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Chemical Name	Eye irritation	Species
Silica-amorphous	Non-irritant	Rabbit/ adult

Respiratory or skin sensitization: Not classified (based on available data, the classification criteria are not met).

CYANOQUANIDINE: Based on the weight of evidence of several skin sensitization studies, this material does not have sensitizing potential.

Chemical Name	Skin sensitisation	Species
Silica-amorphous	Non-sensitizer	N/E

Carcinogenicity: Not classified (based on available data, the classification criteria are not met). CYANOQUANIDINE: 2-year carcinogenicity study in rats resulted in a determination that this material has no carcinogenic potential. NOAEL (no-observed-adverse-effect-level) (carcinogenicity), rat: 15000 ppm; LOAEL (Lowest-observable-adverse-effect-level) (carcinogenicity), rat: 50000 ppm.

Germ cell mutagenicity: Not classified (based on available data, the classification criteria are not met). CYANOQUANIDINE: Mutagenicity was negative in in-vitro genotoxicity assays.

Reproductive toxicity: Not classified (based on available data, the classification criteria are not met). CYANOQUANIDINE: Reproductive toxicity, 2-generation oral study in rats: NOAEL (no-observed adverse-effect-level) = 725-1002 mg/kg/day. Prenatal Developmental toxicity, oral, rabbit, rats: NOAEL of 1000 mg/kg bw/day (maternal toxicity, embryo/fetal developmental toxicity).

Specific target organ toxicity (STOT) - single exposure: Not classified (based on available data, the classification criteria are not met). CYANOQUANIDINE: In oral acute toxicity studies, the following effects were observed within 1-2 hours of dosing at high doses (30,000 mg/kg) but disappeared within 18 hours after dosing: hypothermia, decrease in locomotor activity, cyanosis and lateral position.

Specific target organ toxicity (STOT) - repeated exposure: Not classified (based on available data, the classification criteria are not met). CYANOQUANIDINE: Repeated dose study, oral, rats: NOAEL (no-observed-adverse-effect-level)= 570-1000 mg/kg/day.

Aspiration hazard: Not classified (technical impossibility to obtain the data).

Other toxicity information: No additional information available.

SECTION 12: Ecological information

Ecotoxicity: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in most sensitive species tested).

Chemical Name	Species	Acute	Acute	Chronic
Silica-amorphous	Fish	LC50 >10000 mg/L (96 hours)	N/E	N/E
Silica-amorphous	Invertebrates	EC50 >1000 mg/L (48 hours)	N/E	N/E
Silica-amorphous	Algae	EC50 440 mg/L (72 hours) (similar materials)	N/E	N/E

Persistence and degradability: Not readily biodegradable.

Chemical Name	Biodegradation
Silica-amorphous	Not applicable (inorganic)

Bioaccumulative potential: Not expected to bioaccumulate.

Chemical Name	Bioconcentration Factor (BCF)	Log Kow
Silica-amorphous	N/E	no bioaccumulation expected

Mobility in soil: No specific information available.

Chemical Name	Mobility in soil (Koc/Kow)
Silica-amorphous	inert material

Other adverse effects: No additional information available.

SECTION 13: Disposal considerations

Dispose of unused contents (incineration or landfill) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14: Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

UN number: N/A

UN proper shipping name:

Not regulated - See Bill of Lading for Details

Transport hazard class(es):

U.S. DOT hazard class: N/A

Canada TDG hazard class: N/A

Europe ADR/RID hazard class: N/A

IMDG Code (ocean) hazard class: N/A

ICAO/IATA (air) hazard class: N/A

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

Packing group: N/A

Environmental hazards:

Marine pollutant: Not Applicable

Hazardous substance (USA): Not Applicable

Special precautions for user: Not Applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:

Not Applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question:

Japan regulations:

Japan Industrial Safety and Health Law:

Chemical name

Category

No subject chemicals

Japan Fire Service Law:

Chemical name

Category

No subject chemicals

Japan Poisonous and Deleterious Substances:

Chemical name

Category

Threshold

No subject chemicals

Japan Prevention of Marine Pollution and Disaster:

Chemical name

Category

No subject chemicals

Japan Chemical Substances Control Law:

Chemical name

Category

Notes

No subject chemicals

Korean regulations:

Korea Industrial Safety and Health Act:

Chemical name

Category

Threshold

No subject chemicals

Korea Act on Registration and Evaluation of Chemical Substances (K-REACH) - Substances subject to registration:

No subject chemicals

Korea Chemical Control Act (CCA):

Chemical name

Category

Code

Threshold

No subject chemicals

Korea Safety Control of Dangerous Substances Act (MPSS):

Chemical name

Class

Threshold

No subject chemicals

Korea Waste Control Act: Waste disposal methods must comply with local and national laws.

Chemical name
No subject chemicals

Notes

Other regulations: No Additional Information

Chemical inventories:

<u>Regulation</u>	<u>Status</u>
Australian Inventory of Chemical Substances (AICS):	Y
Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
China Inventory of Existing Chemical Substances (IECSC):	Y
European EC Inventory (EINECS, ELINCS, NLP):	Y
Japan Existing and New Chemical Substances (ENCS):	Y
Japan Industrial Safety and Health Law (ISHL):	Y
Korean Existing and Evaluated Chemical Substances (KECL):	Y
New Zealand Inventory of Chemicals (NZIoC):	Y
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Y
Taiwan Inventory of Existing Chemicals:	Y
U.S. Toxic Substances Control Act (TSCA) (Active):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory (or is not on the ACTIVE inventory for U.S. TSCA); 2) no information is available; or 3) the component has not been reviewed. A "Y" for New Zealand may mean that a qualified group standard may exist for the components in this product.

Chemical inventory notes: New Zealand: One or more components may be covered by a group standard.

Europe REACh (EC) 1907/2006: Applicable components are registered, exempt or otherwise compliant. REACh is only relevant to substances either manufactured or imported into the EU. Huntsman Corporation has met its obligations under the REACh regulation. REACh information regarding this product is provided for informational purposes only. Each Legal Entity may have differing REACh obligations, depending on their place in the supply chain. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

SECTION 16: Other information

Legend:

* : Trademark owned by Huntsman Corporation.

ACGIH: American Conference of Governmental Industrial Hygienists

N/A: Not Applicable

N/E: None Established

STEL: Short Term Exposure Limit

TWA: Time Weighted Average (exposure for 8-hour workday)

Users Responsibility/Disclaimer of Liability:

The information set forth herein is based on our current knowledge, and is intended to describe the product solely with respect to health, safety and the environment. As such, it must not be interpreted as a guarantee of any specific property of the product. As a result, the customer shall be solely responsible for deciding whether said information is suitable and beneficial.

Safety Data Sheet Preparer:

Product Compliance Department