

## **Safety Data Sheet**

# Durlon® 5000, 5300, 7900, 7910, 7925, 7950, 8300, 8400, 8500, 8600, 8700, 8900

#### **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 5000, 5300, 7900, 7910, 7925, 7950, 8300, 8400, 8500, 8600, 8700, 8900

Product Family Compressed Non Asbestos

Manufacturer Durabla Canada Ltd., 293 University Avenue

PO Box 696, Belleville, ON

Supplier Identifier Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

**SDS No.** 0029

**Date of Preparation** March 20, 2017

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name        | CAS No.    | %     | Other Identifiers |
|----------------------|------------|-------|-------------------|
| Aluminum Silicate    | 1332-58-7  | 20-60 |                   |
| Calcium Metasilicate | 13983-17-0 | 10-30 |                   |
| Crystalline Silica   | 14808-60-7 | <1    |                   |
| Zinc oxide           | 1314-13-2  | <1    |                   |
| Carbon black         | 1333-86-4  | <1    |                   |

#### **Notes**

These ingredients are encapsulated with styrene-butadiene, acrylonitrile-butadiene or polychloroprene rubber and are not expected to create any hazard during handling and useage with good manufacturing and hygiene practices.

## **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

## Inhalation

Move to fresh air.

#### **Skin Contact**

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes.

#### **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

#### Ingestion

Get medical advice or attention if you feel unwell or are concerned.

## **First-aid Comments**

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If irritation occurs or persists from any route of exposure, discontinue use immediately and consult physician. Bring Safety Data Sheet for physician consultation.

## **SECTION 5. FIRE-FIGHTING MEASURES**

## **Extinguishing Media**

## **Suitable Extinguishing Media**

Water mist, foam, dry chemical or carbon dioxide (CO2).

## **Specific Hazards Arising from the Product**

Not sensitive to static discharge.

## **Special Protective Equipment and Precautions for Fire-fighters**

Self-contained breathing apparatus and protective clothing must be worn in case of fire. If possible, prevent runoff from entering storm sewers, water bodies or other environmentally sensitive areas.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

## Personal Precautions, Protective Equipment, and Emergency Procedures

Place spilled material (dust) in a container for disposal. Dispose of all waste according to federal, state, provincial or local laws.

#### **Environmental Precautions**

No special precautions are necessary.

## **SECTION 7. HANDLING AND STORAGE**

## **Precautions for Safe Handling**

No special handling precautions are necessary. It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

## **Conditions for Safe Storage**

Store in a cool, dry place away from direct sunlight to maximize shelf life.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control Parameters**

|                      | ACGIH 1     | ACGIH TLV® |           | OSHA PEL |          | VEEL |
|----------------------|-------------|------------|-----------|----------|----------|------|
| Chemical Name        | TWA         | STEL       | TWA       | Ceiling  | 8-hr TWA | TWA  |
| Aluminum Silicate    | 2 mg/m3     |            | 15 mg/m3  |          |          |      |
| Calcium Metasilicate | 15 mg/m3    |            | 5 mg/m3   |          |          |      |
| Crystalline Silica   | 0.025 mg/m3 |            | 10 mg/m3  |          |          |      |
| Zinc oxide           | 10 mg/m3    |            | 15 mg/m3  |          |          |      |
| Carbon black         | 3.5 mg/m3   |            | 3.5 mg/m3 |          |          |      |

#### **Appropriate Engineering Controls**

General ventilation is usually adequate. If dust or fumes are generated during use, use local exhaust in combination with general ventilation as necessary to remove fumes/dust from the worker's breathing zone and to ensure exposures do not exceed applicable limits.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### **Skin Protection**

Not required, if used as directed. Wear chemical protective clothing e.g. gloves, aprons, boots.

#### **Respiratory Protection**

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Not normally required if product is used as directed. Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Basic Physical and Chemical Properties** 

Odour Not available pH Not applicable

Melting Point/Freezing Point Not available (melting)

Initial Boiling Point/Range

Evaporation Rate

Vapour Pressure

Vapour Density (air = 1)

Relative Density (water = 1)

Not available

Not available

1.2 - 1.8

**Solubility** Insoluble in water

Other Information

Physical State Solid

## **SECTION 10. STABILITY AND REACTIVITY**

#### Reactivity

Not reactive under normal conditions of use.

#### **Conditions to Avoid**

High temperatures. Open flames, sparks, static discharge, heat and other ignition sources.

## **Incompatible Materials**

Oxidizing agents (e.g. peroxides), reducing agents (e.g. hydroquinone).

## **Hazardous Decomposition Products**

Carbon monoxide. Hydrogen cyanide and hydrogen chloride in small amounts.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Skin Corrosion/Irritation

Contact with this product may irritate exposed skin and non-irritating skin eyes, but it is recommended to wash the skin after use.

## **Reproductive Toxicity**

#### **Development of Offspring**

No information was located.

## **SECTION 12. ECOLOGICAL INFORMATION**

## **Ecotoxicity**

No information was located.

## Persistence and Degradability

No specific data available for this product; however this product is not expected to be readily biodegradable.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

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#### SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

**Special Precautions** Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

#### Safety, Health and Environmental Regulations

#### Canada

#### WHMIS 1988 Classification

Not a WHMIS controlled product.

#### **CEPA - National Pollutant Release Inventory (NPRI)**

No components of this product are listed as CEPA priority substances.

#### **USA**

## Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

## Additional USA Regulatory Lists

This product does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) of the reporting levels established by SARA Title III, Section 313.

## **SECTION 16. OTHER INFORMATION**

Date of Preparation

March 20, 2017

**Disclaimer** 

The information provided in this SDS is correct and to the best of our knowledge at the date of its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the material used in any other combination or process unless specified in the text.

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## **Durlon® 7760**

#### **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 7760

Product Family Compressed Non Asbestos

Manufacturer Durabla Canada Ltd., 293 University Avenue

PO Box 696, Belleville, ON

Supplier Identifier Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0043

**Date of Preparation** May 31, 2017

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name     | CAS No.   | %     | Other Identifiers | Other Names |
|-------------------|-----------|-------|-------------------|-------------|
| Aluminum Silicate | 1332-58-7 | 40-60 |                   |             |

#### **Notes**

This product consists of a trade secret formulation comprised of a combination of synthetic rubber binder systems and other fillers such as celluose, glass, mineral fibres and domestic grade inert clay. This product formulation does not contain asbestos.

## **SECTION 4. FIRST-AID MEASURES**

#### First-aid Measures

#### Inhalation

Move to fresh air.

#### **Skin Contact**

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

## Ingestion

Get medical advice or attention if you feel unwell or are concerned.

#### **First-aid Comments**

If irritation occurs or persists from any route of exposure, discontinue use immediately and consult physician. Bring

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## **SECTION 5. FIRE-FIGHTING MEASURES**

## **Extinguishing Media**

## Suitable Extinguishing Media

Water mist, foam, dry chemical or carbon dioxide (CO2).

## **Specific Hazards Arising from the Product**

Not sensitive to static discharge.

## **Special Protective Equipment and Precautions for Fire-fighters**

Self-contained breathing apparatus and protective clothing must be worn in case of fire. If possible, prevent runoff from entering storm sewers, water bodies or other environmentally sensitive areas.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

## Personal Precautions, Protective Equipment, and Emergency Procedures

Place spilled material (dust) in a container for disposal. Dispose of all waste according to federal, state, provincial or local laws.

#### **Environmental Precautions**

No special precautions are necessary.

## **SECTION 7. HANDLING AND STORAGE**

## **Precautions for Safe Handling**

No special handling precautions are necessary. It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

## **Conditions for Safe Storage**

Store in a cool, dry place away from direct sunlight to maximize shelf life.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control Parameters**

|                   | ACGIH TLV® |      | OSHA PEL |         | AIHA WEEL |     |
|-------------------|------------|------|----------|---------|-----------|-----|
| Chemical Name     | TWA        | STEL | TWA      | Ceiling | 8-hr TWA  | TWA |
| Aluminum Silicate | 2 mg/m3    |      | 15 mg/m3 |         |           |     |

OSHA PEL = 0.1 mg/m3 (Respirable dust at crystalline silica)

ACGIH TLV = 0.1 mg/m3 (Respirable dust at crystalline silica)

#### **Appropriate Engineering Controls**

General ventilation is usually adequate. If dust or fumes are generated during use, use local exhaust in combination with general ventilation as necessary to remove fumes/dust from the worker's breathing zone and to ensure exposures do not exceed applicable limits.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### **Skin Protection**

Not required, if used as directed. Wear chemical protective clothing e.g. gloves, aprons, boots.

## **Respiratory Protection**

Not normally required if product is used as directed. Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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## **Basic Physical and Chemical Properties**

Appearance Tan.

