

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.06.2018

Page 1 of 8

1. Identification

Product identifier

ANSI / ASHRAE Standard 52.1 / 52.2 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

Further Information

This safety data sheet was created by: ECI EnviroConsult Ingenieurbüro Dr. Lux e.K.

2. Hazard(s) identification

Classification of the chemical

Hazard categories:
Carcinogenicity: Carc. 1A
Carcinogenicity: Carc. 2
Hazard Statements:
May cause cancer by inhalation
Suspected of causing cancer

Label elements

Signal word: Danger
Pictograms: health hazard



Hazard statements

May cause cancer by inhalation
Suspected of causing cancer

Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
If exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container to

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Mixtures

Chemical characterization

powdered minerals with milled cellulose fibers

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.02.2016

Page 2 of 8

Hazardous components

CAS No	Components	Quantity
14808-60-7	silica (fine dust)	49-55 %
1333-86-4	Carbon Black	23 %
1344-28-1	aluminium oxide	7-11 %
9004-34-6	Second-cut cotton linters (cellulose)	5 %
1305-78-8	calcium oxide (mineral)	1,4-3,6 %
1309-37-1	Iron(III) oxide (hematite)	1,4-3,6 %
1313-59-3	sodium oxide (mineral)	1,4-2,8 %
12136-45-7	potassium oxide (mineral)	1,4-3,6 %
13463-67-7	titanium dioxide	0,3-0,7 %

4. First-aid measures

Description of first aid measures

After inhalation

Provide fresh air. Medical treatment necessary.

After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Medical treatment necessary.

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

Dry extinguishing powder. Foam. Water. Carbon dioxide (CO₂).

Specific hazards arising from the chemical

Non-flammable.

Special protective equipment and precautions for fire-fighters

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

Additional information

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

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.02.2016

Page 3 of 8

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 generation of dust. Do not breathe dust.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

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.

Advice on storage compatibility

No special measures are necessary.

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No.	Substance	ppm	mg/m ³	f/cc	Category	Origin
1305-78-8	Calcium oxide	-	5		TWA (8 h)	PEL
		-	2		TWA (8 h)	REL
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)	PEL
1309-48-4	Magnesium oxide fume Total Particulate	-	15		TWA (8 h)	PEL
14808-60-7	Silica, crystalline (as respirable dust)	-	0.05		TWA (8 h)	REL
14808-60-7	Silica, crystalline quartz, total dust	-	(Z-3)		TWA (8 h)	PEL
13463-67-7	Titanium dioxide Total dust	-	15		TWA (8 h)	PEL
1344-28-1	alpha-Alumina Respirable fraction	-	5		TWA (8 h)	PEL

Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust. 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 generation of dust. 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 or drink.

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.02.2016

Page 4 of 8

Workspaces have to be equipped with eye shower and safety showers.

Eye/face protection

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

Hand protection

Hand protection: not required.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Suitable respiratory protective equipment: particulates filter device (DIN EN 143). Filtering device (full mask or mouthpiece) with filter: FFP2 / N95; HEPA

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state: solid
Color: grey
Odor: odourless

Test method

pH-Value: not determined

Changes in the physical state

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

Flammability

Solid: not applicable
Gas: not applicable

Lower explosion limits: not determined
Upper explosion limits: not determined

Auto-ignition temperature

Solid: 407 °C
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapor pressure: not determined

Density: ~2 g/cm³

Water solubility: insoluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

Other information

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.02.2016

Page 5 of 8

Solid content:

100,00 %

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: Fluorine. Hydrofluoric acid

Conditions to avoid

none

Incompatible materials

Oxidizing agents, 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, Ingestion, Eye Contact

Acute toxicity

CAS No	Components				
	Exposure routes	Method	Dose	Species	Source
1333-86-4	Carbon Black				
	inhalative (4 h) aerosol	LC50	>4,46 mg/l	Rat	ECHA
9004-34-6	Second-cut cotton linters (cellulose)				
	oral	LD50	>5000 mg/kg		GESTIS
	dermal	LD50	>2000 mg/kg	Rabbit	GESTIS
	inhalative (4 h) aerosol	LC50	>5,8 mg/l		GESTIS

Severe effects after repeated or prolonged exposure

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.02.2016

Page 6 of 8

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.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains: Crystalline silica, quartz. The IARC concluded that there is "sufficient evidence in humans for the carcinogenicity of crystalline silica in the form of quartz or cristobalite from occupational sources" and that "sufficient evidence in experimental animals for the carcinogenicity of quartz and cristobalite" exist. The Overall IARC was that "crystalline silica, which is inhaled in the form of quartz or cristobalite from occupational sources, carcinogenic to humans (Group 1)" is. The evaluation of the IARC stated that "carcinogenicity was not detected in all industrial circumstances. The carcinogenicity may depend on inherent characteristics of crystalline silica or external factors affecting its biological activity or distribution of polymorphs. "For more information on the evaluation of the IARC see" IARC Monographs on the Evaluation of Carcinogenic Risks to Humans ", Volume 68, and "Silica, Some Silicates." (1997). **Contains:** Crystalline silica, quartz. Repeated or prolonged inhalation of fine dusts may cause (disease of the lower lung) a severe scarring of the lungs, known as a stone dust lung disease, and alveolar. Silicosis is caused by the inhalation and accumulation of respirable crystalline silica. Silicosis may come in different forms, chronic (or ordinary), accelerated, or acute, occur. Chronic or ordinary silicosis (often referred to as simple silicosis) is the most common form of silicosis. They can occur in the air after several years of exposure to relatively low concentrations of respirable crystalline silica. It is further defined as either simple or complex silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, characterized primarily in the upper lung zones. Often a simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and evolve into a complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 cm in diameter in. With complicated silicosis or PMF may not reflect symptoms need to be connected. However, symptoms of this shortness of breath, wheezing, cough and sputum are. Complicated silicosis or PMF may be associated with decreased lung function and lead to physical disability. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF may as a result of lung disease heart disease (cor pulmonale) cause. Accelerated silicosis can by exposure to high concentrations of respirable crystalline silica, often over a relatively short period, may occur; the lung lesions can appear within five (5) years after the initial exposure. The disease can progress rapidly. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and the progression runs faster.

Carcinogenicity (IARC): Silica, crystalline (inhaled in the form of quartz or cristobalite from occupational sources) (CAS 14808-60-7) is listed in group 1. Titanium dioxide (CAS 13463-67-7) is listed in group 2B. Carbon black (CAS 1333-86-4) is listed i

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.02.2016

Page 7 of 8

Additional information on tests

This mixture is classified as hazardous according to 1999/45/EC. Special hazards arising from the substance or mixture!

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.

Further information

Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Advice on disposal

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)

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

Safety Data Sheet



according to 29 CFR 1910.1200(g)

ANSI / ASHRAE Standard 52.1 / 52.2 Test Dust

Revision date: 04.02.2016

Page 8 of 8

15. Regulatory information

U.S. Regulations

National regulatory information

SARA Section 311/312 Hazards:

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

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 contains no 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: *2

Flammability: 1

Physical Hazard: 0

NFPA Hazard Ratings

Health: 2

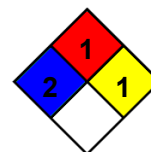
Flammability: 1

Reactivity: 1

Unique Hazard:

Revision date: 04.02.2016

Revision No: 1,03



Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

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.

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