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ECR#26658

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name Zirconia Prime

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Adhesive

Uses advised against Not known

Supplier's details

Supplier Address
DenMat Holdings LLC
1017 W. Central Ave.
Lompoc, CA 93436
TEL: 805-346-3700

Emergency telephone number

Emergency Telephone Number 805-346-3700

2. HAZARDS IDENTIFICATION

| | | |
|----------------------|-----------------------------------|------------|
| Physical hazards | Flammable liquids | Category 2 |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 1 |
| | Sensitization, respiratory | Category 1 |
| | Sensitization, skin | Category 1 |
| OSHA defined hazards | Not classified | |
| Label elements | | |



Signal word Danger

| | |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard statement | Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Precautionary statement | |
| Prevention | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist/vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. |
| Response | If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. In case of fire: Use water fog, alcohol resistant foam, dry chemical powder, carbon dioxide to extinguish. |
| Storage | Store in a well-ventilated place. Keep cool. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

| Chemical | CAS number | % |
|-----------------------------------|-------------|---------|
| Ethanol | 64-17-5 | 60 - 90 |
| Pyromellitic dimethacrylate | 133736-31-9 | 1 - 20 |
| 2-Hydroxyethyl methacrylate | 868-77-9 | 1 - 10 |
| Bisphenol A glycidyl methacrylate | 1565-94-2 | 1 - 10 |

Composition comments The manufacturer has claimed one or more hazardous ingredients as trade secret under the OSHA Hazard Communication Standard. The hazards of this (these) ingredient(s) are given on this SDS.
All concentrations are in percent by weight.

4. FIRST AID MEASURES

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

| | |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skin Contact | Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. |
| Ingestion | Rinse mouth. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. |
| General information | Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. FIRE-FIGHTING MEASURES

| | |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media | Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Highly flammable liquid and vapor. |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. |

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not get this material in contact with eyes. Avoid contact with skin and clothing. Avoid prolonged exposure. Persons susceptible to allergic reactions should not handle this product. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Follow rules for flammable liquids. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components | Type | Value |
|-----------------------|------|------------------------------------|
| Ethanol (CAS 64-17-5) | PEL | 1900 mg/m ³ 1000 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|-----------------------|------|----------|
| Ethanol (CAS 64-17-5) | STEL | 1000 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|-----------------------|------|------------------------------------|
| Ethanol (CAS 64-17-5) | TWA | 1900 mg/m ³ 1000 ppm |

**Biological limit values
Appropriate engineering
controls**

No biological exposure limits noted for the ingredient(s).
Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

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|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/face protection | Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed. |
| Skin protection Hand protection | Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. |
| Skin protection Other | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. |
| Respiratory protection | If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear NIOSH approved respirator appropriate for airborne exposure at the point of use. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

| | |
|----------------------------------------------|---------------------------|
| Physical state | Liquid |
| Form | Liquid |
| Color | Not available |
| Odor | Not available. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | Not available. |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | > 20.5 mm ² /s |

| | |
|--------------------------|----------------|
| Viscosity temperature | 104 °F (40 °C) |
| Other information | |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |

10. STABILITY AND REACTIVITY

| | |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Contact with incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Protect against direct sunlight. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized. |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

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|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation | May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful. |
| Skin contact | Causes skin irritation. May cause an allergic skin reaction. |
| Eye contact | Causes serious eye damage. |
| Ingestion | May cause discomfort if swallowed. |
| Symptoms related to the physical, chemical and toxicological characteristics | Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. |

Information on toxicological effects

| | |
|-----------------------|-----------------------------------|
| Acute toxicity | Not expected to be acutely toxic. |
|-----------------------|-----------------------------------|

| Components | Species | Test Results |
|--------------------------------------------|---------|--------------|
| 2-Hydroxyethyl methacrylate (CAS 868-77-9) | | |
| <u>Acute Dermal</u> LD50 | Rabbit | > 3000 mg/kg |
| <u>Oral</u> LD50 | Rat | > 4000 mg/kg |
| Ethanol (CAS 64-17-5) | | |
| <u>Acute</u> | | |

| | | |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Inhalation | | |
| <i>Vapor</i> | | |
| LD50 | Mouse | 39 g/m ³ , 4 Hours |
| Oral | | |
| LD50 | Rat | 7000 - 11000 mg/kg |
| Skin corrosion/irritation | Causes skin irritation. | |
| Serious eye damage/eye irritation | Causes serious eye damage. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | May cause allergy or asthma symptoms or breathing difficulties if inhaled. | |
| Skin sensitization | May cause an allergic skin reaction. | |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Carcinogenicity | Not classifiable as to carcinogenicity to humans. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | Not listed. | |
| NTP Report on Carcinogens | Not listed. | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) | Not regulated. | |
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. | |
| Specific target organ toxicity - single exposure | Not classified. | |
| Specific target organ toxicity - repeated exposure | Not classified. | |
| Aspiration hazard | Not an aspiration hazard. | |
| Chronic effects | Prolonged inhalation may be harmful | |