Odour Not available pH Not applicable

Melting Point/Freezing Point Not available (melting)

Initial Boiling Point/Range

Evaporation Rate

Vapour Pressure

Vapour Density (air = 1)

Relative Density (water = 1)

Not available

1.2 - 1.8

**Solubility** Insoluble in water

Other Information

Physical State Solid

## **SECTION 10. STABILITY AND REACTIVITY**

## Reactivity

Not reactive under normal conditions of use.

#### **Conditions to Avoid**

High temperatures. Open flames, sparks, static discharge, heat and other ignition sources.

## **Incompatible Materials**

See chemical resistance chart.

## **Hazardous Decomposition Products**

Carbon monoxide. Hydrogen cyanide and hydrogen chloride in small amounts. In the cause of thermal decomposition at temperatures above 250°C (482°F), toxic gases and vapours may occur.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

## **Likely Routes of Exposure**

Inhalation.

## **Acute Toxicity**

The LD50 is greater than 5.0 g/kg of body weight

The LD50 is greater than 2.0 g/kg of body weight.

## Skin Corrosion/Irritation

Contact with this product may irritate exposed skin and non-irritating skin eyes, but it is recommended to wash the skin after use.

#### Serious Eye Damage/Irritation

The compound is non-irritant and non-corrosive.

## STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Dust exposure is excess of the TLV is not expected since the materials are primarily bound in the product.

## **Skin Absorption**

No information was located.

#### Ingestion

Consult physician if necessary.

## Carcinogenicity

Known human carcinogen. A1 – Confirmed human carcinogen.

NTP has classified repirable crystalline silica as a probable carcinogen. IARC has established a 1 classification to

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crystalline silica as a known carcinogen to humans.

#### **Reproductive Toxicity**

## **Development of Offspring**

No information was located.

## **SECTION 12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

No information was located.

## **Persistence and Degradability**

No specific data available for this product; however this product is not expected to be readily biodegradable.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

## **SECTION 14. TRANSPORT INFORMATION**

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

## Safety, Health and Environmental Regulations

N/A.

## Canada

#### WHMIS 1988 Classification

Not a WHMIS controlled product.

**CEPA - National Pollutant Release Inventory (NPRI)** 

No components of this product are listed as CEPA priority substances.

## **SECTION 16. OTHER INFORMATION**

NFPA Rating Health - 1 Flammability - 1
SDS Prepared By Triangle Fluid Controls Ltd.

**Phone No.** 613-968-1100 **Date of Preparation** May 31, 2017

**Disclaimer**The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

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material used in any other combination or process unless specified in the text.

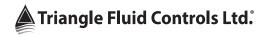
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## Durlon® 9000

#### **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 9000

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0011

**Date of Preparation** March 07, 2017

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name           | CAS No.    | %       | Other Identifiers |
|-------------------------|------------|---------|-------------------|
| Polytetrafluoroethylene | 9002-84-0  | 70-80   |                   |
| Fibrous glass           | 65997-17-3 | 20-30   |                   |
| C.I. Pigment Blue 28    | 1345-16-0  | 0.1-1.5 |                   |
|                         |            |         |                   |

## **SECTION 4. FIRST-AID MEASURES**

#### **First-aid Measures**

#### Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

## **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

## Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

#### **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

#### Most Important Symptoms and Effects, Acute and Delayed

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If in eyes: may cause mild irritation.

## SECTION 5. FIRE-FIGHTING MEASURES

## **Extinguishing Media**

## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

## **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

## **Special Protective Equipment and Precautions for Fire-fighters**

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

## Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

#### **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

#### **SECTION 7. HANDLING AND STORAGE**

## **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

#### **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Control Parameters**

|                      | ACGIH      | ACGIH TLV® |     | OSHA PEL |          | AIHA WEEL |  |
|----------------------|------------|------------|-----|----------|----------|-----------|--|
| Chemical Name        | TWA        | STEL       | TWA | Ceiling  | 8-hr TWA | TWA       |  |
| Fibrous glass        | 5 mg/m3 ** |            |     |          |          |           |  |
| C.I. Pigment Blue 28 | 0.02 mg/m3 |            |     |          |          |           |  |

## **Appropriate Engineering Controls**

General ventilation is usually adequate.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

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#### Skin Protection

If material is being handled when hot, use heat resistant gloves.

## **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

## **Basic Physical and Chemical Properties**

Appearance Blue.

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

Upper/Lower Flammability or

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

Vapour Pressure
Not available
Vapour Density (air = 1)
Relative Density (water = 1)
Not available
Not available
Insoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State Solid

Electrical Conductivity

Vapour Pressure at 50 deg C

Not available

Not available

## **SECTION 10. STABILITY AND REACTIVITY**

#### Reactivity

Not reactive under normal conditions of use.

## **Chemical Stability**

Normally stable.

## **Possibility of Hazardous Reactions**

None expected under normal conditions of storage and use.

#### **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

#### **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium alloy), fluorine, chlorine trifluoride, strong fluorinating agents and sodium hydroxide (reacts above 300°C/572°F).

#### **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned. Amounts will vary depending on the specific conditions.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

Product Identifier: Durlon® 9000

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## Likely Routes of Exposure

Inhalation; eye contact; ingestion.

#### Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

#### Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

## Carcinogenicity

Group 2B - Possibly carcinogenic to humans.

IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans (Group 2B, monograph 52). Cobalt Aluminate Blue Spinel pigment is the result of high temperature calcinations of the component substances. Due to its unique crystalline structure the properties of the finished pigment do not necessarily reflect the properties of the component metals or oxides.

Key to Abbreviations

Group 2B = Possibly carcinogenic to humans.

#### SECTION 12. ECOLOGICAL INFORMATION

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

#### Persistence and Degradability

No data available.

#### **Bioaccumulative Potential**

No data available.

## **Mobility in Soil**

No data available.

#### **Other Adverse Effects**

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

#### SECTION 13. DISPOSAL CONSIDERATIONS

#### **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

## **SECTION 14. TRANSPORT INFORMATION**

Product Identifier: Durlon® 9000

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Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |
|------------|--------|----------------------|-------------------------------|------------------|
|            |        |                      |                               |                  |

**Special Precautions** Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

#### Safety, Health and Environmental Regulations

## Canada

#### WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

#### **USA**

## **Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

## **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

Phone No. 613-968-1100

Date of Preparation March 07, 2017

Date of Last Revision March 07, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® 9000

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## **Durlon® 9000N**

## **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 9000N

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0017

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name           | CAS No.    | %     | Other Identifiers |
|-------------------------|------------|-------|-------------------|
| Polytetrafluoroethylene | 9002-84-0  | 70-80 |                   |
| Fibrous glass           | 65997-17-3 | 20-30 |                   |

## **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

## Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

## **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

#### **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

#### Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

## **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

## Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause mild irritation.

Product Identifier: Durlon® 9000N

SDS No.: 0017 Page 01 of 05

#### SECTION 5. FIRE-FIGHTING MEASURES

## **Extinguishing Media**

## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

## **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

## **Special Protective Equipment and Precautions for Fire-fighters**

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

#### Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

#### **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

## **SECTION 7. HANDLING AND STORAGE**

#### **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

## **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control Parameters**

|               | ACGIH TLV® |      | OSHA PEL |         | AIHA WEEL |     |
|---------------|------------|------|----------|---------|-----------|-----|
| Chemical Name | TWA        | STEL | TWA      | Ceiling | 8-hr TWA  | TWA |
| Fibrous glass | 5 mg/m3 ** |      |          |         |           |     |

#### **Appropriate Engineering Controls**

General ventilation is usually adequate.

## **Individual Protection Measures**

#### **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### **Skin Protection**

If material is being handled when hot, use heat resistant gloves.

## **Respiratory Protection**

Product Identifier: Durlon® 9000N

SDS No.: 0017 Page 02 of 05

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Basic Physical and Chemical Properties** 

Appearance White.

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

**Upper/Lower Flammability or** 

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

Vapour PressureNot availableVapour Density (air = 1)Not availableRelative Density (water = 1)Not availableSolubilityInsoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State Solid

Electrical Conductivity

Not available

Vapour Pressure at 50 deg C

Not available

## **SECTION 10. STABILITY AND REACTIVITY**

#### Reactivity

Not reactive under normal conditions of use.

#### **Chemical Stability**

Normally stable.

## **Possibility of Hazardous Reactions**

None expected under normal conditions of storage and use.

#### **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

#### **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium alloy), fluorine, chlorine trifluoride, strong fluorinating agents and sodium hydroxide (reacts above 300°C/572°F).

#### **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned. Amounts will vary depending on the specific conditions.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

#### **Likely Routes of Exposure**

Inhalation; eye contact; ingestion.

#### Skin Corrosion/Irritation

Product Identifier: Durlon® 9000N

SDS No.: 0017 Page 03 of 05

Not a skin irritant, but washing the skin after use is advisable.

## Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

#### Ingestion

No information was located.

## **SECTION 12. ECOLOGICAL INFORMATION**

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

## Persistence and Degradability

No data available.

#### **Bioaccumulative Potential**

No data available.

