SAFETY DATA SHEET
in accordance with REACH (1907/2006/EC, as amended by 453/2010/EC) and WHMIS 2015

Revision date: 26 April 2018  Initial date of issue: 4 March 2008  SDS No. 1097-3a

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

1.1. Product identifier
459

1.2. Relevant identified uses of the substance or mixture and uses advised against
Laminated Graphite sheet with a Nickel insert. This material is designed for use in high temperature, high pressure, flange applications. It can be used up to 454°C (850°F) in an oxidizing atmosphere and 870°C (1600°F) in a non-oxidizing atmosphere.

1.3. Details of the supplier of the safety data sheet
Company: Supplier:
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)
E-mail (SDS questions): ProductMSDSs@chesterton.com
E-mail: customer.service@chesterton.com
SDS requests: www.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,
D-85737 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)

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.

2.1.2. Classification according to Directive 1999/45/EC
This product does not meet the criteria for classification in any danger category according to Directive 1999/45/EC on classification, packaging and labelling of dangerous preparations.

2.1.3. Classification according to WHMIS 1988
None

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

2.1.5. Additional information

2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP] / WHMIS 2015 / GHS

Hazard pictograms: N/A
Signal word: None
Hazard statements: None
Precautionary statements: None
Supplemental information: None

2.3. Other hazards
None expected in industrial use.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

<table>
<thead>
<tr>
<th>Hazardous Ingredients¹</th>
<th>% Wt.</th>
<th>CAS No./EC No.</th>
<th>REACH Reg. No.</th>
<th>Classification (acc. to 1272/2008/EC)</th>
<th>Classification (67/548/EEC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
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</tbody>
</table>

Indications of danger acc. to 67/548/EEC: Not applicable
For full text of H-statements and R-phrases: see SECTION 16.

* WHMIS 2015
* Safe Work Australia [NOHSC: 1008 (2004)]

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures
Inhalation: not applicable
Skin contact: Wash skin with soap and water. Contact physician if irritation persists.
Eye contact: not applicable
Ingestion: not applicable

4.2. Most important symptoms and effects, both acute and delayed
None

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

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media
Carbon Dioxide, dry chemical, water or foam

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: not determined
HAZCHEM Emergency Action Code: 3 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
None

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
Store in a dark, 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 PEL ppm</th>
<th>ACGIH TLV mg/m³</th>
<th>UK WEL² ppm</th>
<th>AUSTRALIA ES³ mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
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</tbody>
</table>

² EH40 Workplace exposure limits, as amended.
³ Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003].

8.2. Exposure controls

8.2.1. Engineering measures
not applicable

8.2.2. Individual protection measures
Respiratory protection: Not applicable
Protective gloves: Not normally needed.
Eye and face protection: 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

<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>Relative density</th>
<th>Weight per volume</th>
<th>Coefficient (water/oil)</th>
<th>Vapour density (air=1)</th>
<th>Rate of evaporation (ether=1)</th>
<th>Solubility in water</th>
<th>Oxidising properties</th>
<th>Flammability (solid, gas)</th>
<th>Explosive properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>solid</td>
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<td></td>
<td>not determined</td>
<td>not determined</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. No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid
Open flames and red hot surfaces.

10.5. Incompatible materials
Fluorine, aqua regia, oleum, fuming Nitric Acid and Hydrochloric Acid and Hydrofluoric Acid when used as a positive electrode.

10.6. Hazardous decomposition products
Carbon Monoxide, Carbon Dioxide and other toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Primary route of exposure  skin contact
under normal use:  

Acute effects:  None
Chronic effects:  None

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.

Aspiration hazard:  Not applicable
Other information:  None known

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

12.2. Persistence and degradability
Graphite, Nickel: inorganic substances, exist in nature.

12.3. Bioaccumulative potential
Not determined

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.

European List of Wastes code:  20 01 40

SECTION 14: TRANSPORT INFORMATION

14.1. UN number
DRM/RID/ADN/IMDG/ICAO:  NOT APPLICABLE
TDG:  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

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: None
313 Chemicals: None

Hazardous Materials Identification System (HMIS)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>0</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>1</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>*</td>
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</tbody>
</table>

Other national regulations:

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
### SECTION 16: OTHER INFORMATION

<table>
<thead>
<tr>
<th>Abbreviations and acronyms:</th>
<th>ACGIH: American Conference of Governmental Industrial Hygienists</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways</td>
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<td></td>
<td>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road</td>
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<td></td>
<td>ATE: Acute Toxicity Estimate</td>
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<td></td>
<td>BCF: Bioconcentration Factor</td>
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<td></td>
<td>CLP: Classification Labelling Packaging Regulation (1272/2008/EC)</td>
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<td></td>
<td>ES: Exposure Standard</td>
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<td>GHS: Globally Harmonized System</td>
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<td></td>
<td>ICAO: International Civil Aviation Organization</td>
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<td></td>
<td>IMDG: International Maritime Dangerous Goods</td>
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<td></td>
<td>LC50: Lethal Concentration to 50 % of a test population</td>
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<tr>
<td></td>
<td>LD50: Lethal Dose to 50% of a test population</td>
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<tr>
<td></td>
<td>LOEL: Lowest Observed Effect Level</td>
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<tr>
<td></td>
<td>N/A: Not Applicable</td>
</tr>
<tr>
<td></td>
<td>NA: Not Available</td>
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<tr>
<td></td>
<td>NOAEL: No Observed Adverse Effect Level</td>
</tr>
<tr>
<td></td>
<td>NOEL: No Observed Effect Level</td>
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<tr>
<td></td>
<td>OSHA: Occupational Health &amp; Safety Administration</td>
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<tr>
<td></td>
<td>PBT: Persistent, Bioaccumulative and Toxic substance</td>
</tr>
<tr>
<td></td>
<td>PEL: Permissible Exposure Limit</td>
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<tr>
<td></td>
<td>(Q)SAR: Quantitative Structure-Activity Relationship</td>
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<tr>
<td></td>
<td>REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)</td>
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<tr>
<td></td>
<td>RID: Regulations concerning the International Carriage of Dangerous Goods by Rail</td>
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<td></td>
<td>SDS: Safety Data Sheet</td>
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<td></td>
<td>STEL: Short Term Exposure Limit</td>
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<td></td>
<td>STOT: Specific Target Organ Toxicity</td>
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<tr>
<td></td>
<td>TDG: Transportation of Dangerous Goods (Canada)</td>
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<td></td>
<td>TLV: Threshold Limit Value</td>
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<tr>
<td></td>
<td>US DOT: United States Department of Transportation</td>
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<tr>
<td></td>
<td>vPvB: very Persistent and very Bioaccumulative substance</td>
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<td></td>
<td>WEL: Workplace Exposure Limit</td>
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<td></td>
<td>WHMIS: Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>Other abbreviations and acronyms can be looked up at <a href="http://www.wikipedia.org">www.wikipedia.org</a>.</td>
<td></td>
</tr>
</tbody>
</table>

**Key literature references and sources for data:**

- Commission de la santé et de la sécurité du travail (CSST)
- European chemical Substances Information System (ESIS)
- European Chemicals Agency (ECHA) - Information on Chemicals
- Hazardous Substances Data Bank (HSDB)
- Hazardous Substances Information System (HSIS)
- Swedish Chemicals Agency (KEMI)

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

<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

**Relevant R-phrases:** None

**Hazard pictogram names:** Not applicable

**Changes to the SDS in this revision:** Sections 1.3, 2.1, 2.2, 3, 16.

**Date of last revision:** 26 April 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.