

Heraeus Kulzer

Mitsui Chemicals Group

SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:

Other means of identification:

None Synonyms:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:

Chemical manufacturer address and telephone number:

Heraeus Kulzer, LLC (Mitsul Chemicals Group) Manufacturer Name:

Address:

300 Heraeus Way South Bend, Indlana 46614-2517

800-431-1785 General Phone Number:

Emergency phone number:

Chemtrec @ 1-800-424-9300 Emergency Phone Number:

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910,1200(d)(f):

GHS Pictograms:

Signal Word:

DANGER.

GH5 Class:

Specific Target Organ Toxicity -STOT Repeated exposure RE. Category 1 (Inhalation, Lung).

Carcinogenicity. Category 1A.

Hazard Statements:

H372 - Causes damage to organs through prolonged or repeated exposure.

H350 - May cause cancer.

Precautionary Statements:

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P405 - Store locked up. P201 - Obtain special instructions before use.

P405 - Store locked up. P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:

Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eve: Skin: Eye contact with the dust may cause imitation.

May cause skin irritation.

Inhalation:

May be harmful if inhaled.

Ingestion:

May be harmful if Ingested.

Target Organs:

Eyes, Skin, Respiratory system, Digestive system.

Aggravation of Pre-Existing

Conditions:

None generally recognized.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Ingredient Percent CAS# EC Num. Chemical Name

Ammonium Chloride

12125-02-9

1 - 5 by weight

Denstone White Revision:: 5/25/2015 Crystalline Silica (Quartz)

14808-60-7

1 - 5 by weight

Plaster of Paris

26499-65-0

20 - 30 by weight

Calcium Sulfate Hemihydrate

10034-76-1

65 - 75 by weight

SECTION 4: FIRST AID MEASURES

Description of necessary measures:

Eve Contact:

If dust gets into eyes. Flush eye with water for 15 minutes. Remove contact lenses, if applicable, and continue flushing. If eye irritation persists, consult a specialist.

Skin Contact:

If dust gets onto the skin. Wash skin with soap and pienty of water. Get medical attention if irritation develops or persists.

Inhalation:

If dust is inhaled, remove the affected person to fresh air. If symptoms persist, get medical attention.

Ingestion:

Accidental ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal obstruction does not occur.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Sultable Extinguishing Media:

Use any extinguishing media appropriate for the surrounding fires. Dike to control run-on/run-off if water is used to fight fires

NFPA Ratings:

NFPA Health:

0

NFPA Flammability: NFPA Reactivity:



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures;

Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Persons responding to an accidental release should war coveralls, gloves, safety glasses or other protective clothing as required. Close-fitting goggles may be necessary in some circumstances to prevent eye contact with dust. Workers should wash and change clothing following cleanup of a spill to expect the presonal contamination. prevent personal contamination.

Environmental precautions:

Environmental Precautions:

Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Methods for containment:

Collect spillage and prevent from spreading by covering, diking, berming or other means. Minimize

dust generation.

Methods for cleanup:

Control source of spillage if possible to do so safely.
Restrict access to the area until completion of dean up.
Contain spilled material immediately and control run-on and run-off.
Clean up spilled material observing precautions listed in Section 8, Personal Protection and using

Clean up spilled material observing predation. methods that will minimize dust generation. Uncontaminated materials can be recovered for return to process. Contaminated materials should be placed in sultable labeled containers for later recovery or disposal. Waste material must be treated and disposed of in accordance with all local, regional, and national

requirements.

SECTION 7: HANDLING and STORAGE

Precautions for safe handling:

Handling:

No special handling procedures are required for this material. Avoid dust formation.

Hygiene Practices:

Wash hands with water as a precaution. Do not breathe dust.

Conditions for safe storage, including any incompatibilities:

Storage:

No special storage conditions required.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ammonium Chloride:

Guideline ACGIH:

TLV-STEL: 20 mg/m3 TLV-TWA: 10 mg/m3 Crystalline Silica (Quartz):

Guideline ACGIH:

TLV-TWA: 0.025 mg/m3 (R)

Plaster of Paris: Guidellne OSHA:

PEL-TWA: 15 mg/m3 Total particulate/dust (T) PEL-TWA: 5 mg/m3 Respirable fraction (R)

Calcium Sulfate Hemilydrate:

Guldeline ACGIH:

TLV-TWA: 10 mg/m3 Inhalable fraction (I)

Appropriate engineering controls:

Engineering Controls:

Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eve/Face Protection:

Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 165. Close-fitting goggles may be necessary in some circumstances to prevent eye contact with dust.

Skin Protection Description:

Coveralls or other work clothing, safety glasses, and gloves are recommended to prevent prolonged or

repeated direct skin and eye contact.