#### **Mobility in Soil**

No data available.

#### Other Adverse Effects

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

## **SECTION 14. TRANSPORT INFORMATION**

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |  |
|------------|--------|----------------------|-------------------------------|------------------|--|
|            |        |                      |                               |                  |  |

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Product Identifier: Durlon® 9000N

SDS No.: 0017 Page 04 of 05

#### **SECTION 15. REGULATORY INFORMATION**

## Safety, Health and Environmental Regulations

#### Canada

#### WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

#### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

#### **USA**

## **Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

## **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

**Phone No.** 613-968-1100 **Date of Last Revision** March 07, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® 9000N

SDS No.: 0017 Page 05 of 05







## Durlon® 9002

#### **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 9002

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0020

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name           | CAS No.    | %       | Other Identifiers |
|-------------------------|------------|---------|-------------------|
| Polytetrafluoroethylene | 9002-84-0  | 70-80   |                   |
| Fibrous glass           | 65997-17-3 | 20-30   |                   |
| C.I. Pigment Blue 28    | 1345-16-0  | 0.1-1.5 |                   |
|                         |            |         |                   |

## **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

#### Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

#### **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

#### Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

## **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

## Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause mild irritation.

Product Identifier: Durlon® 9002

SDS No.: 0020 Page 01 of 05

## SECTION 5. FIRE-FIGHTING MEASURES

## **Extinguishing Media**

## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

## Specific Hazards Arising from the Product

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

## Special Protective Equipment and Precautions for Fire-fighters

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

## Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

#### **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

## **SECTION 7. HANDLING AND STORAGE**

#### **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

## **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control Parameters**

|                      | ACGIH '    | ACGIH TLV® |     | OSHA PEL |          | AIHA WEEL |  |
|----------------------|------------|------------|-----|----------|----------|-----------|--|
| Chemical Name        | TWA        | STEL       | TWA | Ceiling  | 8-hr TWA | TWA       |  |
| Fibrous glass        | 5 mg/m3 ** |            |     |          |          |           |  |
| C.I. Pigment Blue 28 | 0.02 mg/m3 |            |     |          |          |           |  |

## **Appropriate Engineering Controls**

General ventilation is usually adequate.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### **Skin Protection**

If material is being handled when hot, use heat resistant gloves.

Product Identifier: Durlon® 9002

SDS No.: 0020 Page 02 of 05

## **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Basic Physical and Chemical Properties** 

Appearance Blue.

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

**Upper/Lower Flammability or** 

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

Vapour PressureNot availableVapour Density (air = 1)Not availableRelative Density (water = 1)Not availableSolubilityInsoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State Solid

Electrical Conductivity

Not available

Vapour Pressure at 50 deg C

Not available

## **SECTION 10. STABILITY AND REACTIVITY**

#### Reactivity

Not reactive under normal conditions of use.

## **Chemical Stability**

Normally stable.

#### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

#### **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

## **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium alloy), fluorine, chlorine trifluoride, strong fluorinating agents and sodium hydroxide (reacts above 300°C/572°F).

## **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned. Amounts will vary depending on the specific conditions.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

## **Likely Routes of Exposure**

Inhalation; eye contact; ingestion.

Product Identifier: Durlon® 9002

SDS No.: 0020 Page 03 of 05

#### Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

## Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

## Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

## Carcinogenicity

Group 2B - Possibly carcinogenic to humans.

IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans (Group 2B, monograph 52). Cobalt Aluminate Blue Spinel pigment is the result of high temperature calcinations of the component substances. Due to its unique crystalline structure the properties of the finished pigment do not necessarily reflect the properties of the component metals or oxides.

Key to Abbreviations

Group 2B = Possibly carcinogenic to humans.

## **SECTION 12. ECOLOGICAL INFORMATION**

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

#### Persistence and Degradability

No data available.

#### **Bioaccumulative Potential**

No data available.

## **Mobility in Soil**

No data available.

## **Other Adverse Effects**

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

## **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

#### SECTION 14. TRANSPORT INFORMATION

Product Identifier: Durlon® 9002

SDS No.: 0020 Page 04 of 05

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |
|------------|--------|----------------------|-------------------------------|------------------|
|            |        |                      |                               |                  |

**Special Precautions** Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

#### Safety, Health and Environmental Regulations

#### Canada

#### WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

#### **USA**

## **Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

## **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

Phone No. 613-968-1100 **Date of Last Revision** March 07, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

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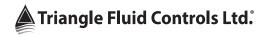
material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® 9002

SDS No.: 0020 Page 05 of 05







## Durlon® 9007

## **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 9007

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0021

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

## **Label Elements**

Not applicable

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name           | CAS No.    | %       | Other Identifiers |
|-------------------------|------------|---------|-------------------|
| Polytetrafluoroethylene | 9002-84-0  | 70-80   |                   |
| Fibrous glass           | 65997-17-3 | 20-30   |                   |
| C.I. Pigment Blue 28    | 1345-16-0  | 0.1-1.5 |                   |
|                         |            |         |                   |

## **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

#### Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

#### **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

#### Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

## **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

## Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause mild irritation.

Product Identifier: Durlon® 9007

SDS No.: 0021 Page 01 of 05

## SECTION 5. FIRE-FIGHTING MEASURES

## **Extinguishing Media**

## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

## Specific Hazards Arising from the Product

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

## **Special Protective Equipment and Precautions for Fire-fighters**

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

#### Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

#### **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

## **SECTION 7. HANDLING AND STORAGE**

#### **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

## **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control Parameters**

|                      | ACGIH '    | ACGIH TLV® |     | OSHA PEL |          | AIHA WEEL |  |
|----------------------|------------|------------|-----|----------|----------|-----------|--|
| Chemical Name        | TWA        | STEL       | TWA | Ceiling  | 8-hr TWA | TWA       |  |
| Fibrous glass        | 5 mg/m3 ** |            |     |          |          |           |  |
| C.I. Pigment Blue 28 | 0.02 mg/m3 |            |     |          |          |           |  |

## **Appropriate Engineering Controls**

General ventilation is usually adequate.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### **Skin Protection**

If material is being handled when hot, use heat resistant gloves.

Product Identifier: Durlon® 9007

SDS No.: 0021 Page 02 of 05

## **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Basic Physical and Chemical Properties** 

Appearance Blue.

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

**Upper/Lower Flammability or** 

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

Vapour PressureNot availableVapour Density (air = 1)Not availableRelative Density (water = 1)Not availableSolubilityInsoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State Solid

Electrical Conductivity

Not available

Vapour Pressure at 50 deg C

Not available

## **SECTION 10. STABILITY AND REACTIVITY**

#### Reactivity

Not reactive under normal conditions of use.

## **Chemical Stability**

Normally stable.

#### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

#### **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

## **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium alloy), fluorine, chlorine trifluoride, strong fluorinating agents and sodium hydroxide (reacts above 300°C/572°F).

## **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned. Amounts will vary depending on the specific conditions.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

## **Likely Routes of Exposure**

Inhalation; eye contact; ingestion.

Product Identifier: Durlon® 9007

SDS No.: 0021 Page 03 of 05

#### Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

## Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

## Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

## Carcinogenicity

Group 2B - Possibly carcinogenic to humans.

IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans (Group 2B, monograph 52). Cobalt Aluminate Blue Spinel pigment is the result of high temperature calcinations of the component substances. Due to its unique crystalline structure the properties of the finished pigment do not necessarily reflect the properties of the component metals or oxides.

Key to Abbreviations

Group 2B = Possibly carcinogenic to humans.

## **SECTION 12. ECOLOGICAL INFORMATION**

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

#### Persistence and Degradability

No data available.

#### **Bioaccumulative Potential**

No data available.

## **Mobility in Soil**

No data available.

## **Other Adverse Effects**

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

## **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

#### SECTION 14. TRANSPORT INFORMATION

Product Identifier: Durlon® 9007

SDS No.: 0021 Page 04 of 05

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |
|------------|--------|----------------------|-------------------------------|------------------|
|            |        |                      |                               |                  |

**Special Precautions** Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

#### Safety, Health and Environmental Regulations

#### Canada

#### WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

#### **USA**

## **Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

## **SECTION 16. OTHER INFORMATION**

**SDS Prepared By** Triangle Fluid Controls Ltd.

Phone No. 613-968-1100 Date of Last Revision March 07, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier:

0021 SDS No.: Page 05 of 05

Date of Preparation:



Durlon® 9007





## Durlon® 9200

#### **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 9200

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0019

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### Mixture:

| Chemical Name           | CAS No.   | %     | Other Identifiers |
|-------------------------|-----------|-------|-------------------|
| Polytetrafluoroethylene | 9002-84-0 | 60-70 |                   |
| Barium sulfate          | 7727-43-7 | 30-40 |                   |

## **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

## Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

#### **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

#### **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

#### Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

## **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

## Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause mild irritation.

