



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:** 19 November 2013 **SDS No.** 1100-1a

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

1.1. Product identifier

5900, 5900-I

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

High purity graphite foil from exfoliated natural graphite with corrosion inhibitor that helps prevent electrolytic pitting. For use in all valves with high pressure bonnets to seal against all (pH 0-14) fluids, chemicals and gases to 4200 psi (290 bar) and 1200°F (650°C).

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

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP] / WHMIS 2015 / 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.

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

D2B: Toxic materials causing other effects

2.1.4. Australian classification

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

2.1.5. Additional information

None

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

| Hazardous Ingredients ¹ | % Wt. | CAS No./ EC No. | REACH Reg. No. | Classification (acc. to 1272/2008/EC) | Classification (67/548/EEC) |
|--|----------|------------------------|-------------------|--|--------------------------------|
| Graphite | ≥ 97 | 7782-42-5 231-955-3 | NA | Not classified* | Not classified |
| Barium Molybdate (Contained in 5900-I only) | 0.75-2.5 | 7787-37-3 232-111-7 | NA | Acute Tox. 4, H302/332 | Xn; R20/22 |

Indications of danger acc. to 67/548/EEC: Xn: Harmful
For full text of H-statements and R-phrases: see SECTION 16.

*Substance with a workplace exposure limit.

¹Classified according to: * 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F), California Proposition 65
* 1272/2008/EC, 67/548/EEC, 99/45/EC, REACH
* WHMIS 2015
* Safe Work Australia [NOHSC: 1008 (2004)]

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

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. Prolonged, excessive inhalation of Graphite dust has caused emphysema and pneumoconiosis.

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, foam or water

5.2. Special hazards arising from the substance or mixture

Accumulations of graphite may cause shorting of electrical circuits.

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**

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 | | ACGIH TLV | | UK WEL ² | | AUSTRALIA ES ³ | |
|------------------|----------|-------------------|-------------------|-------------------|---------------------|-------------------|---------------------------|-------------------|
| | ppm | mg/m ³ | ppm | mg/m ³ | ppm | mg/m ³ | ppm | mg/m ³ |
| Graphite | 15 mppct | – | (resp) | 2 | (total) (resp) | 10 4 | (resp) | 3 |
| Barium Molybdate | – | 15 | (inhal) (resp) | 10 3 | – | 10 | – | 10 |

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**

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 P2).

Protective gloves: Recommended

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**

| | | | |
|---|----------------|--------------------------------------|----------------|
| Physical state | solid | Odour | None |
| Colour | gray | Odour threshold | not determined |
| Initial boiling point | not applicable | Vapour pressure @ 20°C | not applicable |
| Melting point | not applicable | % Aromatics by weight | not applicable |
| % Volatile (by volume) | not applicable | pH | not applicable |
| Flash point | not applicable | Relative density | not applicable |
| Method | not applicable | Weight per volume | not applicable |
| Viscosity | not applicable | Coefficient (water/oil) | not applicable |
| Autoignition temperature | not determined | Vapour density (air=1) | not applicable |
| Decomposition temperature | not determined | Rate of evaporation (ether=1) | not applicable |
| Upper/lower flammability or explosive limits | not applicable | Solubility in water | Insoluble |
| Flammability (solid, gas) | not determined | Oxidising properties | not applicable |
| Explosive 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

None

10.5. Incompatible materials

Oleum, fuming Nitric Acid, aqua regia, Fluorine, HCL, and HF 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 under normal use: Inhalation, skin and eye contact. Personnel with pre-existing chronic respiratory impairments may be aggravated by exposure.

Acute effects: Graphite dust may cause mechanical irritation to the skin, eyes and nasal passages.

Chronic effects: Repeated inhalation of nuisance dust in excess of exposure limits over an extended period of time may result in injury to the lungs. Prolonged, excessive inhalation of Graphite dust has caused emphysema and pneumoconiosis.

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, Barium Molybdate: 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**

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

European List of Wastes code: 06 13 99

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

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:**Immediate
Delayed**313 Chemicals:**

Barium Compound 0.75-2.5%

Hazardous Materials Identification System (HMIS)

4 = Severe Hazard
3 = Serious Hazard
2 = Moderate Hazard
1 = Slight Hazard
0 = Minimal Hazard
* = See Section 8

| | |
|----------------------------|----------|
| HEALTH | 0 |
| FLAMMABILITY | 0 |
| REACTIVITY | 1 |
| Personal Protection | * |

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: ACGIH: American Conference of Governmental Industrial Hygienists
 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
 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
 NOAEL: No Observed Adverse Effect Level
 NOEL: No Observed Effect Level
 OSHA: Occupational Health & Safety Administration
 PBT: Persistent, Bioaccumulative and Toxic substance
 PEL: Permissible Exposure Limit
 (Q)SAR: Quantitative Structure-Activity Relationship
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)
 RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
 SDS: Safety Data Sheet
 STEL: Short Term Exposure Limit
 STOT: Specific Target Organ Toxicity
 TDG: Transportation of Dangerous Goods (Canada)
 TLV: Threshold Limit Value
 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 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:

| Classification | Classification procedure |
|----------------|--------------------------|
| Not applicable | Not applicable |

Relevant H-statements: H302/332: Harmful if swallowed or if inhaled.

Relevant R-phrases: R20/22: Harmful by inhalation and if swallowed.

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.