## SAFETY DATA SHEET


| Revision date: 1 March 2018 | Initial date of issue: 11 September 2007 | SDS No. 1024-11 |

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

#### 1.1. Product identifier

370

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

Multi-Service Carbon Yarn Packing. Controls water, steam, boiler feed, aqueous solutions of acids and alkalis. Non-reactive with all chemicals from pH 0-14 to 315°C (600°F) except oleum, fuming nitric acid, aqua regia and fluorine.

#### 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


<table>
<thead>
<tr>
<th>Hazard pictograms:</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word:</td>
<td>None</td>
</tr>
<tr>
<td>Hazard statements:</td>
<td>None</td>
</tr>
<tr>
<td>Precautionary statements:</td>
<td>None</td>
</tr>
<tr>
<td>Supplemental information:</td>
<td>None</td>
</tr>
</tbody>
</table>

**2.3. Other hazards**

None expected in industrial use.
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients¹ % Wt. CAS No./ EC No. REACH Reg. No. CLP/GHS Classification

Graphite/Carbon 50-60 7782-42-5/ 231-955-3 231-153-3 NA Not classified


SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: 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 and carbon fibers may cause mechanical irritation of 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, water, or foam

Unsuitable extinguishing media: None known

5.2. Special hazards arising from the substance or mixture

None

5.3. Advice for firefighters

Recommend Firefighters wear self-contained breathing apparatus.

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

7.2. Conditions for safe storage, including any incompatibilities
Keep in dry and ventilated area.

7.3. Specific end use(s)
Multi-Service Carbon Yarn Packing. Controls water, steam, boiler feed, aqueous solutions of acids and alkalis, Non-reactive with all chemicals from pH 0-14 to 315°C (600°F) except oleum, fuming nitric acid, aqua regia and fluorine. Refer to the product instructions and product data sheet for more detailed application information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>OSHA PEL¹ ppm</th>
<th>ACGIH TLV² ppm</th>
<th>UK WEL³ ppm</th>
<th>AUSTRALIA ES⁴ ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>15 mpcf</td>
<td>(resp.)</td>
<td>2 (resp.)</td>
<td>4 (resp.)</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 limits are exceeded, use an approved dust respirator (e.g., EN filter type P1).
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>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>solid</td>
</tr>
<tr>
<td>Colour</td>
<td>black</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>not determined</td>
</tr>
<tr>
<td>% Volatile (by volume)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Method</td>
<td>not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>not determined</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not determined</td>
</tr>
<tr>
<td>Odour</td>
<td>None</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapour pressure @ 20°C</td>
<td>not applicable</td>
</tr>
<tr>
<td>% Aromatics by weight</td>
<td>not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>not applicable</td>
</tr>
<tr>
<td>Weight per volume</td>
<td>not applicable</td>
</tr>
<tr>
<td>Coefficient (water/oil)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapour density (air=1)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Rate of evaporation (ether=1)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>insoluble</td>
</tr>
<tr>
<td>Method</td>
<td>not applicable</td>
</tr>
<tr>
<td>Weight per volume</td>
<td>not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
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<td>Autoignition temperature</td>
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</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>not determined</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not determined</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>no data available</td>
</tr>
</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

None

10.5. Incompatible materials

Oleum, fuming nitric acid, aqua regia, and Fluorine.

10.6. Hazardous decomposition products

Strong oxidizers like liquid Chlorine and concentrated Oxygen.

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.

<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.

**Inhalation:**

Graphite dust and carbon fibers may cause mechanical irritation of the nasal passages.

<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/m³</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation:**

Graphite dust and carbon fibers may cause mechanical irritation of 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 and carbon fibers may cause mechanical irritation of 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 (OECD 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: As per 29 CFR 1910.1200 (Hazard Communication), 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. 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 determined. Graphite: 96 h LC50 (fish) > 100 mg/l.

12.2. Persistence and degradability
Graphite/Carbon: inorganic substances; exist in nature.

12.3. Bioaccumulative potential
No information available

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

14.2. UN proper shipping name
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)
ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE
TDG: NOT APPLICABLE
US DOT: NOT APPLICABLE

14.4. Packing group
ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE
TDG: NOT APPLICABLE
US DOT: NOT APPLICABLE

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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:   Not applicable
   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.

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.
**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:**

<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, 5.3, 8.1, 11, 15.1.2, 16.

**Date of last revision:** 1 March 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.