Product Identifier: Durlon® 9200

SDS No.: 0019 Page 01 of 05

#### SECTION 5. FIRE-FIGHTING MEASURES

## **Extinguishing Media**

## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

## **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

## **Special Protective Equipment and Precautions for Fire-fighters**

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

## Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

#### **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

## **SECTION 7. HANDLING AND STORAGE**

#### **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

#### **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Appropriate Engineering Controls**

General ventilation is usually adequate.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

## **Skin Protection**

If material is being handled when hot, use heat resistant gloves.

## **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

## **Basic Physical and Chemical Properties**

Appearance White.

Product Identifier: Durlon® 9200

SDS No.: 0019 Page 02 of 05

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

**Upper/Lower Flammability or** 

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

Vapour PressureNot availableVapour Density (air = 1)Not availableRelative Density (water = 1)Not availableSolubilityInsoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State Solid

Electrical Conductivity

Not available

Vapour Pressure at 50 deg C

Not available

## **SECTION 10. STABILITY AND REACTIVITY**

## Reactivity

Not reactive under normal conditions of use.

## **Chemical Stability**

Normally stable.

## **Possibility of Hazardous Reactions**

None expected under normal conditions of storage and use.

#### **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

## **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium alloy), fluorine, chlorine trifluoride, strong fluorinating agents and sodium hydroxide (reacts above 300°C/572°F).

#### **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned. Amounts will vary depending on the specific conditions.

#### SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

#### **Likely Routes of Exposure**

Inhalation; eye contact; ingestion.

#### Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

## Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Product Identifier: Durlon® 9200

SDS No.: 0019 Page 03 of 05

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

#### Ingestion

Not harmful.

## **Aspiration Hazard**

No information was located.

#### Respiratory and/or Skin Sensitization

Not a respiratory sensitizer.

#### Carcinogenicity

Not classifiable as a carcinogen to humans.

## **Reproductive Toxicity**

#### **Development of Offspring**

This product is not known to cause reproductive or developmental effects.

## **Germ Cell Mutagenicity**

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

## Persistence and Degradability

No data available.

#### **Bioaccumulative Potential**

No data available.

#### **Mobility in Soil**

No data available.

#### Other Adverse Effects

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

#### **SECTION 14. TRANSPORT INFORMATION**

Product Identifier: Durlon® 9200

SDS No.: 0019 Page 04 of 05

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |
|------------|--------|----------------------|-------------------------------|------------------|
|            |        |                      |                               |                  |

**Special Precautions** Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

## Safety, Health and Environmental Regulations

## Canada

#### WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

## Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL. Not listed on the NDSL.

#### **USA**

## **Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

## **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

Phone No. 613-968-1100 **Date of Last Revision** March 07, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® 9200

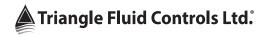
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SDS No.:

0048



## Durlon® 9400

#### **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 9400

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0048

**Date of Preparation** May 31, 2017

## **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### Mixture:

| Chemical Name              | CAS No.    | %     | Other Identifiers | Other Names   |
|----------------------------|------------|-------|-------------------|---------------|
| Polytetrafluoroethylene    | 9002-84-0  | 70-80 |                   | PTFE          |
| Coke (petroleum), calcined | 64743-05-1 | 20-30 |                   | Carbon Powder |

## **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

#### Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

#### **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

## Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

#### **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

## Most Important Symptoms and Effects, Acute and Delayed

Product Identifier: Durlon® 9400 - Ver. 1

Date of Preparation: May 31, 2017

Date of Last Revision: Page 01 of 05

If in eyes: may cause mild irritation.

## **SECTION 5. FIRE-FIGHTING MEASURES**

## **Extinguishing Media**

## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

## **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

## **Special Protective Equipment and Precautions for Fire-fighters**

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

## Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

#### **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

## **SECTION 7. HANDLING AND STORAGE**

## **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

#### **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### **Appropriate Engineering Controls**

General ventilation is usually adequate.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### **Skin Protection**

If material is being handled when hot, use heat resistant gloves.

## **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

Product Identifier: Durlon® 9400 - Ver. 1 SDS No.: 0048

Date of Preparation: May 31, 2017

Date of Last Revision: Page 02 of 05

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

## **Basic Physical and Chemical Properties**

Appearance Black.

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

**Upper/Lower Flammability or** 

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

Vapour PressureNot availableVapour Density (air = 1)Not availableRelative Density (water = 1)Not available

**Solubility** Insoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

**Other Information** 

Physical State Solid

Electrical Conductivity

Not available

Vapour Pressure at 50 deg C

Not available

## **SECTION 10. STABILITY AND REACTIVITY**

#### Reactivity

Not reactive under normal conditions of use.

#### **Chemical Stability**

Normally stable.

## Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

## **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

#### **Hazardous Decomposition Products**

Thermal decomposition of product above 300°C (572°F), can create Carbonyl fluoride, which combines with air and moisture and hdrolyses to Hydrogen Fluoride and Carbon Dioxide. Other PTFE degradation products include; perfluoroisobutylene, tetrafluoroethylene, hexafluoropropylene, carbon monoxide and trifluoromethane.

#### SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

## Likely Routes of Exposure

Inhalation; eye contact; ingestion.

## Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

#### Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

Product Identifier: Durlon® 9400 - Ver. 1 SDS No.: 0048

Date of Preparation: May 31, 2017

Date of Last Revision: Page 03 of 05

#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

#### Ingestion

Not harmful.

# **Aspiration Hazard**

No information was located.

# Respiratory and/or Skin Sensitization

Not a respiratory sensitizer.

# Carcinogenicity

Not classifiable as a carcinogen to humans.

# **Reproductive Toxicity**

## **Development of Offspring**

This product is not known to cause reproductive or developmental effects.

# **Germ Cell Mutagenicity**

No information was located.

# **SECTION 12. ECOLOGICAL INFORMATION**

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

## Persistence and Degradability

No data available.

### **Bioaccumulative Potential**

No data available.

# **Mobility in Soil**

No data available.

# Other Adverse Effects

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

# **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

## SECTION 14. TRANSPORT INFORMATION

Product Identifier: Durlon® 9400 - Ver. 1 SDS No.: 0048

Date of Preparation: May 31, 2017

Date of Last Revision: Page 04 of 05

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |
|------------|--------|----------------------|-------------------------------|------------------|
|            |        |                      |                               |                  |

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

# **SECTION 15. REGULATORY INFORMATION**

## Safety, Health and Environmental Regulations

#### Canada

#### WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

# Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL. Not listed on the NDSL.

#### **USA**

# Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

# **SECTION 16. OTHER INFORMATION**

NFPA Rating Health - 2 Flammability - 1 Instability - 0

SDS Prepared By Triangle Fluid Controls Ltd.

**Phone No.** 613-968-1100 **Date of Preparation** May 31, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® 9400 - Ver. 1 SDS No.: 0048

Date of Preparation: May 31, 2017

Date of Last Revision: Page 05 of 05



SDS No.:

0039



# Durlon® 9600, Durlon® Joint Sealant

## **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® 9600, Durlon® Joint Sealant

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 316°C (600°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0039

**Date of Preparation** May 31, 2017

# **SECTION 2. HAZARD IDENTIFICATION**

## Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name           | CAS No.   | %   | Other Identifiers | Other Names |
|-------------------------|-----------|-----|-------------------|-------------|
| Polytetrafluoroethylene | 9002-84-0 | 100 |                   |             |

### Notes

For Durlon® Joint Sealant, PSA is not considered as a hazardous material in normal use as defined in 29 CFR 1910.1200 and is composed of ;ess tjam 10% of the end product.

## **SECTION 4. FIRST-AID MEASURES**

# **First-aid Measures**

## Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

# **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

# Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

# **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

Product Identifier: Durlon® 9600, Durlon® Joint Sealant - Ver. 1

Date of Preparation: May 31, 2017

Date of Last Revision: May 31, 2017 Page 01 of 05

## Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause mild irritation.

# SECTION 5. FIRE-FIGHTING MEASURES

# **Extinguishing Media**

# Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

# **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

# **Special Protective Equipment and Precautions for Fire-fighters**

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

# **SECTION 6. ACCIDENTAL RELEASE MEASURES**

## Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material. See section 4 for further information.

## **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

# **SECTION 7. HANDLING AND STORAGE**

# **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

#### **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

# SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# **Appropriate Engineering Controls**

General ventilation is usually adequate.

## **Individual Protection Measures**

# **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

### **Skin Protection**

If material is being handled when hot, use heat resistant gloves.

## **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

Product Identifier: Durlon® 9600, Durlon® Joint Sealant - Ver. 1 SDS No.: 0039

Date of Preparation: May 31, 2017

Date of Last Revision: May 31, 2017 Page 02 of 05

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# **Basic Physical and Chemical Properties**

Appearance White.

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

**Upper/Lower Flammability or** 

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

Vapour PressureNot availableVapour Density (air = 1)Not availableRelative Density (water = 1)Not availableSolubilityInsoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

**Other Information** 

Physical State Solid

Electrical Conductivity

Not available

Vapour Pressure at 50 deg C

Not available

# **SECTION 10. STABILITY AND REACTIVITY**

## Reactivity

Not reactive under normal conditions of use.

#### **Chemical Stability**

Normally stable.

# Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

# **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

# **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium alloy), fluorine, chlorine trifluoride, strong fluorinating agents and sodium hydroxide (reacts above 300°C/572°F).

# **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned. Amounts will vary depending on the specific conditions.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

## **Likely Routes of Exposure**

Inhalation; eye contact; ingestion.

# Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

# Serious Eye Damage/Irritation

Product Identifier: Durlon® 9600, Durlon® Joint Sealant - Ver. 1 SDS No.: 0039

Date of Preparation: May 31, 2017

Date of Last Revision: May 31, 2017 Page 03 of 05

Rinse with water. Get medical attention if irritation is observed.

# STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

## Ingestion

No information was located.

# **SECTION 12. ECOLOGICAL INFORMATION**

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

# Persistence and Degradability

No data available.

#### **Bioaccumulative Potential**

No data available.

#### **Mobility in Soil**

No data available.

## **Other Adverse Effects**

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

# **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

# **SECTION 14. TRANSPORT INFORMATION**

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |
|------------|--------|----------------------|-------------------------------|------------------|
|            |        |                      |                               |                  |

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

# **SECTION 15. REGULATORY INFORMATION**

# Safety, Health and Environmental Regulations

Product Identifier: Durlon® 9600, Durlon® Joint Sealant - Ver. 1 SDS No.: 0039

Date of Preparation: May 31, 2017

Date of Last Revision: May 31, 2017 Page 04 of 05

#### Canada

## WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

# Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

## **USA**

# **Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

# **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

Phone No. 613-968-1100

Date of Preparation May 31, 2017

Date of Last Revision May 31, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® 9600, Durlon® Joint Sealant - Ver. 1

Date of Preparation: May 31, 2017

Date of Last Revision: May 31, 2017 Page 05 of 05

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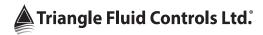
SDS No.:





SDS No.:

0041



# **Durlon® Flexible Graphite**

# **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® Flexible Graphite

Product Family Semi-Metallic

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0041

# **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

## **Label Elements**

Not applicable

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name      | CAS No.    | %    | Other Identifiers | Other Names |
|--------------------|------------|------|-------------------|-------------|
| Graphite           | 7727-42-5  | >95  |                   |             |
| Crystalline Silica | 14808-60-7 | <0.8 |                   |             |

#### **Notes**

Product grades: FGS95, FGL316, FGT316 & FGM316 available in sheets, rolls or gaskets.

# **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

#### Inhalation

Do not breathe dust. If exposed to high levels of dust, remove to fresh air. rinmk water and clear throat. Blow nose to clear dust.

## **Skin Contact**

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice or attention if you feel unwell or are concerned.

#### **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open.

## Ingestion

Give large quantities of water. Get medical advice or attention if you feel unwell or are concerned.

# **Immediate Medical Attention and Special Treatment**

## **Special Instructions**

Treat symptomatically.

Product Identifier: Durlon® Flexible Graphite - Ver. 1

Date of Preparation: May 31, 2017

Date of Last Revision: Page 01 of 04

## SECTION 5. FIRE-FIGHTING MEASURES

## **Extinguishing Media**

## Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Water fog, foam, dry chemical powder or carbon dioxide (CO2).

# **Specific Hazards Arising from the Product**

Compositions of by-products from the result of fire will vary depending on the specific conditions. Hazardous gases and vapour include dense smoke and carbon monoxide. There may be others unknown to us.

## Special Protective Equipment and Precautions for Fire-fighters

Self-contained breathing devices and protective clothing must be worn in case of fire.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

## Personal Precautions, Protective Equipment, and Emergency Procedures

No special precautions are necessary. Place spilled material (dust) in a container for disposal. Dispose of all wastes in accordance with federal, provincial, state or local laws.

## **Environmental Precautions**

No special precautions are necessary. It is good practice to prevent releases into the environment.

# **SECTION 7. HANDLING AND STORAGE**

## Precautions for Safe Handling

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Dust should be gathered by wet wiping or vacuuming with HEPA filtration equpped vacuum cleaners. Do not dry sweep or blow dust with compressed air. Graphite dusts are electrically conductive and accumulation of dust may cause shorting of electric circuits and switches. Personnel involved with handling this product should be wearing appropriate personal protective equipment as outlined in section 8.

# **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity).

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Control Parameters**

|               | ACGIH TLV® |      | OSHA PEL |         | AIHA WEEL |     |
|---------------|------------|------|----------|---------|-----------|-----|
| Chemical Name | TWA        | STEL | TWA      | Ceiling | 8-hr TWA  | TWA |
| Graphite      | 5 mg/m3    |      |          |         |           |     |

US ACGIH Threshold Limit Values

Graphite (CAS 7782-42-5)

TWA - 2 mg/m3, respirable fraction

Crystalline Silica (CAS 14808-60-7) TWA - 0.025 mg/m3, respirable fraction

# **Appropriate Engineering Controls**

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

# **Individual Protection Measures**

#### **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

## **Skin Protection**

Protective gloves are recommended when handling.

# **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

Product Identifier: Durlon® Flexible Graphite - Ver. 1 SDS No.: 0041

Date of Preparation: May 31, 2017

Date of Last Revision: Page 02 of 04

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# **Basic Physical and Chemical Properties**

AppearanceBlack powder.OdourNot applicable

Melting Point/Freezing Point Not applicable (melting); Not applicable (freezing)

Vapour Pressure Not applicable
Relative Density (water = 1) 0.8 - 1.8

**Solubility** Insoluble in water

**Other Information** 

Physical State Solid

# **SECTION 10. STABILITY AND REACTIVITY**

## Reactivity

Not reactive under normal conditions of use.

# **Chemical Stability**

Normally stable.

## **Conditions to Avoid**

Avoid contact with highly concentrated acids. Dust is combustable, avoid sources of ignition and strong oxidizing agents. This product should not be used in oxidizing environments.

## **Incompatible Materials**

Oxidizing agents (e.g. peroxides), reducing agents (e.g. hydroquinone).

# **Hazardous Decomposition Products**

By-products from the result of a fire will vary depending on the specific conditions. Hazardous gases/vapours may include dense smoke and carbon monoxide. There may be others unknown to us.

## SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

## **Acute Toxicity**

LD50 (Oral) >10,000 mg/kg (Rat)

# Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

# Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

Prolonged and repeated overexposure to dust can lead to pneumoconiosis. Prolonged exposure is associated with lung cancer. Crystalline silica: Overexposure to the respirable dist of crystalline silica (quartz of crostobalite, less than or equal to 5 microns in size) may lead to silicosis in humans, which is a progressive and irreversible lung disease.

# Carcinogenicity

(Crystalline Silica) Has been classified by IARC, NTP and ACGIH as a known human carcinogen and suspected human carcinogen respectively.

# **SECTION 12. ECOLOGICAL INFORMATION**

Product Identifier: Durlon® Flexible Graphite - Ver. 1 SDS No.: 0041

Date of Preparation: May 31, 2017

Date of Last Revision: Page 03 of 04

### **Ecotoxicity**

No information was located.

## Persistence and Degradability

No information was located.

#### **Bioaccumulative Potential**

This product and its degradation products are not expected to bioaccumulate. Product is insoluble in water.

# **Mobility in Soil**

No information was located.

## SECTION 13. DISPOSAL CONSIDERATIONS

# **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

# **SECTION 15. REGULATORY INFORMATION**

Safety, Health and Environmental Regulations

None known.

#### Canada

WHMIS 1988 Classification

Not a WHMIS controlled product.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Not available.

**CEPA - National Pollutant Release Inventory (NPRI)** 

Not available.

#### **USA**

**Toxic Substances Control Act (TSCA) Section 8(b)** 

Not regulated.

# **SECTION 16. OTHER INFORMATION**

NFPA Rating Health - 0 Instability - 0

**SDS Prepared By** Triangle Fluid Controls Ltd.

**Phone No.** 613-968-1100 **Date of Preparation** May 31, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

0041

SDS No.:

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® Flexible Graphite - Ver. 1

Date of Preparation: May 31, 2017

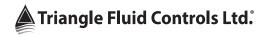
Date of Last Revision: Page 04 of 04





SDS No.:

0042



# **Durlon® HT1000**

## **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® HT1000

Product Family Compressed Non Asbestos

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 1000°C (1832°F).

Manufacturer Durabla Canada Ltd., 293 University Avenue

PO Box 696, Belleville, ON

Supplier Identifier Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0042

**Date of Preparation** May 31, 2017

# **SECTION 2. HAZARD IDENTIFICATION**

## Classification

Not classified under any hazard class.

## **Label Elements**

Not applicable

# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Contains no hazardous ingredients.

#### **Notes**

Product grades: S90, L316 or T316 available in sheets, rolls or cut gaskets.

