

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 06.04.2020

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## 1. Identification

### Product identifier

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

### Recommended use of the chemical and restrictions on use

#### Use of the substance/mixture

test dust

### Details of the supplier of the safety data sheet

Company name: Powder Technology Inc.  
Street: 1300 Grey Fox Road  
Place: USA-55112 Arden Hills, MN  
Telephone: +1 952 894 -8737  
e-mail: sales@powdertechologyinc.com  
Internet: <http://www.powdertechologyinc.com>

**Emergency phone number:** +1 952 894 -8737

## 2. Hazard(s) identification

### Classification of the chemical

#### 29 CFR Part 1910.1200

Carcinogenicity: Carc. 2

Specific target organ toxicity repeated or prolonged exposure: STOT RE 1

Combustible Dust: Comb. Dust

### Label elements

#### 29 CFR Part 1910.1200

**Signal word:** Danger

**Pictograms:**



### **Hazard statements**

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure

### **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

If exposed or concerned: Get medical advice/attention.

Store locked up.

### **Special labelling of certain mixtures**

May form combustible dust concentrations in air.

### Hazards not otherwise classified

No information available.

## 3. Composition/information on ingredients

### Mixtures

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#### Chemical characterization

Powder-Sand, Fibres (Second-cut cotton linters (cellulose))

Mineral bound:

Aluminium oxide; Alumina

CAS No.2 1344-28-1

potassium oxide (mineral)

CAS No. 12136-45-7

sodium oxide (mineral)

CAS No. 1313-59-3

Iron (III) oxide (hematite)

CAS No. 1309-37-1

Magnesium oxide

CAS No. 1309-48-4

#### Hazardous components

CAS No	Components	Quantity
14808-60-7	Silica (fine dust)	53.28 %
1305-78-8	calcium oxide (mineral)	2.52 %
13463-67-7	titanium dioxide	0.72 %

### 4. First-aid measures

#### Description of first aid measures

##### General information

In all cases of doubt, or when symptoms persist, seek medical advice.

##### After inhalation

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. If experiencing respiratory symptoms: Call a doctor.

##### After contact with skin

Wash with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

##### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

#### Most important symptoms and effects, both acute and delayed

No information available.

#### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### 5. Fire-fighting measures

#### Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

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Dry extinguishing powder. Foam. Water. Carbon dioxide (CO<sub>2</sub>).

#### Unsuitable extinguishing media

High power water jet.

#### Specific hazards arising from the chemical

May form combustible dust concentrations in air.

In case of fire: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide (CO), Gases/vapours, irritant.

#### Special protective equipment and precautions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

#### Additional information

Knock down dust with water spray jet. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition - No smoking. Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety.

#### Environmental precautions

Do not allow to enter into surface water or drains.

#### Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

#### Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

### 7. Handling and storage

#### Precautions for safe handling

##### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid dust formation. Do not breathe dust. Wear personal protection equipment. Avoid contact with skin, eyes and clothes.

##### Advice on protection against fire and explosion

May form combustible dust concentrations in air. Keep away from sources of ignition - No smoking.

#### Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

##### Hints on joint storage

Do not store together with: Hydrofluoric acid; Fluorine; Oxidising agent, strong; Acid, concentrated.

