



## SAFETY DATA SHEET

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

**Revision date:** 30 June 2023      **Date of previous issue:** 26 September 2017      **SDS No.** 1146-2

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

#### 1.1. Product identifier

DualPac® 2211

**Unique Formula Identifier (UFI):** Not available

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

**Relevant identified uses:** An Advanced Expanded Graphite PTFE along with a continuous multi-filament aramid yarn packing, impregnated with (TFE) dispersion and silicone (pH ranges 4-11). Not recommended in strong mineral acids, alkalis or strong oxidizers.

**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 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): [ProductSDSs@chesterton.com](mailto:ProductSDSs@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] / 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, 29 CFR 1910.1200, WHMIS 2015, Safe Work Australia and GHS.

##### 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.

## 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	SCL, M-factor, ATE
Graphite	10-30	7782-42-5/ 231-955-3	NA	Not classified*	ATE (oral): > 2,000 mg/kg ATE (inhalation, dust): > 2 mg/l

\*Substance with a workplace exposure limit.

<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 action shall be taken involving any personal risk or without suitable training. See section 8.2.2 for recommendations on personal protective equipment.

### 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:** Water, foam, dry chemical (ABC)

**Unsuitable extinguishing media:** Dry chemical (BC, D) carbon dioxide

### 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 noted

### 5.3. Advice for firefighters

Recommend Firefighters wear self-contained breathing apparatus.

**Australian HAZCHEM Emergency Action Code:** 1 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**

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

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

Store in a cool, dry area.

**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>
Graphite	(total)	15	(resp.)	2	(total)	10	(resp.)	3
	(resp.)	5			(resp.)	4		

<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> 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**

No special requirements. If exposure limits are exceeded, provide adequate ventilation.

**8.2.2. Individual protection measures**

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

**Protective gloves:** Recommended

**Eye and face protection:** Safety glasses

**Other:** None

### 8.2.3. Environmental exposure controls

No special requirements.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Physical state</b>	solid	<b>pH</b>	not applicable
<b>Colour</b>	yellow / black	<b>Kinematic viscosity</b>	not applicable
<b>Odour</b>	none	<b>Solubility in water</b>	insoluble
<b>Odour threshold</b>	not applicable	<b>Partition coefficient n-octanol/water (log value)</b>	not applicable
<b>Boiling point or range</b>	not applicable	<b>Vapour pressure @ 20°C</b>	not applicable
<b>Melting point/freezing point</b>	not applicable	<b>Density and/or relative density</b>	not applicable
<b>% Volatile (by volume)</b>	not applicable	<b>Weight per volume</b>	not applicable
<b>Flammability</b>	not determined	<b>Vapour density (air=1)</b>	not applicable
<b>Lower/upper flammability or explosion limits</b>	not applicable	<b>Rate of evaporation (ether=1)</b>	not applicable
<b>Flash point</b>	not applicable	<b>% Aromatics by weight</b>	not applicable
<b>Method</b>	not applicable	<b>Particle characteristics</b>	no data available
<b>Autoignition temperature</b>	not determined	<b>Explosive properties</b>	not determined
<b>Decomposition temperature</b>	not determined	<b>Oxidising properties</b>	not determined

### 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 may be 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:

Based on available data on components, the classification criteria are not met. Graphite dust may cause mechanical irritation of the nasal passages.

Substance	Test	Result
Graphite	LC50, rat, 4 hours	> 2,000 mg/m <sup>3</sup>

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

Substance	Test	Result
Graphite	Skin sensitization (OECD 429), mouse	Not sensitizing

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

**Carcinogenicity:** This product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or Regulation (EC) No 1272/2008.

**Reproductive toxicity:** Graphite: based on available data, the classification criteria are not met.

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

**STOT – repeated exposure:** 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. 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

Not expected to be harmful to aquatic organisms. Graphite: 96 h LC50 (fish) > 100 mg/l.

#### 12.2. Persistence and degradability

Graphite: inorganic substance, exists in nature. PTFE: 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

Unused product is not a regulated waste (not classified as hazardous according to 2008/98/EC). Can be disposed in a secure, properly licensed landfill. Check local, state and national/federal regulations and comply with the most stringent requirement.

### 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:**

None

**Chemicals subject to reporting requirements of Section 313 of EPCRA and of 40 CFR 372:**

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](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] / GHS:**

Classification	Classification procedure
Not applicable	Not applicable

**Relevant H-statements:** None

**Hazard pictogram names:** Not applicable

**Further information:** None

**Date of last revision:** 30 June 2023

**Changes to the SDS in this revision:** Sections 1.1, 1.2, 1.3, 2.1, 3.2, 4.1, 5.1, 5.3, 8.1, 9.1, 11.1, 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.