## **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

# Inhalation

Move to fresh air.

#### **Skin Contact**

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

#### Ingestion

Get medical advice or attention if you feel unwell or are concerned.

#### **First-aid Comments**

If irritation occurs or persists from any route of exposure, discontinue use immediately and consult physician. Bring Safety Data Sheet for physician consultation.

Product Identifier: Durlon® HT1000 - Ver. 1

Date of Preparation: May 31, 2017

Date of Last Revision: Page 01 of 04

# **SECTION 5. FIRE-FIGHTING MEASURES**

# **Extinguishing Media**

# **Suitable Extinguishing Media**

Water mist, foam, dry chemical or carbon dioxide (CO2). Alcohol resistant foams (ATC type) are preferred.

# **Specific Hazards Arising from the Product**

Not sensitive to static discharge.

## **Special Protective Equipment and Precautions for Fire-fighters**

Self-contained breathing apparatus and protective clothing must be worn in case of fire. If possible, prevent runoff from entering storm sewers, water bodies or other environmentally sensitive areas.

# **SECTION 6. ACCIDENTAL RELEASE MEASURES**

# Personal Precautions, Protective Equipment, and Emergency Procedures

Place spilled material (dust) in a container for disposal. Dispose of all waste according to federal, state, provincial or local laws.

#### **Environmental Precautions**

No special precautions are necessary.

## Other Information

Dispose in accordance with section 8 and 13.

# **SECTION 7. HANDLING AND STORAGE**

## **Precautions for Safe Handling**

No special handling precautions are necessary. It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

## **Conditions for Safe Storage**

Store in a cool, dry place away from direct sunlight to maximize shelf life.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Control Parameters**

Not available.

# **Appropriate Engineering Controls**

General ventilation is usually adequate. If dust or fumes are generated during use, use local exhaust in combination with general ventilation as necessary to remove fumes/dust from the worker's breathing zone and to ensure exposures do not exceed applicable limits.

## **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### Skin Protection

Not required, if used as directed. Wear chemical protective clothing e.g. gloves, aprons, boots.

## **Respiratory Protection**

Not normally required if product is used as directed. Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# **Basic Physical and Chemical Properties**

AppearanceBrown - green.OdourOdourless

Product Identifier: Durlon® HT1000 - Ver. 1 SDS No.: 0042

Date of Preparation: May 31, 2017

Date of Last Revision: Page 02 of 04

**pH** Not applicable

Melting Point/Freezing Point Not available (melting)

Initial Boiling Point/Range

Evaporation Rate

Vapour Pressure

Vapour Density (air = 1)

Relative Density (water = 1)

Not available

Not available

1.7 - 1.9

**Solubility** Insoluble in water

Other Information

Physical State Solid

# **SECTION 10. STABILITY AND REACTIVITY**

# Reactivity

Not reactive under normal conditions of use.

Maximum transport temperature of 30°C (86°F). Higher temperatures may change the material properties (e.g. flexibility, stickiness).

## **Conditions to Avoid**

None known.

## **Incompatible Materials**

None known.

## **Hazardous Decomposition Products**

In the cause of thermal decomposition at temperatures above 250°C (482°F), toxic gases and vapours may occur.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

## Skin Corrosion/Irritation

Contact with this product may irritate exposed skin and non-irritating skin eyes, but it is recommended to wash the skin after use.

## **Reproductive Toxicity**

# **Development of Offspring**

No information was located.

# **SECTION 12. ECOLOGICAL INFORMATION**

## **Ecotoxicity**

No information was located.

# Persistence and Degradability

No specific data available for this product; however this product is not biodegradable.

#### **Bioaccumulative Potential**

No information was located.

#### **Mobility in Soil**

No information was located.

#### Other Adverse Effects

Not known.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

# **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

Product Identifier: Durlon® HT1000 - Ver. 1 SDS No.: 0042

Date of Preparation: May 31, 2017

Date of Last Revision: Page 03 of 04

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

# **SECTION 15. REGULATORY INFORMATION**

Safety, Health and Environmental Regulations

None known.

Canada

WHMIS 1988 Classification

Not a WHMIS controlled product.

**CEPA - National Pollutant Release Inventory (NPRI)** 

No components of this product are listed as CEPA priority substances.

**Custom Regulatory 1** 

A Chemical Safety Assessment has not been carried out.

## **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

**Phone No.** 613-968-1100 **Date of Preparation** May 31, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® HT1000 - Ver. 1 SDS No.: 0042

Date of Preparation: May 31, 2017

Date of Last Revision: Page 04 of 04





# **Durlon® Spiral Wound Gasket - ETG**

## **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® Spiral Wound Gasket - ETG

Product Family Semi-Metallic

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0056

# **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name | CAS No.   | % | Other Identifiers | Other Names |
|---------------|-----------|---|-------------------|-------------|
| Graphite      | 7727-42-5 |   |                   |             |

#### **Notes**

Spiral Wound Gasket with Phlogopite Mica and Graphite Filler. Guide Ring Material (If Existing): Carbon steel or stainless steel Inner Ring Material (If Existing): Stainless Steel

Winding Material: Graphite with Stainless Steel

## **SECTION 4. FIRST-AID MEASURES**

#### **First-aid Measures**

#### Inhalation

Do not breathe dust. If exposed to high levels of dust, remove to fresh air. rinmk water and clear throat. Blow nose to clear dust.

#### Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice or attention if you feel unwell or are concerned.

#### **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open.

## Ingestion

Give large quantities of water. Get medical advice or attention if you feel unwell or are concerned.

# **SECTION 5. FIRE-FIGHTING MEASURES**

Product Identifier: Durlon® Spiral Wound Gasket - ETG - Ver. 1 SDS No.: 0056

Date of Preparation:

Date of Last Revision: Page 01 of 04

## **Extinguishing Media**

## **Suitable Extinguishing Media**

Not combustible. Use extinguishing agent suitable for surrounding fire. Water fog, foam, dry chemical powder or carbon dioxide (CO2).

# **Specific Hazards Arising from the Product**

Compositions of by-products from the result of fire will vary depending on the specific conditions. Hazardous gases and vapour include dense smoke and carbon monoxide. There may be others unknown to us.

# **Special Protective Equipment and Precautions for Fire-fighters**

Self-contained breathing devices and protective clothing must be worn in case of fire.

# **SECTION 6. ACCIDENTAL RELEASE MEASURES**

# Personal Precautions, Protective Equipment, and Emergency Procedures

No special precautions are necessary. Place spilled material (dust) in a container for disposal. Dispose of all wastes in accordance with federal, provincial, state or local laws.

#### **Environmental Precautions**

No special precautions are necessary. It is good practice to prevent releases into the environment.

# **SECTION 7. HANDLING AND STORAGE**

## **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Dust should be gathered by wet wiping or vacuuming with HEPA filtration equpped vacuum cleaners. Do not dry sweep or blow dust with compressed air. Graphite dusts are electrically conductive and accumulation of dust may cause shorting of electric circuits and switches. Personnel involved with handling this product should be wearing appropriate personal protective equipment as outlined in section 8.

# **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity).

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# **Control Parameters**

|               | ACGIH TLV® |      | OSHA PEL |         | AIHA WEEL |     |
|---------------|------------|------|----------|---------|-----------|-----|
| Chemical Name | TWA        | STEL | TWA      | Ceiling | 8-hr TWA  | TWA |
| Graphite      | 5 mg/m3    |      |          |         |           |     |

## **Appropriate Engineering Controls**

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

# **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

# **Skin Protection**

Protective gloves are recommended when handling.

# **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# **Basic Physical and Chemical Properties**

**Odour** Not applicable

Melting Point/Freezing Point Not applicable (melting); Not applicable (freezing)

Product Identifier: Durlon® Spiral Wound Gasket - ETG - Ver. 1 SDS No.: 0056

Date of Preparation:

Date of Last Revision: Page 02 of 04

Vapour Pressure Not applicable

Relative Density (water = 1) 0.8 - 1.8

**Other Information** 

Physical State Solid

# **SECTION 10. STABILITY AND REACTIVITY**

## Reactivity

Not reactive under normal conditions of use.

#### **Chemical Stability**

Normally stable.

#### **Conditions to Avoid**

Avoid contact with highly concentrated acids.

# **Incompatible Materials**

Oxidizing agents (e.g. peroxides).

# **Hazardous Decomposition Products**

By-products from the result of a fire will vary depending on the specific conditions. Hazardous gases/vapours may include dense smoke and carbon monoxide. There may be others unknown to us.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

## Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

## Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

# **SECTION 12. ECOLOGICAL INFORMATION**

# **Ecotoxicity**

No information was located.

## Persistence and Degradability

No information was located.