12. ECOLOGICAL INFORMATION

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|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ecotoxicity | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Components | Species | Test Results |
|----------------------------------------------------------|------------------------------------------------------------|------------------------------------------|
| Ethanol (CAS 64-17-5) | | |
| Aquatic | | |
| Acute | | |
| Crustacea | LC50 | Ceriodaphnia dubia Daphnia magna |
| | | 5012 mg/l, 48 hours 454 mg/l, 11 days |
| Fish | LC50 | Pimephales promelas |
| | | 13480 mg/l, 96 hours |
| <i>Chronic</i> | | |
| Crustacea | NOEC | Ceriodaphnia dubia |
| | | 9.6 mg/l, 10 days |
| Persistence and degradability | No data is available on the degradability of this product. | |
| Bioaccumulative potential | | |
| Partition coefficient n-octanol / water (log Kow) | | |
| 2-Hydroxyethyl methacrylate (CAS 868-77-9) | 0.47 | |

| | |
|-----------------------|------------------------------------------------------------------------------------------------------|
| Ethanol (CAS 64-17-5) | -0.31 |
| Mobility in soil | No data available for this product. |
| Other adverse effects | The product contains volatile organic compounds which have a photochemical ozone creation potential. |

13. DISPOSAL CONSIDERATIONS

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

14. TRANSPORT INFORMATION

DOT

| | |
|------------------------------|-------------------------------------------------------------------------|
| UN number | UN1170 |
| UN proper shipping name | Ethanol solutions |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Label(s) | 3 |
| Packing group | III |
| Environmental hazards | No |
| Marine pollutant | |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | 24, B1, IB3, T2, TP1 |
| Packaging exceptions | 4b, 150 |
| Packaging non bulk | 203 |
| Packaging bulk | 242 |

IATA

| | |
|------------------------------|-------------------------------------------------------------------------|
| UN number | UN1170 |
| UN proper shipping name | ETHANOL SOLUTIONS |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Label(s) | 3 |
| Packing group | III |
| Environmental hazards | No |
| ERG Code | 3L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

IMDG

| | |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------|
| UN number | UN1170 |
| UN proper shipping name | ETHANOL SOLUTIONS |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | No |
| EmS | F-E, S-D |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not established. |

15. REGULATORY INFORMATION

| | |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| US federal regulations | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |
| TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) | Not regulated. |
| CERCLA Hazardous Substance List (40 CFR 302.4) | Not listed. |
| SARA 304 Emergency release notification | Not regulated. |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) | Not regulated. |
| Superfund Amendments and Reauthorization Act of 1986 (SARA) | |
| SARA 302 Extremely hazardous substance | Not listed. |
| SARA 311/312 Hazardous chemical | Yes |
| Classified hazard categories | Flammable (gases, aerosols, liquids, or solids) Skin corrosion or irritation Serious eye damage or eye irritation Respiratory or skin sensitization |
| SARA 313 (TRI reporting) | Not regulated. |
| Other federal regulations | |
| Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List | Not regulated. |
| Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) | Not regulated. |
| Safe Drinking Water Act (SDWA) | Not regulated. |
| FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace | Ethanol (CAS 64-17-5) Low priority |
| US state regulations | |
| US. Massachusetts RTK - Substance List | Ethanol (CAS 64-17-5) |
| US. New Jersey Worker and Community Right-to-Know Act | Ethanol (CAS 64-17-5) |

US. Pennsylvania Worker and Community Right-to-Know Law

Ethanol (CAS 64-17-5)

US. Rhode Island RTK

Ethanol (CAS 64-17-5)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|------------------------------------------------------------------------|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | NO |
| Canada | Domestic Substances List (DSL) | NO |
| Canada | Non-Domestic Substances List (NDSL) | NO |
| China | Inventory of Existing Chemical Substances in China (IECSC) | NO |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | NO |
| Europe | European List of Notified Chemical Substances (ELINCS) | NO |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | NO |
| Korea | Existing Chemicals List (ECL) | NO |
| New Zealand | New Zealand Inventory | NO |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | NO |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | NO |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | NO |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION

NFPA ratings**Prepared By**

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Lompoc, CA 93436
TEL: 805-346-3700

Issuing Date

28-August-2019

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet