



## SAFETY DATA SHEET

in accordance with REACH (1907/2006/EC, as amended by 2015/830/EU) 29 CFR 1910.1200 and WHMIS 2015

Revision date: 8 June 2018

Initial date of issue: 23 March 2011

SDS No. 1140-6

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

1622 (Lot number 180531 and lower)

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Graphite based braided packing with nickel alloy wire reinforcement for use in block valves in low emissions VOC service.

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

##### Company:

A.W. CHESTERTON COMPANY  
860 Salem Street  
Groveland, MA 01834-1507, USA  
Tel. +1 978-469-6446 Fax: +1 978-469-6785  
(Mon. - Fri. 8:30 - 5:00 PM EST)  
SDS requests: [www.chesterton.com](http://www.chesterton.com)  
E-mail (SDS questions): [ProductMSDSs@chesterton.com](mailto:ProductMSDSs@chesterton.com)  
E-mail: [customer.service@chesterton.com](mailto:customer.service@chesterton.com)

##### Supplier:

Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,  
Unit 105, Burlington, Ontario L7L 4X8 – Tel. 905-335-5055  
EU: Chesterton International GmbH, Am Lenzenfleck 23,  
D85737 Ismaning, Germany – Tel. +49-89-996-5460

#### 1.4. Emergency telephone number

24 hours per day, 7 days per week  
Call Infotrac: 1-800-535-5053  
Outside N. America: +1 352-323-3500 (collect)  
NSW Poisons Information Centre (Australia): 13 11 26

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

##### 2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP]

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. However, a safety data sheet is being supplied for it on request as it contains at least one substance posing human health or environmental hazards.

##### 2.1.2. Classification according to 29 CFR 1910.1200 / WHMIS 2015

Carcinogenicity, Category 2, H351\*

\*Labeling not required for a Category 2 carcinogen between 0.1% and 1% under 29 CFR 1910.1200.

##### 2.1.3. Australian statement of hazardous nature

Not classified as hazardous according to criteria of Safe Work Australia.

##### 2.1.4. Additional information

For full text of H-statements: see SECTIONS 2.2 and 16.

#### 2.2. Label elements

##### 2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms: None

Signal word: None

Hazard statements: None

**Precautionary statements:** None

**Supplemental information:** None

### 2.2.2. Labelling according to 29 CFR 1910.1200 / WHMIS 2015

**Hazard pictograms:**



**Signal word:** Warning

**Hazard statements:** H351 Suspected of causing cancer by inhalation.

**Precautionary statements:** P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P280 Wear eye protection.  
 P308/313 IF exposed or concerned: Get medical advice/attention.  
 P501 Dispose of contents in accordance with local/regional/federal regulations.

**Supplemental information:** None

### 2.3. Other hazards

None expected in industrial use. PTFE is nonhazardous at ambient temperatures. At temperatures above 260°C (500°F), toxic decomposition products may be emitted. Due to toxic decomposition, avoid smoking (wash hands to avoid transfer to tobacco products) when handling PTFE products.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

Hazardous Ingredients <sup>1</sup>	% Wt.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification
Molybdenum trioxide	0.1-< 1	1313-27-5 215-204-7	01-211948 8038-30	Carc. 2, H351 (inhalation) Eye Irrit. 2, H319 STOT SE 3, H335
Other ingredients:				
Graphite	60-70	7782-42-5 231-955-3	NA	Not classified*
Silica (Quartz)	< 1	14808-60-7 238-878-4	NA	Not classified*

\*Substance with a workplace exposure limit.  
 For full text of H-statements: see SECTION 16.

<sup>1</sup> Classified according to: • 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F)  
 • 1272/2008/EC, GHS, REACH  
 • WHMIS 2015  
 • Safe Work Australia

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**Inhalation:** If overcome by decomposition fumes, remove to fresh air. If not breathing, administer artificial respiration. Contact physician.

**Skin contact:** Wash skin with soap and water. Contact physician if irritation persists.

**Eye contact:** Flush eyes for at least 15 minutes with large amounts of water. Contact physician if irritation persists.

**Ingestion:** Not applicable

**Protection of first-aiders:** No special precautions.

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

Graphite dust may cause mechanical irritation to the skin, eyes and nasal passages. Repeated inhalation of nuisance dust in excess of exposure limits over an extended period of time may result in injury to the lungs. Symptoms can include cough, shortness of breath and decrease in pulmonary function.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptoms.