#### **Bioaccumulative Potential**

This product and its degradation products are not expected to bioaccumulate. Product is insoluble in water.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

# **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

# **SECTION 14. TRANSPORT INFORMATION**

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Product Identifier: Durlon® Spiral Wound Gasket - ETG - Ver. 1 SDS No.: 0056

Date of Preparation:

Date of Last Revision: Page 03 of 04

# **SECTION 15. REGULATORY INFORMATION**

Safety, Health and Environmental Regulations

None known.

Canada

WHMIS 1988 Classification

Not a WHMIS controlled product.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Not available.

**CEPA - National Pollutant Release Inventory (NPRI)** 

Not available.

# **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

**Phone No.** 613-968-1100

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® Spiral Wound Gasket - ETG - Ver. 1 SDS No.: 0056

Date of Preparation:

Date of Last Revision: Page 04 of 04





# **Durlon® Spiral Wound Gasket - Flexible Graphite Filled**

# **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® Spiral Wound Gasket - Flexible Graphite Filled

Product Family Semi-Metallic

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0030

# **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name | CAS No.   | % | Other Identifiers | Other Names |
|---------------|-----------|---|-------------------|-------------|
| Graphite      | 7727-42-5 |   |                   |             |

#### **Notes**

Spiral Wound Gasket with Graphite Filler.

Guide Ring Material (If Existing): Carbon steel or stainless steel

Inner Ring Material (If Existing): Stainless Steel Winding Material: Graphite with Stainless Steel

# **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

## Inhalation

Do not breathe dust. If exposed to high levels of dust, remove to fresh air. rinmk water and clear throat. Blow nose to clear dust.

#### **Skin Contact**

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice or attention if you feel unwell or are concerned.

#### **Eve Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open.

## Ingestion

Give large quantities of water. Get medical advice or attention if you feel unwell or are concerned.

# SECTION 5. FIRE-FIGHTING MEASURES

Product Identifier: Durlon® Spiral Wound Gasket - Flexible Graphite Filled - Ver. 1 SDS No.: 0030

Date of Preparation: March 20, 2017

Date of Last Revision: Page 01 of 04

# **Extinguishing Media**

## Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Specific Hazards Arising from the Product**

Compositions of by-products from the result of fire will vary depending on the specific conditions. Hazardous gases and vapour include dense smoke and carbon monoxide. There may be others unknown to us.

# Special Protective Equipment and Precautions for Fire-fighters

Self-contained breathing devices and protective clothing must be worn in case of fire.

# **SECTION 6. ACCIDENTAL RELEASE MEASURES**

# Personal Precautions, Protective Equipment, and Emergency Procedures

No special precautions are necessary. Place spilled material (dust) in a container for disposal. Dispose of all wastes in accordance with federal, provincial, state or local laws.

#### **Environmental Precautions**

No special precautions are necessary. It is good practice to prevent releases into the environment.

# **SECTION 7. HANDLING AND STORAGE**

# **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Dust should be gathered by wet wiping or vacuuming with HEPA filtration equpped vacuum cleaners. Do not dry sweep or blow dust with compressed air. Graphite dusts are electrically conductive and accumulation of dust may cause shorting of electric circuits and switches. Personnel involved with handling this product should be wearing appropriate personal protective equipment as outlined in section 8.

# **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity).

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Control Parameters**

|               | ACGIH TLV® |      | OSHA PEL |         | AIHA WEEL |     |
|---------------|------------|------|----------|---------|-----------|-----|
| Chemical Name | TWA        | STEL | TWA      | Ceiling | 8-hr TWA  | TWA |
| Graphite      | 5 mg/m3    |      |          |         |           |     |

## **Appropriate Engineering Controls**

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

#### **Individual Protection Measures**

### **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

## **Skin Protection**

Protective gloves are recommended when handling.

# **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# **Basic Physical and Chemical Properties**

Odour Not applicable

Melting Point/Freezing Point Not applicable (melting); Not applicable (freezing)

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Vapour Pressure Not applicable

Relative Density (water = 1) 0.8 - 1.8

Other Information

Physical State Solid

# **SECTION 10. STABILITY AND REACTIVITY**

# Reactivity

Not reactive under normal conditions of use.

#### **Chemical Stability**

Normally stable.

#### **Conditions to Avoid**

Avoid contact with highly concentrated acids.

# **Incompatible Materials**

Oxidizing agents (e.g. peroxides).

# **Hazardous Decomposition Products**

By-products from the result of a fire will vary depending on the specific conditions. Hazardous gases/vapours may include dense smoke and carbon monoxide. There may be others unknown to us.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

## Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

## Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

## STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

# **SECTION 12. ECOLOGICAL INFORMATION**

# **Ecotoxicity**

No information was located.

## Persistence and Degradability

No information was located.

#### **Bioaccumulative Potential**

This product and its degradation products are not expected to bioaccumulate. Product is insoluble in water.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

# Disposal Methods

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

# **SECTION 14. TRANSPORT INFORMATION**

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

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## SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

None known.

Canada

WHMIS 1988 Classification

Not a WHMIS controlled product.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Not available.

**CEPA - National Pollutant Release Inventory (NPRI)** 

Not available.

# **SECTION 16. OTHER INFORMATION**

**SDS Prepared By** Triangle Fluid Controls Ltd.

 Phone No.
 613-968-1100

 Date of Preparation
 March 20, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

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# **Durlon® Spiral Wound Gasket - PTFE Filler**

# **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® Spiral Wound Gasket - PTFE Filler

Product Family Semi-Metallic

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College Street East, Belleville, ON, K8N5S7, Canada, Chett

Norton, 613-968-1100, 8am-5pm EST, www.trianglefluid.com

Emergency Phone No. Chett Norton, 613-968-1100, 8am-5pm EST

Date of Preparation July 12, 2018

## SECTION 2. HAZARD IDENTIFICATION

### Classification

Not classified under any hazard class.

# **Label Elements**

Not applicable

# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name           | CAS No.   | %   | Other Identifiers | Other Names |
|-------------------------|-----------|-----|-------------------|-------------|
| Polytetrafluoroethylene | 9002-84-0 | >20 |                   |             |

# **SECTION 4. FIRST-AID MEASURES**

## **First-aid Measures**

# Inhalation

Get medical advice or attention if you feel unwell or are concerned.

## **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

#### **Eve Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open.

#### Ingestion

Get medical advice or attention if you feel unwell or are concerned.

## **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

## Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause irritation.

# **SECTION 5. FIRE-FIGHTING MEASURES**

# **Extinguishing Media**

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## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

## **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour. In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

# Special Protective Equipment and Precautions for Fire-fighters

Before entry, especially into confined areas, use an appropriate monitor to check for toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

# Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, grinding or other abrasive actions. Dust created from these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

## **Environmental Precautions**

No special precautions are necessary.

## Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

# **SECTION 7. HANDLING AND STORAGE**

## **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

# **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

# SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Appropriate Engineering Controls**

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

#### **Individual Protection Measures**

# **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### **Skin Protection**

Wear gloves.

# **Respiratory Protection**

Use particulate filter repirator for specific particulate concentrations exceeding the occupational exposure limits.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# **Basic Physical and Chemical Properties**

Appearance White.

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Upper/Lower Flammability or

**Explosive Limit** 

Not applicable (upper); Not applicable (lower)

**Solubility** Not applicable in water **Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

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# **SECTION 10. STABILITY AND REACTIVITY**

## Reactivity

Not reactive under normal conditions of use.

## **Chemical Stability**

Normally stable.

#### **Possibility of Hazardous Reactions**

None expected under normal conditions of storage and use.

#### **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources.

## **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium allow), fluorine, chlorine trifluoride, strong fluorinating agents and soum hydroxide (reacts above 300C/572F).

# **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated and or burned. Amounts will vary depending on the specific conditions.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

# **Likely Routes of Exposure**

Inhalation: eve contact: ingestion.

## Skin Corrosion/Irritation

Not an irritant, but washing the skin after use or contact is advisable.

# Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

### STOT (Specific Target Organ Toxicity) - Single Exposure

## Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air and consult physician if systems persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irriation. Many cases of flu-like disorder called "polymer fume fever", a temporary flu-like illness with chills, fever and sometimes cough of approx 24 hours duration may arise. These symptons have been reported following exposure to chemicals formed with PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokeser who have repeated episodes of "polymer fume fever". Due to complicating factors, such as mixed exposures and smoking history, these findings are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

# **Skin Absorption**

No information was located.

## Ingestion

No information was located.

# **Aspiration Hazard**

No information was located.

# Respiratory and/or Skin Sensitization

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist. In general, high oncentrations of low toxicity dusts may cause coughing and mild,

Product Identifier: Durlon® Spiral Wound Gasket - PTFE Filler - Ver. 1

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temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been

reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## Carcinogenicity

No information was located.

# **SECTION 12. ECOLOGICAL INFORMATION**

The product is not classified as environmentally hazardous. However, this does not include the possibility that large amounts of frequent spills can have a harmful or damaging effect on the environment.

## **Ecotoxicity**

Studies were not located.

# Persistence and Degradability

No information was located.