### 8. Exposure controls/personal protection

#### Control parameters

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**Exposure limits**

CAS No.	Substance	ppm	mg/m <sup>3</sup>	f/cc	Category	Origin
1305-78-8	Calcium oxide	-	5		TWA (8 h)	REL
		-	2		TWA (8 h)	REL
		-	2		TWA (8 h)	ACGIH-2019
1333-86-4	Carbon black (inhalable fraction)	-	3		TWA (8 h)	ACGIH-2019
9004-34-6	Cellulose (total)	-	10		TWA (8 h)	REL
9004-34-6	Cellulose Respirable fraction	-	5		TWA (8 h)	REL
9004-34-6	Cellulose Total dust	-	15		TWA (8 h)	REL
9004-34-6	Cellulose	-	10		TWA (8 h)	ACGIH-2019
1309-37-1	Iron oxide (Fe <sub>2</sub> O <sub>3</sub> ) (respirable fraction)	-	5		TWA (8 h)	ACGIH-2019
1309-37-1	Iron oxide dust and fume (as Fe)	-	5		TWA (8 h)	REL
1309-37-1	Iron oxide fume	-	10		TWA (8 h)	REL
1309-48-4	Magnesium oxide (inhalable fraction)	-	10		TWA (8 h)	ACGIH-2019
1309-48-4	Magnesium oxide fume Total Particulate	-	15		TWA (8 h)	REL
14808-60-7	Silica, crystalline (as respirable dust)	-	0.05		TWA (8 h)	REL
14808-60-7	Silica, crystalline - alpha-quartz (respirable fraction)	-	0.025		TWA (8 h)	ACGIH-2019
14808-60-7	Silica, crystalline quartz, respirable dust	(Z-3)	(Z-3)		TWA (8 h)	REL
14808-60-7	Silica, crystalline quartz, total dust	-	(Z-3)		TWA (8 h)	REL
13463-67-7	Titanium dioxide Total dust	-	15		TWA (8 h)	REL
13463-67-7	Titanium dioxide	-	10		TWA (8 h)	ACGIH-2019
1344-28-1	alpha-Alumina Respirable fraction	-	5		TWA (8 h)	REL
1344-28-1	alpha-Alumina Total dust	-	15		TWA (8 h)	REL

**Exposure controls**
**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

**Protective and hygiene measures**

Do not breathe dust. Avoid dust formation. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

**Eye/face protection**

Wear eye protection/face protection.  
Suitable eye protection: Dust protection goggles.

**Hand protection**

Wear suitable gloves.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Skin protection**

Wear suitable protective clothing.

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#### Respiratory protection

In case of inadequate ventilation wear respiratory protection. Respiratory protection necessary at: Generation/formation of dust.

Suitable respiratory protective equipment: particulates filter device (DIN EN 143). Filtering device (full mask or mouthpiece) with filter: FFP2 / N95; High efficiency particulate air filter (HEPA filter).

#### Environmental exposure controls

Avoid release to the environment.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state:	solid
Color:	grey
Odor:	odourless

pH-Value:	not determined
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#### Changes in the physical state

Melting point/freezing point:	not determined
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Initial boiling point and boiling range:	2980 °C
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Flash point:	210 °C
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#### Flammability

Solid:	not applicable
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Gas:	not applicable
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#### Explosive properties

The product is not: Explosive. May form combustible dust concentrations in air.

Lower explosion limits:	not determined
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Upper explosion limits:	not determined
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Ignition temperature:	not determined
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#### Auto-ignition temperature

Solid:	407 °C
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Gas:	not applicable
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Decomposition temperature:	not determined
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#### Oxidizing properties

Not oxidising.

Vapor pressure: (at 20 °C)	not determined
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Density:	~2 g/cm <sup>3</sup>
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Water solubility:	Immiscible
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#### Solubility in other solvents

not determined

Partition coefficient:	not determined
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Viscosity / dynamic:	not applicable
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Viscosity / kinematic:	not applicable
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Vapor density:	not determined
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Evaporation rate:	not determined
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### Other information

Solid content:	100,00 %
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Odour threshold: not applicable

**10. Stability and reactivity****Reactivity**

No hazardous reaction when handled and stored according to provisions.

**Chemical stability**

Stability: Stable

The product is stable under storage at normal ambient temperatures.

**Possibility of hazardous reactions**

Hazardous reactions: May occur

Explosive reaction with: Hydrofluoric acid; Fluorine.

May form combustible dust concentrations in air.

**Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Incompatible materials**

Hydrofluoric acid; Fluorine; Oxidising agent, strong; Acid, concentrated.

**Hazardous decomposition products**

Carbon monoxide. Carbon dioxide. Gas/vapours, irritant.

**11. Toxicological information****Information on toxicological effects****Route(s) of Entry**

Inhalation, Eye contact, dermal, oral.

**Acute toxicity**

Based on available data, the classification criteria are not met.

**Irritation and corrosivity**

Based on available data, the classification criteria are not met.

**Sensitizing effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing cancer (titanium dioxide)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

Contains: Silica (fine dust).

**Specific target organ toxicity (STOT) - single exposure**

Based on available data, the classification criteria are not met.