Hand Protection Description:

Wear appropriate protective gloves and other protective apparel to prevent skin contact, Consult manufacturer's data for permeability data.

Respiratory Protection:

No personal respiratory protective equipment normally required. When workers are facing airborne particulate/dust concentrations above the exposure limit they must use appropriate certified respirators.

PPE Pictograms:



SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State:

Fine powder.

Color:

Various Colors.

Odor:

Not determined.

Bailing Point:

Not determined.

Melting Point:

Not determined.

Specific Gravity:

2.3

Solubility:

Slight, 0.2% at 40°C in water

Vapor Pressure:

Not determined.

Percent Volatile:

Not determined. Not determined.

Evaporation Rate:

Not determined.

pH: Flash Point:

Not determined.

Lower Flammable/Explosive Limit:

Not determined.

Upper Flammable/Explosive Limit:

Not determined.

Auto Ignition Temperature:

Not determined.

VOC Content:

SECTION 10: STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability:

None under normal use.

Possibility of hazardous reactions:

Hazardous Polymerization:

Will not occur.

Conditions To Avoid:

Conditions to Avoid:

Dust dispersion in air.

Incompatible Materials:

Incompatible Materials:

None during normal use:

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Ammonium Chloride

Denstone White Revision:: 5/25/2015 Eye:

Administration into the eye - Rabbit Standard Draize test: 500 mg/24H [Mild] Administration into the eye - Rabbit Standard Draize test: 100 mg [Severe] (RTECS)

Ingestion:

Oral - Rat LD50 - Lethal dose, 50 percent kill: 1650 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:

No ecotoxicity data was found for the product.

Environmental Stability:

No environmental information found for this product,

SECTION 13: DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal:

Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local

SECTION 14: TRANSPORT INFORMATION

UN number:

Not regulated as hazardous material for transportation.

UN proper shipping name:

Not regulated as hazardous material for transportation,

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Canada WHMIS:

Controlled - Class: D2B Toxic This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products

Regulations.

Ammonium Chloride:

TSCA Inventory Status:

Listed

Canada DSL:

Listed

Crystalline Silica (Quartz):

TSCA Inventory Status:

Listed

Canada DSI:

Listed

SECTION 16: ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard:

HMIS Fire Hazard:

0

HMIS Reactivity:

1

HMIS Personal Protection:

Reactivity Personal Protection

SDS Revision Date:

May 25, 2015

SDS-Format:

MSDS Author:

Regulatory department

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Heraeus Kulzer

Mitsui Chemicals Group

SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: Denstone Golden

Other means of identification:

Synonyms: None

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:

Chemical manufacturer address and telephone number:

Heraeus Kulzer, LLC (Mitsul Chemicals Group) Manufacturer Name:

300 Heraeus Way Address:

South Bend, Indiana 46614-2517

USA

800-431-1785 General Phone Number:

Emergency phone number:

Chemtrec @ 1-800-424-9300 Emergency Phone Number:

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:

Signal Word:

DANGER.

GHS Class:

Specific Target Organ Toxicity -STOT Repeated exposure RE. Category 1 (Inhalation, Lung). Carcinogenicity. Category 1A.

Hazard Statements:

H372 - Causes damage to organs through prolonged or repeated exposure. H350 - May cause cancer.

Precautionary Statements:

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective dothing/eye protection/face protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Hazards not otherwise classified that have been identified during the classification process:

Eyes, Skin, Inhalation, Ingestion. Route of Exposure:

Potential Health Effects:

Eye contact with the dust may cause irritation.

May cause skin irritation. Skin: May be harmful If inhaled. Inhalation:

May be harmful If ingested. Ingestion:

Eyes, Skin. Respiratory system, Digestive system. Target Organs:

Aggravation of Pre-Existing Conditions:

None generally recognized.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Ingredient Percent CAS# EC Num. Chemical Name

Ammonium Chloride

12125-02-9

1 - 5 by weight

Crystalline Silica (Quartz)

14808-60-7

1 - 5 by weight

Calcium Sulfate Hemihydrate

10034-76-1

90 - 95 by weight

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eve Contact:

If dust gets into eyes. Flush eye with water for 15 minutes. Remove contact lenses, if applicable, and continue flushing. If eye irritation persists, consult a specialist.

Skin Contact:

If dust gets onto the skin. Wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.

Inhalation: Indestion:

If dust is inhaled, remove the affected person to fresh air. If symptoms persist, get medical attention.