#### **Bioaccumulative Potential**

No information was located.

#### Other Adverse Effects

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this product.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

# **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

# **SECTION 14. TRANSPORT INFORMATION**

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

## Safety, Health and Environmental Regulations

None known.

#### Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

# Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

Date of Last Revision:

## **SECTION 16. OTHER INFORMATION**

| NFPA Rating Flammability - 1 |  |               |  |  |  |
|------------------------------|--|---------------|--|--|--|
|                              | Based on Polytetrafluoroethylene                   |               |  |  |  |
| SDS Prepared By              | CN   |               |  |  |  |
| Phone No.                    | 613-968-1100                                       |               |  |  |  |
| Product Identifier:          | Durlon® Spiral Wound Gasket - PTFE Filler - Ver. 1 | SDS No.: 0003 |  |  |  |
| Date of Preparation:         | July 12, 2018                                      |               |  |  |  |

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# Date of Preparation Disclaimer

July 12, 2018

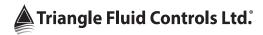
The information provided in this SDS is correct and to the best of our knowledge at the date of its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered warranty or quality specification. This SDS is intended for the material specified and may not be valid for the material used in any other combination or process unless specified in the text.

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# **Durlon® Virgin PTFE**

## **SECTION 1. IDENTIFICATION**

Product Identifier Durlon® Virgin PTFE

Product Family PTFE

**Recommended Use** Gasket Material.

**Restrictions on Use** Maximum service temperature should not exceed 260°C (500°F).

Manufacturer Triangle Fluid Controls Ltd., 399 College St E., Belleville, Ontario, K8N 5S7, Chett Norton,

613-968-1100, www.trianglefluid.com

Emergency Phone No. Triangle Fluid Controls Ltd., 613-968-1100, 8 am - 5pm EST

**SDS No.** 0040

# **SECTION 2. HAZARD IDENTIFICATION**

#### Classification

Not classified under any hazard class.

#### **Label Elements**

Not applicable

# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name           | CAS No.   | %   | Other Identifiers | Other Names |
|-------------------------|-----------|-----|-------------------|-------------|
| Polytetrafluoroethylene | 9002-84-0 | 100 |                   |             |

## **Notes**

This document covers both virgin material grades: mechanical (reprocessed) and skived material.

## **SECTION 4. FIRST-AID MEASURES**

# **First-aid Measures**

## Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

# **Skin Contact**

The product is not likely to be hazardous by skin contact, but washing the skin after use is advisable.

## **Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

#### Ingestion

Not applicable (gas). Get medical advice or attention if you feel unwell or are concerned.

# **First-aid Comments**

Treat symptomatically. Get medical advice or attention if you feel unwell or are concerned.

# Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause mild irritation.

Product Identifier: Durlon® Virgin PTFE - Ver. 1 SDS No.: 0040

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# **SECTION 5. FIRE-FIGHTING MEASURES**

# **Extinguishing Media**

## Suitable Extinguishing Media

Water fog, foam, dry chemical powder or carbon dioxide (CO2).

# **Unsuitable Extinguishing Media**

Do use a water stream to extinguish, as this could spread the fire.

## **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: toxic chemicals; corrosive hydrogen fluoride. Hydrogen fluoride fumes released during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling waste from fire.

# Special Protective Equipment and Precautions for Fire-fighters

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Self-contained breathing devices and protective clothing must be worn in case of fire. No unusual fire or explosion hazards noted.

# **SECTION 6. ACCIDENTAL RELEASE MEASURES**

# Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid sanding, griniding or other abrasive actions. Dust created for these actions must be captured by wet wiping or with a HEPA filtration equipped vacuum. Do not dry sweep, or blow dust with blower or compressed air. Avoid breathing dust and contamination of cigarettes or tobacco with dust from this material.

#### **Environmental Precautions**

No special precautions are necessary.

# Methods and Materials for Containment and Cleaning Up

No special clean-up methods are necessary.

# **SECTION 7. HANDLING AND STORAGE**

# **Precautions for Safe Handling**

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

#### **Conditions for Safe Storage**

No special requirements for storage area. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# **Appropriate Engineering Controls**

General ventilation is usually adequate.

#### **Individual Protection Measures**

## **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

## **Skin Protection**

If material is being handled when hot, use heat resistant gloves.

# **Respiratory Protection**

Use particulate filter respirator for specific particulate concentrations exceeding the Occupational Exposure Limits.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

## **Basic Physical and Chemical Properties**

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Date of Preparation:

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Appearance White.

Odour Not applicable
Odour Threshold Not applicable

Melting Point/Freezing Point 327 °C (621 °F) (melting)

Initial Boiling Point/RangeNot applicableFlash PointNot applicableFlammability (solid, gas)Not available

**Upper/Lower Flammability or** 

Explosive Limit

Not applicable (upper); Not applicable (lower)

Vapour Pressure
Not available
Vapour Density (air = 1)
Relative Density (water = 1)
Not available
Not available
Insoluble in water

**Auto-ignition Temperature** 520 - 560 °C (968 - 1040 °F)

**Decomposition Temperature** 260 °C (500 °F)

Viscosity Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State Solid

Electrical Conductivity

Not available

Vapour Pressure at 50 deg C

Not available

# **SECTION 10. STABILITY AND REACTIVITY**

## Reactivity

Not reactive under normal conditions of use.

# **Chemical Stability**

Normally stable.

# **Possibility of Hazardous Reactions**

None expected under normal conditions of storage and use.

## **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 260.0 °C (500.0 °F)

#### **Incompatible Materials**

Molten alkali metals (e.g. sodium, potassium or sodium-potassium alloy), fluorine, chlorine trifluoride, strong fluorinating agents and sodium hydroxide (reacts above 300°C/572°F).

# **Hazardous Decomposition Products**

Hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned. Amounts will vary depending on the specific conditions.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

Information presented below is for the entire product, unless otherwise specified.

# **Likely Routes of Exposure**

Inhalation; eye contact; ingestion.

# Skin Corrosion/Irritation

Not a skin irritant, but washing the skin after use is advisable.

## Serious Eye Damage/Irritation

Rinse with water. Get medical attention if irritation is observed.

# STOT (Specific Target Organ Toxicity) - Single Exposure

Product Identifier: Durlon® Virgin PTFE - Ver. 1 SDS No.: 0040

Date of Preparation:

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#### Inhalation

Not likely to be hazardous by inhalation. If exposed to fumes from ignition or combustion of product, move to fresh air. Consult physician symptoms persist.

In general, high concentrations of low toxicity dusts may cause coughing and mild, temporary irritation. Many cases of flu-like disorder called "polymer fume fever", a termporary flu-like illness with chills, fever and sometimes cough, of approx. 24 hours duration may arise. These symptoms have been reported following exposure to chemicals formed when PTFE is heated to a temperature of 300°C/572°F. Many cases of "polymer flu fever" have been reported in literature of persistent pulmonary effects in individuals, especially smokers who have repeated episodes of polymer fume fever. Due to complicating factors, such as mixed exposures and smoking history, these finds are uncertain. Small amounts of hydrogen fluoride, carbon tetrafluoride, carbonyl fluoride and tetrafluoroethylene monomer can form if PTFE is overheated or burned.

## **Skin Absorption**

Not harmful.

#### Ingestion

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

The product is not classified as environmentally hazardous. However, this does not include the possibility that large of frequent spills can have a harmful or damaging effect on the environment.

## Persistence and Degradability

No data available.

#### **Bioaccumulative Potential**

No data available.

## **Mobility in Soil**

No data available.

#### Other Adverse Effects

No other adverse effects such as ozone depletion, photochemical ozone creation, endocrine disruption or global warming potential are expected from this component.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

## **Disposal Methods**

Dispose of in accordance with all applicable municipal, provincial and federal regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

| Regulation | UN No. | Proper Shipping Name | Transport Hazard<br>Class(es) | Packing<br>Group |
|------------|--------|----------------------|-------------------------------|------------------|
|            |        |                      |                               |                  |

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

# **SECTION 15. REGULATORY INFORMATION**

# Safety, Health and Environmental Regulations

Canada

WHMIS 1988 Classification

Product Identifier: Durlon® Virgin PTFE - Ver. 1 SDS No.: 0040

Date of Preparation:

Date of Last Revision: March 07, 2017 Page 04 of 05

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

**USA** 

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

# **SECTION 16. OTHER INFORMATION**

SDS Prepared By Triangle Fluid Controls Ltd.

**Phone No.** 613-968-1100 **Date of Last Revision** March 07, 2017

**Disclaimer** The information provided in this SDS is correct and to the best of our knowledge at the date of

its publication. The information provided is intended only as a guidance for safe handling, transportation, storage, use and disposal and is not considered a warranty or quality specification. This SDS is intended for the material specified and may not be valid for the

material used in any other combination or process unless specified in the text.

Product Identifier: Durlon® Virgin PTFE - Ver. 1 SDS No.: 0040

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