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media****Suitable extinguishing media:** Carbon dioxide, dry chemical, foam or water spray**Unsuitable extinguishing media:** None known**5.2. Special hazards arising from the substance or mixture**

Toxic fumes may be emitted at temperatures above 260°C (500°F).

**5.3. Advice for firefighters**

Recommend Firefighters wear self-contained breathing apparatus.

**Flammability Classification:** –**HAZCHEM Emergency Action Code:** 2 Z**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Utilize exposure controls and personal protection as specified in Section 8.

**6.2. Environmental Precautions**

No special requirements.

**6.3. Methods and material for containment and cleaning up**

No special steps required. Nontoxic.

**6.4. Reference to other sections**

Refer to section 13 for disposal advice.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Accumulations of graphite may cause shorting of electrical circuits. Do not smoke when handling PTFE products; wash hands after handling to avoid transfer to tobacco products. Avoid creating and breathing dust during removal, drilling, grinding, sawing or sanding.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in cool, dry area. Exposure to heat, humidity, ozone or light may shorten its unlimited shelf life.

**7.3. Specific end use(s)**

No special precautions.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Occupational exposure limit values**

Ingredients	OSHA PEL <sup>1</sup>		ACGIH TLV <sup>2</sup>		UK WEL <sup>3</sup>		AUSTRALIA ES <sup>4</sup>	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Molybdenum trioxide	–	5 (as Mo)	(resp.)	0.5 (as Mo)	–	5 (as Mo)	–	5 (as Mo)
Graphite	15 mppcf	(resp.)	(resp.)	2	(inhal.) (resp.)	4 10	(resp.)	3
Silica (Quartz)	(resp.) (total)	0.5 0.3	(resp.)	0.025	(resp.)	0.1	(resp.)	0.1

<sup>1</sup> United States Occupational Health & Safety Administration permissible exposure limits

<sup>2</sup> American Conference of Governmental Industrial Hygienists threshold limit values

<sup>3</sup> EH40 Workplace exposure limits, Health & Safety Executive

<sup>4</sup> Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003]

#### Derived No Effect Level (DNEL) according to Regulation (EC) No 1907/2006:

##### Workers

Substance	Route of exposure	Potential health effects	DNEL
Molybdenum trioxide	Inhalation	Chronic effects, local	3 mg Molybdenum trioxide/m <sup>3</sup> (2 mg Mo/m <sup>3</sup> )
		Chronic effects, systemic	11.17 mg Mo/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No 1907/2006:

Substance	Environmental protection target	PNEC
Molybdenum trioxide	Fresh water	12.7 mg Mo/l (19.05 mg MoO <sub>3</sub> /l)
	Freshwater sediments	22.6 g Mo/kg (33.9 g MoO <sub>3</sub> /kg)
	Marine water	1.9 mg Mo/l (2.85 mg MoO <sub>3</sub> /l)
	Marine sediments	1.98 g Mo/kg (2.97 g MoO <sub>3</sub> /kg)
	Microorganisms in sewage treatment	27.1 mg Mo/l (40.65 mg MoO <sub>3</sub> /l)
	Soil (agricultural)	11.8 – 188 mg Mo/l (17.7 – 282 mg MoO <sub>3</sub> /kg)

## 8.2. Exposure controls

### 8.2.1. Engineering measures

If using under extreme heat, use local exhaust.

### 8.2.2. Individual protection measures

**Respiratory protection:** Not normally needed. If exposure limits are exceeded, use an approved dust respirator (e.g., EN filter type P2).