Accidental ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal obstruction does not occur.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:

Use any extinguishing media appropriate for the surrounding fires. Dike to control run-on/run-off if water is used to fight fires

NFPA Ratings:

NFPA Health:

0

NFPA Flammability: NFPA Reactivity:



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personnel Precautions:

Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Persons responding to an accidental release should wear coveralls, gloves, safety glasses or other protective clothing as required. Close-fitting goggles may be necessary in some circumstances to prevent eye contact with dust. Workers should wash and change clothing following cleanup of a spill to are prevent executed to the prevent of the processary of the processary of the prevent of the p prevent personal contamination.

Environmental precautions:

Environmental Precautions:

Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Methods for containment:

Collect spillinge and prevent from spreading by covering, diking, berming or other means. Minimize

dust generation.

Methods for cleanup:

Control source of spillage if possible to do so safely.
Restrict access to the area until completion of clean up.
Contain spilled material immediately and control run-on and run-off.
Clean up spilled material observing precautions listed in Section 8, Personal Protection and using methods that will minimize dust generation.
Uncontaminated materials can be recovered for return to process. Contaminated materials should be placed in suitable labeled containers for later recovery or disposal.
Waste material must be treated and disposed of in accordance with all local, regional, and national requirements.

requirements.

SECTION 7: HANDLING and STORAGE

Precautions for safe handling:

Handling:

No special handling procedures are required for this material. Avoid dust formation.

Hyglene Practices:

Wash hands with water as a precaution. Do not breathe dust.

Conditions for safe storage, including any incompatibilities:

Storage:

No special storage conditions required.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ammonium Chloride: Guldeline ACGIH:

TLV-STEL: 20 mg/m3 TLV-TWA: 10 mg/m3

Crystalline Silica (Quartz):

Guldeline ACGIH:

TLV-TWA: 0.025 mg/m3 (R)

Calcium Sulfate Hemihydrate:

Guldeline ACGIH:

TLV-TWA: 10 mg/m3 Inhalable fraction (I)

Appropriate engineering controls:

Engineering Controls:

Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection:

Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166. Close-fitting goggles may be necessary in some circumstances to prevent eye contact with dust.

Skin Protection Description:

Coveralls or other work clothing, safety glasses, and gloves are recommended to prevent prolonged or repeated direct skin and eye contact.

Hand Protection Description:

Wear appropriate protective gloves and other protective apparel to prevent skin contact, Consult manufacturer's data for permeability data.

Respiratory Protection:

No personal respiratory protective equipment normally required. When workers are facing airborne particulate/dust concentrations above the exposure limit they must use appropriate certified respirators.

PPE Pictograms:



SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State:

Fine powder.

Color:

Various Colors.

Not determined.

Bolling Point:

Not determined.

Melting Point:

Not determined.

Specific Gravity:

Solubllity:

Slight, 0.2% at 40°C in water

Vapor Pressure:

Not determined.

Percent Volatile:

Not determined.

Evaporation Rate:

Not determined.

pH:

Not determined.

Flash Point:

Not determined.

Lower Flammable/Explosive Limit:

Not determined.

Upper Flammable/Explosive Limit:

Auto Ignition Temperature:

Not determined.

VOC Content:

Not determined.

SECTION 10: STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability:

None under normal use.

Possibility of hazardous reactions:

Hazardous Polymerization:

Will not occur.

Conditions To Avoid:

Conditions to Avoid:

Dust dispersion in air.

Incompatible Materials:

Incompatible Materials:

None during normal use.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Ammonium Chloride:

Eye:

Administration into the eye - Rabbit Standard Draize test: 500 mg/24H [Mild] Administration into the eye - Rabbit Standard Draize test: 100 mg [Severe] (RTECS)

Ingestion:

Oral - Rat LD50 - Lethal dose, 50 percent kill: $1650 \, \text{mg/kg}$ [Details of toxic effects not reported other than lethal dose value] (RTECS)

Denstone Golden Revision:: 5/25/2015

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:

No ecotoxicity data was found for the product.

Environmental Stability

No environmental information found for this product,

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal:

Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14: TRANSPORT INFORMATION

UN number:

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UN proper shipping name:

Not regulated as hazardous material for transportation.

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Canada WHMIS:

Controlled - Class: D2B Toxic This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products

Health Hazard

Personal Protection

Reactivity

1

x

Regulations.

Ammonium Chloride:

TSCA Inventory Status;

Listed Listed

Canada DSL:

Crystalline Silica (Quartz): TSCA Inventory Status:

Listed

Canada DSL:

Listed

SECTION 16: ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard:

HMIS Fire Hazard:

SDS Revision Date:

HMIS Reactivity: HMIS Personal Protection:

May 25, 2015

SDS Format:

MSDS Author:

Regulatory department

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