SAFETY DATA SHEET

<table>
<thead>
<tr>
<th>Revision date:</th>
<th>Initial date of issue:</th>
<th>SDS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 May 2018</td>
<td>20 May 2010</td>
<td>1132-4</td>
</tr>
</tbody>
</table>

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

1.1. Product identifier
1830-SSP

1.2. Relevant identified uses of the substance or mixture and uses advised against
For use in pumps, mixers and agitators to a maximum temperature of 260ºC (500ºF).

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
E-mail (SDS questions): ProductMSDSs@chesterton.com
E-mail: customer.service@chesterton.com

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
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 and GHS.

2.1.2. Australian statement of hazardous nature
Not classified as hazardous according to criteria of Safe Work Australia.

2.1.3. Additional information
None

2.2. Label elements
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

<table>
<thead>
<tr>
<th>Hazardous Ingredients</th>
<th>% Wt.</th>
<th>CAS No./EC No.</th>
<th>REACH Reg. No.</th>
<th>CLP/GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>45-55</td>
<td>7782-42-5/231-955-3</td>
<td>NA</td>
<td>Not classified*</td>
</tr>
</tbody>
</table>

*Substance with a workplace exposure limit.

1 Classified according to:  
• 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. PTFE is nonhazardous at ambient temperatures. However, small quantities of toxic gases may be produced at temperatures above 260°C (500°F), due to PTFE decomposition. Inhalation of these decomposition products may cause temporary flu-like symptoms.

#### 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:** Use extinguishing media suitable for the surrounding fire.
- **Unsuitable extinguishing media:** None known

#### 5.2. Special hazards arising from the substance or mixture

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

#### 5.3. Advice for firefighters

Recommend Firefighters wear self-contained breathing apparatus.

**Flamability Classification:** –

**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

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>OSHA PEL¹ ppm</th>
<th>ACIGH TLV² ppm</th>
<th>UK WEL³ ppm</th>
<th>AUSTRALIA ES⁴ ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mg/m³</td>
<td>mg/m³</td>
<td>mg/m³</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Graphite</td>
<td>15 mppcf</td>
<td>(resp.)</td>
<td>2 (resp.)</td>
<td>4 (resp.)</td>
</tr>
<tr>
<td></td>
<td>(resp.)</td>
<td>(total)</td>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>

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 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
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

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Odour</th>
<th>Odour threshold</th>
<th>Vapour pressure @ 20°C</th>
<th>% Aromatics by weight</th>
<th>pH</th>
<th>Weight per volume</th>
<th>Vapour pressure @ 20°C</th>
<th>% Aromatics by weight</th>
<th>pH</th>
<th>Weight per volume</th>
<th>Vapour pressure @ 20°C</th>
<th>% Aromatics by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>solid</td>
<td>none</td>
<td></td>
<td>not applicable</td>
<td>not applicable</td>
<td></td>
<td></td>
<td>not applicable</td>
<td>not applicable</td>
<td></td>
<td></td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>Colour</td>
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<td>Initial boiling point</td>
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<td>Melting point</td>
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<tr>
<td>% Volatile (by volume)</td>
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<td>Autoignition temperature</td>
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<tr>
<td>Decomposition temperature</td>
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<td></td>
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<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>not applicable</td>
<td></td>
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<td></td>
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<tr>
<td>Flammability (solid, gas)</td>
<td>not determined</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Explosive properties</td>
<td>not determined</td>
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</tbody>
</table>

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 toxicological effects

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.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>LD50, rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>LC50, rat, 4 hours</td>
<td>&gt; 2000 mg/m²</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>Skin irritation, rabbit</td>
<td>Not irritating</td>
</tr>
</tbody>
</table>
### Serious eye damage/irritation:
Graphite dust may cause mechanical irritation to the eyes.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>Eye irritation, rabbit</td>
<td>Not irritating</td>
</tr>
</tbody>
</table>

### Respiratory or skin sensitisation:
Graphite: based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>Skin sensitization (OEC 429), mouse</td>
<td>Not sensitizing</td>
</tr>
</tbody>
</table>

### 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.

### Other information:
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. 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

<table>
<thead>
<tr>
<th>ADR/RID/ADN/IMDG/ICAO:</th>
<th>NOT APPLICABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG:</td>
<td>NOT APPLICABLE</td>
</tr>
<tr>
<td>US DOT:</td>
<td>NOT APPLICABLE</td>
</tr>
</tbody>
</table>

#### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>ADR/RID/ADN/IMDG/ICAO:</th>
<th>NON-HAZARDOUS, NON REGULATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG:</td>
<td>NON-HAZARDOUS, NON REGULATED</td>
</tr>
<tr>
<td>US DOT:</td>
<td>NON-HAZARDOUS, NON REGULATED</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>ADR/RID/ADN/IMDG/ICAO:</th>
<th>NOT APPLICABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG:</td>
<td>NOT APPLICABLE</td>
</tr>
<tr>
<td>US DOT:</td>
<td>NOT APPLICABLE</td>
</tr>
</tbody>
</table>
14.4. Packing group
   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. Transport in bulk according to Annex II of MARPOL 73/78 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: 313 Chemicals:
None None

Other national regulations: None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
## 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
- TDA: 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 (CNSST)
- 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:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### Relevant H-statements:
None

### Hazard pictogram names:
Not applicable

### Changes to the SDS in this revision:
Sections 1.3, 1.4, 2.1, 2.2, 3, 4.1, 4.2, 5.1, 5.2, 5.3, 7.1, 8.1, 9.1, 10.6, 11, 12.1, 12.2, 12.3, 13, 15.1.2, 16.

### Date of last revision:
16 May 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.