

SAFETY DATA SHEET

1. Identification

Product identifier RESISTEX® 100 DN9

Other means of identification None.

Recommended use Not available.

Recommended restrictions Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name CETCO, a Minerals Technologies Company

Address 2870 Forbs Avenue
Hoffman Estates, IL 60192
United States

Telephone General Information 800.527.9948

Website <http://www.cetco.com>

E-mail safetydata@mineralstech.com

Emergency phone number 1.866.519.4752 (US, CA, 1 760.476.3962
MX)

Americas 1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Carcinogenicity Category 1A
Specific target organ toxicity, repeated exposure Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May cause cancer. Causes damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

Response If exposed or concerned: Get medical advice/attention.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 7.92% of the mixture consists of component(s) of unknown acute oral toxicity. 7.92% of the mixture consists of component(s) of unknown acute dermal toxicity. 7.92% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 7.92% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|--|--------------------------|------------|----------|
| QUARTZ (SIO ₂) | | 14808-60-7 | 5 - < 10 |
| CRISTOBALITE | | 14464-46-1 | 1 - < 3 |
| Hexanedioic acid | | 124-04-9 | < 0.1 |
| 2-Propenamide | | 79-06-1 | 0.0002 |
| Other components below reportable levels | | | 90 - 100 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

| | |
|---|--|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Wash off with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Rinse with water. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | Prolonged exposure may cause chronic effects. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. |
| General information | IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). 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. 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 | 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 | Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

| | |
|--|--|
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. 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 | Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers. 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 | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Store locked up. Store in tightly closed container. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS). |

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

| Components | Type | Value | Form |
|--------------------------------|------|------------|------------------|
| 2-Propenamide (CAS 79-06-1) | PEL | 0.3 mg/m3 | |
| CRISTOBALITE (CAS 14464-46-1) | PEL | 0.05 mg/m3 | Respirable dust. |
| QUARTZ (SIO2) (CAS 14808-60-7) | PEL | 0.05 mg/m3 | Respirable dust. |

US. OSHA Table Z-3 (29 CFR 1910.1000)

| Components | Type | Value | Form |
|--------------------------------|------|------------|-------------|
| CRISTOBALITE (CAS 14464-46-1) | TWA | 0.05 mg/m3 | Respirable. |
| | | 1.2 mppcf | Respirable. |
| QUARTZ (SIO2) (CAS 14808-60-7) | TWA | 0.1 mg/m3 | Respirable. |
| | | 2.4 mppcf | Respirable. |

| Additional components | Type | Value | Form |
|-------------------------|------|----------|----------------------|
| INERT OR NUISANCE DUSTS | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|---------------------------------|------|-------------|-------------------------------|
| 2-Propenamide (CAS 79-06-1) | TWA | 0.03 mg/m3 | Inhalable fraction and vapor. |
| CRISTOBALITE (CAS 14464-46-1) | TWA | 0.025 mg/m3 | Respirable fraction. |
| Hexanedioic acid (CAS 124-04-9) | TWA | 5 mg/m3 | |
| QUARTZ (SIO2) (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|--------------------------------|------|------------|------------------|
| 2-Propenamide (CAS 79-06-1) | TWA | 0.03 mg/m3 | |
| CRISTOBALITE (CAS 14464-46-1) | TWA | 0.05 mg/m3 | Respirable dust. |
| QUARTZ (SIO2) (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

US - California OELs: Skin designation

2-Propenamide (CAS 79-06-1)

Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Propenamide (CAS 79-06-1)

Skin designation applies.

US - Tennessee OELs: Skin designation

2-Propenamide (CAS 79-06-1)

Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2-Propenamide (CAS 79-06-1)

Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Propenamide (CAS 79-06-1)

Can be absorbed through the skin.

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

2-Propenamide (CAS 79-06-1)

Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) 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.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Applicable for industrial settings only.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Applicable for industrial settings only.

Other

Use of an impervious apron is recommended. Applicable for industrial settings only.

Respiratory protection

Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit. Applicable for industrial settings only.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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.

9. Physical and chemical properties

Appearance

The product consists of bentonite granules between geotextile layers

Physical state

Solid.

Form

Solid. Mat

Color

Various.

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 available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

0.00001 hPa estimated

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

Not available.