**Protective gloves:** Not normally needed.

**Eye and face protection:** Recommend safety glasses.

**Other:** None

### 8.2.3. Environmental exposure controls

Refer to sections 6 and 12.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	solid	<b>Odour</b>	odorless
<b>Colour</b>	gray	<b>Odour threshold</b>	not determined
<b>Initial boiling point</b>	not applicable	<b>Vapour pressure @ 20°C</b>	not applicable
<b>Melting point</b>	not determined	<b>% Aromatics by weight</b>	not applicable
<b>% Volatile (by volume)</b>	not applicable	<b>pH</b>	not applicable
<b>Flash point</b>	not applicable	<b>Relative density</b>	not applicable
<b>Method</b>	not applicable	<b>Weight per volume</b>	not applicable
<b>Viscosity</b>	not applicable	<b>Coefficient (water/oil)</b>	not applicable
<b>Autoignition temperature</b>	not determined	<b>Vapour density (air=1)</b>	not applicable
<b>Decomposition temperature</b>	not determined	<b>Rate of evaporation (ether=1)</b>	not applicable
<b>Upper/lower flammability or explosive limits</b>	not applicable	<b>Solubility in water</b>	insoluble
<b>Flammability (solid, gas)</b>	not applicable	<b>Oxidising properties</b>	not applicable
<b>Explosive properties</b>	not applicable		

### 9.2. Other information

None

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Refer to sections 10.3 and 10.5.

**10.2. Chemical stability**

Stable

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under conditions of normal use.

**10.4. Conditions to avoid**

Extreme heat above 260°C (500°F).

**10.5. Incompatible materials**

Fluorine, Chlorine Trifluoride and related compounds and molten alkali metals.

**10.6. Hazardous decomposition products**

Carbon Monoxide, Carbon Dioxide, trace amounts of Hydrogen Fluoride, Perfluorocarbon olefins and other toxic fumes may be evolved above 260°C (500°F).

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Primary route of exposure under normal use:** Inhalation, skin and eye contact. Personnel with pre-existing chronic respiratory impairments are generally aggravated by exposure.**Acute toxicity -****Oral:** Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Graphite	LD50, rat	> 2000 mg/kg
Molybdenum trioxide	LD50, rat	2689 mg/kg

**Dermal:** Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Molybdenum trioxide	LD50, rat	> 2000 mg/kg

**Inhalation:** Graphite dust may cause mechanical irritation of the nasal passages.

Substance	Test	Result
Graphite	LC50, rat, 4 hours	> 2 mg/l (dust)
Molybdenum trioxide	LC50, rat, 4 hours	> 5.84 mg/l (dust)

**Skin corrosion/irritation:** Graphite dust may cause mechanical irritation to the skin.

Substance	Test	Result
Graphite	Skin irritation, rabbit	Not irritating
Molybdenum trioxide	Skin irritation, rabbit	Not irritating

**Serious eye damage/irritation:** Graphite dust may cause mechanical irritation to the eyes.

Substance	Test	Result
Graphite	Eye irritation, rabbit	Not irritating

**Respiratory or skin sensitisation:**

Substance	Test	Result
Graphite	Skin sensitization, mouse	Not sensitizing
Molybdenum trioxide	Skin sensitization, guinea pig	Not sensitizing

**Germ cell mutagenicity:** Graphite, Molybdenum trioxide: based on available data, the classification criteria are not met.**Carcinogenicity:** Molybdenum trioxide has shown evidence of carcinogenic activity in female mice based on increased incidences of alveolar/bronchiolar adenoma and adenoma or carcinoma (combined). Effects are restricted to local effects in the respiratory tract. The European Commission has classified molybdenum trioxide as a suspected human carcinogen. The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified inhaled silica as a human carcinogen.**Reproductive toxicity:** Graphite, Molybdenum trioxide: based on available data, the classification criteria are not met.

<b>STOT – single exposure:</b>	Not expected to cause toxicity. Graphite: based on available data, the classification criteria are not met.
<b>STOT – repeated exposure:</b>	Repeated inhalation of respirable free silica may cause scarring of the lungs with cough and shortness of breath. Silicosis, a delayed lung injury that is a disabling, progressive and sometimes fatal pulmonary fibrosis, may result. Prolonged, excessive inhalation of Graphite dust has caused emphysema and pneumoconiosis. Graphite, Molybdenum trioxide: based on available data, the classification criteria are not met.
<b>Aspiration hazard:</b>	Based on available data, the classification criteria are not met.
<b>Other information:</b>	None

**SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

**12.1. Toxicity**

This product is expected to exhibit low toxicity to aquatic and soil organisms. Graphite: 96 h LC50 (fish) > 100 mg/l.

**12.2. Persistence and degradability**

Graphite, Molybdenum trioxide, Silica: inorganic substances, exist in nature. PTFE: material is chemically unreactive and nonbiodegradable.

**12.3. Bioaccumulative potential**

Graphite: bioconcentration in aquatic organisms is not expected to be significant.

