### SAFETY DATA SHEET

in accordance with REACH (1907/2006/EC, as amended by 453/2010/EC)

| Revision date: | 14 December 2012 | Initial date of issue: | 31 March 2009 | SDS No. | 1093-5 |

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

1.1. **Product identifier**

184 and 185

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

Polytetrafluoroethylene (PTFE) Products 184 and 185 comply with FDA requirements for perfluorocarbon resins (21 CFR 177.1550) for food products. Product 185 also complies with FDA requirements for adhesive components (21 CFR 175.105). For use against most chemicals except elemental fluorine and molten alkali from -267°C (-450°F) to 260°C (500°F).

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:**

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] / 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. **Canadian WHMIS classification**

Not controlled

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] / GHS**

<table>
<thead>
<tr>
<th>Hazard pictograms:</th>
<th>N/A</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. PTFE is nontoxic at ambient temperatures. At temperatures above 260°C (500°F), toxic decomposition products may be emitted. Due to toxic decomposition, avoid smoking when handling PTFE products. Wash hands to avoid transfer to tobacco products.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures
Hazardous Ingredients¹ % Wt. CAS No./EC No. REACH Reg. No. Classification (acc. to 1272/2008/EC) Classification (67/548/EEC)

None

Indications of danger acc. to 67/548/EEC: Not applicable

* Controlled Products Regulations
* Safe Work Australia [NOHSC: 1008 (2004)]

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: not applicable

Eye contact: not applicable

Ingestion: not applicable

4.2. Most important symptoms and effects, both acute and delayed
PTFE is nontoxic at ambient temperatures. However, small quantities of toxic gases may be produced at temperatures above 260°C (500°F), due to decomposition. Inhalation of these decomposition products may cause temporary flu-like symptoms. None

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

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media
Use extinguisher appropriate to the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Toxic fumes may be emitted at temperatures above 260°C (500°F). Product will burn in an atmosphere of > 95% oxygen, when an ignition source is present.

5.3. Advice for firefighters
Recommend Firefighters wear self-contained breathing apparatus to protect against hazardous decomposition products.

Flammability Classification: –

HAZCHEM Emergency Action Code: not applicable

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.

7.2. Conditions for safe storage, including any incompatibilities
Store in cool, dry area.

7.3. Specific end use(s)
Polytetrafluoroethylene (PTFE) Products 184 and 185 comply with FDA requirements for perfluorocarbon resins (21 CFR 177.1550) for food products. Product 185 also complies with FDA requirements for adhesive components (21 CFR 175.105). For use against most chemicals except elemental fluorine and molten alkali from -267°C (-450°F) to 260°C (500°F). 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>Hazardous Ingredients</th>
<th>OSHA PEL ppm</th>
<th>ACGIH TLV ppm</th>
<th>UK WEL ppm</th>
<th>AUSTRALIA ES ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

8.2.1. Engineering measures
No special requirements. If using under extreme heat, use local exhaust.

8.2.2. Individual protection measures

<table>
<thead>
<tr>
<th>Respiratory protection:</th>
<th>Not required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protective gloves:</td>
<td>Not normally needed.</td>
</tr>
<tr>
<td>Eye and face protection:</td>
<td>Not normally needed.</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
</tbody>
</table>

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>solid</th>
<th>Odour</th>
<th>Odour threshold</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>white</td>
<td></td>
<td>Vapour pressure @ 20°C</td>
<td>not applicable</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>not applicable</td>
<td>% Aromatics by weight</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Melting point</td>
<td>not applicable</td>
<td>pH</td>
<td>Weight per volume</td>
<td>not applicable</td>
</tr>
<tr>
<td>% Volatile (by volume)</td>
<td>not applicable</td>
<td>Relative density</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
<td>Weight per volume</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td>None</td>
<td>Coefficient (water/oil)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>not applicable</td>
<td>Vapour density (air=1)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>not applicable</td>
<td>Rate of evaporation (ether=1)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>no data available</td>
<td>Solubility in water</td>
<td>Insoluble</td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>not applicable</td>
<td>Oxidising properties</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not determined</td>
<td></td>
<td></td>
<td></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
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
Carbon Monoxide, Carbon Dioxide, trace amounts of Hydrogen fluoride, Perfluorocarbon olefins, and other toxic fumes may be evolved above 260°C (500°F).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Primary route of exposure under normal use:
Inhalation (PTFE decomposition fumes) and skin contact.

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

#### 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.

#### 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
Nontoxic.

### 12.2. Persistence and degradability
Nonbiodegradable.

### 12.3. Bioaccumulative potential
Not determined

### 12.4. Mobility in soil
Solid. Insoluble in water.

### 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. Check local, state and national/federal regulations and comply with the most stringent requirement.

European List of Wastes code: 07 02 13

## 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

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### 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**

<table>
<thead>
<tr>
<th>312 Hazards</th>
<th>313 Chemicals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

- **Hazardous Materials Identification System (HMIS)**
  - **HEALTH**
    - 4 = Severe Hazard  
    - 3 = Serious Hazard  
    - 2 = Moderate Hazard  
    - 1 = Slight Hazard  
    - 0 = Minimal Hazard  
    - * = See Section 8
  - **FLAMMABILITY**
    - 0
  - **REACTIVITY**
    - 1
  - **Personal Protection**
    - *

**JAPAN PRTR**

<table>
<thead>
<tr>
<th>Class I Chemicals:</th>
<th>Class II Chemicals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**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
- **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
- **NOEL**: No Observed Effect Level
- **OSHA**: Occupational Health & Safety Administration
- **PBT**: Persistent, Bioaccumulative and Toxic substance
- **PEL**: Permissible Exposure Limit
- **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)

#### Relevant H-statements:
- **None**

#### Relevant R-phrases:
- **None**

#### Changes to the SDS in this revision:
- Sections 1-16, updated to new format.

#### 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.