

SAFETY DATA SHEET

in accordance with 2020/878/EU (REACH, Annex II) 29 CFR 1910.1200, WHMIS 2015 and Safe Work Australia

Revision: 30 March 2024

Date of previous issue: 8 June 2018

SDS No. 1140-7

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

1.1. Product identifier

1622 (Lot number 180601 and higher)

Unique Formula Identifier (UFI): Not required

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

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

Uses advised against: No information available

Reason why uses advised against: Not applicable

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

(Mon. - Fri. 8:30 - 5:00 PM EST)

SDS requests: www.chesterton.com

E-mail (SDS questions): ProductSDSs@chesterton.com

E-mail: 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] / 29 CFR 1910.1200 / WHMIS 2015 / Safe Work Australia / GHS

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. Additional information

None

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / WHMIS 2015 / Safe Work Australia / GHS

Hazard pictograms: None

Signal word: None

Hazard statements: None

Precautionary statements: None

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 ¹	% Wt.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification	SCL, M-factor, ATE
None					
Other ingredients:					
Graphite	70-80	7782-42-5 231-955-3	NA	Not classified*	ATE (oral): > 2,000 mg/kg ATE (inhalation, dust): > 2 mg/l
Silica (Quartz)	< 1	14808-60-7 238-878-4	NA	Not classified*	NA

*Substance with a workplace exposure limit.

¹ 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

Hazardous combustion products: Thermal decomposition can yield carbon monoxide, carbon dioxide, hydrogen fluoride, oxides of nitrogen, perfluoroisobutylene, hexafluoropropylene, carbonyl fluoride, tetrafluoroethylene and aliphatic hydrocarbons.

Other hazards: None known

5.3. Advice for firefighters

Recommend Firefighters wear self-contained breathing apparatus.

Australian 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 ¹		ACGIH TLV ²		UK WEL ³		AUSTRALIA ES ⁴	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Graphite	15 mppcf	(resp.)	(resp.)	2	(total) (resp.)	10 4	(resp.)	3
Silica (Quartz)	(total) (resp.)	0.3 0.05	(resp.)	0.025	(resp.)	0.1	(resp.)	0.05

¹ United States Occupational Health & Safety Administration permissible exposure limits

² American Conference of Governmental Industrial Hygienists threshold limit values

³ EH40 Workplace exposure limits, Health & Safety Executive

⁴ Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants

Biological limit values

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

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

Not available

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

Not available

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

Physical state	solid	pH	not applicable
Colour	gray	Kinematic viscosity	not applicable
Odour	odorless	Solubility in water	insoluble
Odour threshold	not determined	Partition coefficient n-octanol/water (log value)	not applicable
Boiling point or range	not applicable	Vapour pressure @ 20°C	not applicable
Melting point/freezing point	not determined	Density and/or relative density	not applicable
% Volatile (by volume)	not applicable	Weight per volume	not applicable
Flammability	not applicable	Vapour density (air=1)	not applicable
Lower/upper flammability or explosion limits	not applicable	Rate of evaporation (ether=1)	not applicable
Flash point	not applicable	% Aromatics by weight	not applicable
Method	not applicable	Particle characteristics	no data available
Autoignition temperature	not determined	Explosive properties	not applicable
Decomposition temperature	not determined	Oxidising properties	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

No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this SDS.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 / GHS

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	> 2,000 mg/kg

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

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

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

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

Substance	Test	Result
Graphite	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

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

Carcinogenicity: 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: based on available data, the classification criteria are not met.

STOT – single exposure: Not expected to cause toxicity. Graphite: based on available data, the classification criteria are not met.

STOT – repeated exposure: 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: based on available data, the classification criteria are not met.

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

11.2. Information on other hazards

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, 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. Endocrine disrupting properties

None known

12.7. 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 or ID number

ADG/ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE
TDG: NOT APPLICABLE

US DOT:	NOT APPLICABLE
14.2. UN proper shipping name	
ADG/ADR/RID/ADN/IMDG/ICAO:	NON-HAZARDOUS, NON REGULATED
TDG:	NON-HAZARDOUS, NON REGULATED
US DOT:	NON-HAZARDOUS, NON REGULATED
14.3. Transport hazard class(es)	
ADG/ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE
14.4. Packing group	
ADG/ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE
14.5. Environmental hazards	
	NOT APPLICABLE
14.6. Special precautions for user	
	NOT APPLICABLE
14.7. Maritime transport in bulk according to IMO instruments	
	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:	Chemicals subject to reporting requirements of Section 313 of EPCRA and of 40 CFR 372:
None	None
TSCA: All components are listed or exempted.	
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: ADG: Australian Dangerous Goods Code
 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
 SCL: Specific Concentration Limit
 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.

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] / GHS:

Classification	Classification procedure
None	Not applicable

Relevant H-statements: Not applicable

Hazard pictogram names: Not applicable

Further information: None

Date of last revision: 30 March 2024

Changes to the SDS in this revision: Sections 1.1, 1.2, 2.1, 3, 5.2, 5.3, 8.1, 9.1, 10.6, 11, 12.6, 15.1, 16.

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.