**12.4. Mobility in soil**

Solid. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9).

**12.5. Results of PBT and vPvB assessment**

Not available

**12.6. Other adverse effects**

None known

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

Check local, state and national/federal regulations and comply with the most stringent requirement. This product is not classified as a hazardous waste according to 2008/98/EC.

**SECTION 14: TRANSPORT INFORMATION****14.1. UN number**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	NOT APPLICABLE
<b>TDG:</b>	NOT APPLICABLE
<b>US DOT:</b>	NOT APPLICABLE

**14.2. UN proper shipping name**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	NON-HAZARDOUS, NON REGULATED
<b>TDG:</b>	NON-HAZARDOUS, NON REGULATED
<b>US DOT:</b>	NON-HAZARDOUS, NON REGULATED

**14.3. Transport hazard class(es)**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	NOT APPLICABLE
<b>TDG:</b>	NOT APPLICABLE
<b>US DOT:</b>	NOT APPLICABLE

**14.4. Packing group**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	NOT APPLICABLE
<b>TDG:</b>	NOT APPLICABLE
<b>US DOT:</b>	NOT APPLICABLE

**14.5. Environmental hazards**

NOT APPLICABLE

**14.6. Special precautions for user**

NOT APPLICABLE

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

NOT APPLICABLE

**14.8. Other information**

NOT APPLICABLE

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU regulations****Authorisations under Title VII:** Not applicable**Restrictions under Title VIII:** None**Other EU regulations:** None**15.1.2. National regulations****US EPA SARA TITLE III****312 Hazards:**

See section 2.1.2

**313 Chemicals:**

Molybdenum trioxide Below de minimis concentration

**Other national regulations:** None**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**SECTION 16: OTHER INFORMATION**

**Abbreviations and acronyms:** ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE: Acute Toxicity Estimate  
 BCF: Bioconcentration Factor  
 cATpE: Converted Acute Toxicity point Estimate  
 CLP: Classification Labelling Packaging Regulation (1272/2008/EC)  
 ES: Exposure Standard  
 GHS: Globally Harmonized System  
 ICAO: International Civil Aviation Organization  
 IMDG: International Maritime Dangerous Goods  
 LC50: Lethal Concentration to 50 % of a test population  
 LD50: Lethal Dose to 50% of a test population  
 LOEL: Lowest Observed Effect Level  
 N/A: Not Applicable  
 NA: Not Available  
 NOEC: No Observed Effect Concentration  
 NOEL: No Observed Effect Level  
 OECD: Organization for Economic Co-operation and Development  
 PBT: Persistent, Bioaccumulative and Toxic substance  
 (Q)SAR: Quantitative Structure-Activity Relationship  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)  
 REL: Recommended Exposure Limit  
 RID: Regulations concerning the International Carriage of Dangerous Goods by Rail  
 SDS: Safety Data Sheet  
 STEL: Short Term Exposure Limit  
 STOT RE: Specific Target Organ Toxicity, Repeated Exposure  
 STOT SE: Specific Target Organ Toxicity, Single Exposure  
 TDG: Transportation of Dangerous Goods (Canada)  
 TWA: Time Weighted Average  
 US DOT: United States Department of Transportation  
 vPvB: very Persistent and very Bioaccumulative substance  
 WEL: Workplace Exposure Limit  
 WHMIS: Workplace Hazardous Materials Information System  
 Other abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

**Key literature references and sources for data:** Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)  
 Chemical Classification and Information Database (CCID)  
 European Chemicals Agency (ECHA) - Information on Chemicals  
 Hazardous Chemical Information System (HCIS)  
 National Institute of Technology and Evaluation (NITE)  
 Swedish Chemicals Agency (KEMI)  
 U.S. National Library of Medicine Toxicology Data Network (TOXNET)

**Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 [CLP]:**

Classification	Classification procedure
None	Not applicable

**Relevant H-statements:** H319: Causes serious eye irritation.  
H335: May cause respiratory irritation.  
H351: Suspected of causing cancer.

**Hazard pictogram names:** Health hazard (Canada)

**Changes to the SDS in this revision:** Sections 1.1, 2.1, 2.2.2, 3.

**Date of last revision:** 8 June 2018

**Further information:** None

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself. No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose. The user must make their own determination as to suitability.