

# Material Safety Data Sheet

**TIMCAL**  
GRAPHITE & CARBON

Trade name: TIMREX Natural Graphite  
Version: 1.0.3 / USA

Status: 15.04.2011

## 1.) Identification of the substance/mixture and of the company/undertaking

Trade name

**TIMREX Natural Graphite**

Details of the supplier of the safety data sheet

Address

TIMCAL AG

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CH-6743 Bodio (Switzerland)

Telephone no. +41 91 873 20 10

Fax no. +41 91 873 20 19

Information provided by / telephone

Technological Development

Emergency telephone

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at +1 800 424 9300.

For ALL other inquiries about this product, call Timcal at

+41 91 873 20 10 (Monday - friday: 7.30 - 12.00, 13.15 - 17.15 h).

Manufacturer

Address

TIMCAL CANADA INC.

990, rue Fernand-Poitras

Terrebonne (Quebec)

Canada J6Y 1V1

Telephone no. +1 450 6229191

Fax no. +1 450 6229191

## 2.) Hazards identification

Potential Health Effects

Eye

May cause eye irritation.

Skin

May cause skin irritation.

Inhalation

May cause respiratory tract irritation.

Ingestion

No hazard in normal industrial use.

Cancer

Natural Graphite may contain impurities of 1 - 3 % crystalline silica (quartz, CAS 14808-60-7) which is listed by IARC as Group 1 carcinogen and by ACGIH as A2 (suspected human carcinogen).

## 3.) Composition / information on ingredients

Chemical characterization

Natural graphite powder

Substance / product identification

CAS no. 7782-42-5

Molecular weight 12.01

Formula C1

Hazardous ingredients

Quartz (SiO<sub>2</sub>)

CAS no. 14808-60-7

Concentration > 0 < 3 %-b.w.

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## 4.) First aid measures

### General information

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

### After inhalation

Remove from exposure. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give Oxygen. Get medical attention.

### After skin contact

Wash with soap and water.

### After eye contact

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes.

### After ingestion

Rinse mouth thoroughly with water. Seek medical advice immediately. Never give anything by mouth to an unconscious person.

## 5.) Firefighting measures

### Suitable extinguishing media

Graphite is difficult to combust. Extinguishing measures to suit surroundings.

### Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases

In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>)

### Special protective equipment for firefighting

As in any fire, wear self-contained breathing apparatus pressure - demand, MSHA/ NIOSH (approved or equivalent) and full protective gear.

## 6.) Accidental release measures

### Personal precautions

Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Avoid dust formation. High risk of slipping due to leakage/spillage of product.

### Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

### Methods for cleaning up/taking up

Take up mechanically. Send in suitable containers for recovery or disposal.

## 7.) Handling and storage

### Handling

#### Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn.

#### Advice on protection against fire and explosion

Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of heat and ignition.

### Storage

#### Requirements for storage rooms and vessels

Containers which are opened must be carefully resealed and kept upright to prevent leakage. Always keep in containers of same material as the original one.

#### Further information on storage conditions

Keep container tightly closed and dry.

## 8.) Exposure controls / personal protection

### Exposure limit values

#### Graphite

CAS no.	7782-42-5
EC no.	231-955-3

#### ACGIH

Graphite (all forms except graphite fibers)

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TWA 2 mg/m<sup>3</sup>

## LIMITS FOR AIR CONTAMINANTS (OSHA)

Graphite, natural  
respirable dust

TWA 15 ml/m<sup>3</sup>

## Quartz (SiO<sub>2</sub>)

CAS no. 14808-60-7

EC no. 238-878-4

## LIMITS FOR AIR CONTAMINANTS (OSHA)

Silica, crystalline quartz  
respirable dust

## ACGIH

Silica, Crystalline: a-quartz

Respirable fraction

TWA 0.025 mg/m<sup>3</sup>

## Exposure controls

### Personal protective equipment

### Respiratory protection

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

### Hand protection

Wear appropriate gloves to prevent skin exposure. Before use, the protective glove should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties).

Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection.

Appropriate Material rubber

### Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

### Skin protection

Wear appropriate clothing to minimize contact with skin.

### General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Wash hands before breaks and after work. Do not inhale dust. Provide eye wash fountain in work area.