Other information

Density

0.76 g/cm³ estimated

| | |
|-----------------------------|----------------|
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |
| Specific gravity | 0.76 estimated |
| VOC | CARB |

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 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. |
| Incompatible materials | Powerful oxidizers. Chlorine. |
| Hazardous decomposition products | Toxic gas. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|--|
| Inhalation | Prolonged inhalation may be harmful. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | Expected to be a low ingestion hazard. |

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not known.

| Components | Species | Test Results |
|---------------------------------|---------|---------------|
| CRISTOBALITE (CAS 14464-46-1) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | > 22500 mg/kg |
| Hexanedioic acid (CAS 124-04-9) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | > 11000 mg/kg |

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

| | |
|----------------------------------|---|
| Respiratory sensitization | Not a respiratory sensitizer. |
| Skin sensitization | This product is not expected to cause skin sensitization. |

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

| | |
|---|-------------------------------------|
| 2-Propenamide (CAS 79-06-1) | 2A Probably carcinogenic to humans. |
| CRISTOBALITE (CAS 14464-46-1) | 1 Carcinogenic to humans. |
| QUARTZ (SiO ₂) (CAS 14808-60-7) | 1 Carcinogenic to humans. |

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

| | |
|---|--------|
| CRISTOBALITE (CAS 14464-46-1) | Cancer |
| QUARTZ (SiO ₂) (CAS 14808-60-7) | Cancer |

US. National Toxicology Program (NTP) Report on Carcinogens

| | |
|---|--|
| 2-Propenamide (CAS 79-06-1) | Reasonably Anticipated to be a Human Carcinogen. |
| CRISTOBALITE (CAS 14464-46-1) | Known To Be Human Carcinogen. |
| QUARTZ (SiO ₂) (CAS 14808-60-7) | Known To Be Human Carcinogen. |

| | |
|---|--|
| 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 | Causes damage to organs through prolonged or repeated exposure. |
| Aspiration hazard | Not an aspiration hazard. |
| Chronic effects | Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. |

12. Ecological information

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 |
|---------------------------------|---------|---|
| 2-Propenamide (CAS 79-06-1) | | |
| Aquatic | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) 77 - 160 mg/l, 96 hours |
| Hexanedioic acid (CAS 124-04-9) | | |
| Aquatic | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) 97 mg/l, 96 hours |

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

| Partition coefficient n-octanol / water (log K _{ow}) | |
|--|-------|
| 2-Propenamide | -0.67 |
| Hexanedioic acid | 0.08 |

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

| | |
|---------------------------------|---------|
| 2-Propenamide (CAS 79-06-1) | Listed. |
| Hexanedioic acid (CAS 124-04-9) | Listed. |

SARA 304 Emergency release notification

| | |
|--------------------------|----------|
| ACRYLAMIDE (CAS 79-06-1) | 5000 LBS |
|--------------------------|----------|

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

| | |
|--------------------------------|-----------------------|
| CRISTOBALITE (CAS 14464-46-1) | Cancer |
| QUARTZ (SIO2) (CAS 14808-60-7) | Cancer |
| CRISTOBALITE (CAS 14464-46-1) | lung effects |
| QUARTZ (SIO2) (CAS 14808-60-7) | lung effects |
| CRISTOBALITE (CAS 14464-46-1) | immune system effects |
| QUARTZ (SIO2) (CAS 14808-60-7) | immune system effects |
| CRISTOBALITE (CAS 14464-46-1) | kidney effects |
| QUARTZ (SIO2) (CAS 14808-60-7) | kidney effects |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

| Chemical name | CAS number | Reportable quantity (pounds) | Threshold planning quantity (pounds) | Threshold planning quantity, lower value (pounds) | Threshold planning quantity, upper value (pounds) |
|---------------|------------|------------------------------|--------------------------------------|---|---|
| 2-Propenamide | 79-06-1 | 5000 | | 1000 | 10000 |

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2-Propenamide (CAS 79-06-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

US state regulations

California Proposition 65



WARNING: This product can expose you to chemicals including 2-Propenamide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

2-Propenamide (CAS 79-06-1) Listed: January 1, 1990
QUARTZ (SIO2) (CAS 14808-60-7) Listed: October 1, 1988

California Proposition 65 - CRT: Listed date/Developmental toxin

2-Propenamide (CAS 79-06-1) Listed: February 25, 2011

California Proposition 65 - CRT: Listed date/Male reproductive toxin

2-Propenamide (CAS 79-06-1) Listed: February 25, 2011

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-Propenamide (CAS 79-06-1)
CRISTOBALITE (CAS 14464-46-1)
QUARTZ (SIO2) (CAS 14808-60-7)

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 that all components of this product comply 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, including date of preparation or last revision

| | |
|----------------------|---|
| Issue date | 09-July-2018 |
| Revision date | 24-February-2020 |
| Version # | 09 |
| HMIS® ratings | Health: 3* Flammability: 0 Physical hazard: 0 |
| NFPA ratings | Health: 2 Flammability: 0 Instability: 0 |

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text. CETCO, a Minerals Technologies Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

Product and Company Identification: Alternate Trade Names