**Specific target organ toxicity (STOT) - repeated exposure**

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Causes damage to organs through prolonged or repeated exposure (Silica (fine dust))

Silicosis: The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute. Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (corpumonale). Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid. Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): Silica dust, crystalline, in the form of quartz or cristobalite (CAS 14808-60-7) is listed in group 1. Carbon black (CAS 1333-86-4) is listed in group 2B. Ferric oxide (CAS 1309-37-1) is listed in group 3. Titanium dioxide (CAS 13463-67-7) is listed in group 2B.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Further information**

Inhalation of dust may cause irritation of the respiratory system. The following symptoms may occur:  
Respiratory complaints, Cough.

Extended inhalation at levels above the workplace limit value can cause irreversible damage to the lungs (silicosis). Symptoms: Respiratory complaints, Fever, Cough. acute Symptoms: Fatal if inhaled.

Skin contact: slightly irritant but not relevant for classification.

After eye contact: slightly irritant but not relevant for classification.

After ingestion: Gastrointestinal complaints, Nausea, Vomiting.

**12. Ecological information****Ecotoxicity**

The product is not: Ecotoxic.

**Persistence and degradability**

The product has not been tested.

**Bioaccumulative potential**

The product has not been tested.

**Mobility in soil**

The product has not been tested.

**Other adverse effects**

No information available.

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**Further information**

Avoid release to the environment.

**13. Disposal considerations****Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation.

**Contaminated packaging**

Dispose of waste according to applicable legislation.

**14. Transport information****US DOT 49 CFR 172.101****Proper shipping name:**

Not a hazardous material with respect to these transport regulations.

**Marine transport (IMDG)****UN number:**

No dangerous good in sense of this transport regulation.

**UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**Packing group:**

No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)****UN number:**

No dangerous good in sense of this transport regulation.

**UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**Packing group:**

No dangerous good in sense of this transport regulation.

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**Special precautions for user**

No information available.

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

not applicable

**15. Regulatory information****U.S. Regulations****National Inventory TSCA**

CAS No. 14808-60-7: Yes.

CAS No. 13463-67-7: Yes.

CAS No. 1305-78-8: Yes.

CAS No. 1333-86-4: Yes.

CAS No. 9004-34-6: Yes.

CAS No. 1344-28-1: Yes.

CAS No. 12136-45-7: Yes.

CAS No. 1313-59-3: Yes.

CAS No. 1309-37-1: Yes.

CAS No. 1309-48-4: Yes.

**National regulatory information**

SARA Section 311/312 Hazards:

Silica (fine dust) (14808-60-7): Delayed (chronic) health hazard

calcium oxide (mineral) (1305-78-8): Immediate (acute) health hazard



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titanium dioxide (13463-67-7): Delayed (chronic) health hazard  
 SARA Section 313 Toxic release inventory:  
 Aluminum oxide (fibrous forms) (1344-28-1): De minimis limit = 1.0 %, Reportable threshold = Standard

#### State Regulations

##### Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

#### 16. Other information

##### Hazardous Materials Information Label (HMIS)

Health: \*3  
 Flammability: 1  
 Physical Hazard: 0

##### NFPA Hazard Ratings

Health: 3  
 Flammability: 1  
 Reactivity: 1  
 Unique Hazard:

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##### Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists  
 CFR: Code of Federal Regulations  
 DOT: Department of Transportation  
 ICAO: International Civil Aviation Organization  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 IARC: International Agency for Research on Cancer  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 CAS: Chemical Abstracts Service  
 NFPA: National Fire Protection Association  
 NTP: National Toxicology Program  
 OSHA: Occupational Safety and Health Administration  
 PEL: permissible exposure limit  
 REL: recommended exposure limit  
 SARA: Superfund Amendments and Reauthorization Act  
 STEL: Short-term exposure limit  
 TSCA: Toxic Substances Control Act  
 TWA: time-weighted average  
 TI: Technical Instructions  
 DGR: Dangerous Goods Regulations  
 UN: United Nations  
 ATE: Acute toxicity estimate  
 LC50: Lethal concentration, 50%  
 LD50: Lethal dose, 50%  
 LL50: Lethal loading, 50%  
 EL50: Effect loading, 50%  
 EC50: Effective Concentration 50%  
 ErC50: Effective Concentration 50%, growth rate  
 NOEC: No Observed Effect Concentration  
 BCF: Bio-concentration factor  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships



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IBC: Intermediate Bulk Container  
VOC: Volatile Organic Compounds

#### Other data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*