## 9.) Physical and chemical properties

### General information

Form powder  
Color grey to black  
Odor odorless

### Important health, safety and environmental information

#### Changes in physical state

Type Melting point  
Value appr. 3500 °C

#### Flash point

Remarks not applicable

#### Ignition temperature

Value > 600 °C  
Reference substance dispersed dust cloud  
Value > 365 °C  
Reference substance deposited dust

#### Vapor pressure

Value < 0,01 mbar  
Reference temperature 20 °C

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## Density

Value	2,1	- 2,3	g/cm <sup>3</sup>
Reference temperature	25	°C	

## Bulk density

Value	70	- 720	kg/m <sup>3</sup>
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## Solubility in water

Value	<	0,001	g/l
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## Other information

Flammability BZ1: not burning (100 °C), source of ignition: glowing platinum wire, 1000 °C approx. Impact sensitivity: not impact sensitive

## 10.) Stability and reactivity

### Materials to avoid

Fluorine; Chlorine trifluoride

### Hazardous decomposition products

No hazardous decomposition products known.

## 11.) Toxicological information

### Acute toxicity

#### Acute oral toxicity

LD50	>	2000	mg/kg
Species	rat		
Reference substance	Graphite		
Method	OECD 401		

### Irritant/corrosive effects

#### Irritant effect on skin

Species	rabbit		
Reference substance	Graphite		
Duration of exposure	4	h	
Evaluation	non-irritant		
Method	OECD 404		

#### Irritant effect on eyes

Species	rabbit		
Reference substance	Graphite		
Evaluation	slightly irritant		
Method	OECD 405		

### Effects after repeated or prolonged exposition (subacute, subchronic, cronic)

### Carcinogenicity

Natural Graphite may contain impurities of < 1 - 3 % crystalline silica (quartz, CAS 14808-60-7) which is listed by IARC as Group 1 carcinogen and by ACGIH as A2 (suspected human carcinogen).

### Experience in practice

Contact with skin and eyes may lead to mechanical irritation. Inhalation of dusts may irritate the respiratory tract.

## 12.) Ecological information

### Persistence and degradability

#### Biodegradability

Evaluation	not degradable
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## 13.) Disposal considerations

### Product

Dispose in accordance with federal, state and local regulations.

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## 14.) Transport information

### Other information

The product is not defined under USDOT, IMDG or ICAO/IATA regulations as a hazardous material. Canada: The product is not defined under Transport Dangerous Goods Directorate regulations as a hazardous material.

## 15.) Regulatory information

### US FEDERAL REGULATIONS

#### Clean Water Act (CWA)

None of the ingredients is listed.

#### OSHA

Following ingredients are Hazardous by definition of Hazard Communication Standard:

CAS no. 14808-60-7

#### SARA Section 302 (RQ):

None of the ingredients is listed.

#### SARA 311/312

Hazard category Chronic Health Hazard

#### SARA Section 313

None of the ingredients is listed.

#### HAPS Hazardous Air Pollutants

None of the ingredients is listed.

### CARCINOGENICITY

#### IARC

Following ingredients are listed in Group 1:

CAS no. 14808-60-7

### US STATE REGULATIONS

#### New Jersey Worker and Community Right to Know Act.

Following ingredients are listed:

CAS no. 14808-60-7

#### California Proposition 65.

Following ingredients are listed:

CAS no. 14808-60-7 Silica

#### Pennsylvania HAZARDOUS SUBSTANCE LIST

Following ingredients are listed:

CAS no. 7782-42-5, 14808-60-7

### CANADA FEDERAL REGULATIONS

#### DSL/NDL

Listed on DSL inventory.

#### WHMIS Classification

This product had been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

#### National Pollutant Release Inventory - Appendix 1

None of the ingredients is listed.

#### National Pollutant Release Inventory - Appendix 2

None of the ingredients is listed.

## 16.) Other information

### Other information

Abbreviations:

ACGIH American Conference of Governmental Hygienics

CAS Chemical Abstracts Service

HAPS Hazardous Air Pollutants

HMIS Hazardous Material Identification System

IARC International Agency for Research on Cancer

IDLH Immediate Dangerous to Life and Health

LEL Lower Explosion Limit

NTP National Toxicology Program

OEL Occupational Exposure Limit

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OSHA Occupational Safety and Health Administration  
PEL Permissible Exposure Limit  
PPE Personal Protection Equipment  
SARA Superfund Amendments and Reauthorization Act  
STEL Short-Term Exposure Level (15 minutes)  
TWA Time-Weighted Average (8 hours)  
UEL Upper Explosion Limit  
VOC Volatile Organic Compounds  
WEEL Workplace Environmental Exposure Level  
Canadian Abbreviations:  
DSL Domestic Substance List  
NDSL Non-Domestic Substance List  
NPRI National Pollutant Release Inventory  
TDG Transport Dangerous Goods Directorate  
WHMIS Workplace Hazardous Materials Information System

## Department issuing safety data sheet

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