

SAFETY DATA SHEET



KYNAR® 720

1. IDENTIFICATION

Company

Arkema Canada Inc.
1100 Burloak Drive, Suite 107
Burlington, Ontario, L7L 6B2

Fluoropolymers Division

Customer Service Telephone Number: (800) 567-5726
(Monday through Friday, 8:30 AM to 4:30 PM EST)

Emergency Information

Transportation: CANUTEC: (613) 996-6666
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: KYNAR® 720
Synonyms: Not available
Molecular formula: Not available
Chemical family: fluoropolymer
Product use: Extrusion - Injection (Mouldings)

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview

Color: white
Physical state: solid
Form: pellets
Odor: odourless

***Classification of the substance or mixture:**
Not a hazardous substance or mixture.

GHS-Labeling

Supplemental Hazard Statements:
Processing may release vapors and/or fumes which cause eye, skin and respiratory tract irritation.

Supplemental information:

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Potential Health Effects:

The product, in the form supplied, is not anticipated to produce significant adverse human health effects. Contains high molecular weight polymer(s). Decomposition gives toxic and corrosive products. Effects due to processing releases: Irritating to eyes, respiratory system and skin. Inhalation of fume may cause flu-like symptoms.

Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness.(severity of effects depends on extent of exposure) .

Other:

Handle in accordance with good industrial hygiene and safety practice. (pellets/granules) This product may release fume and/or vapor of variable composition depending on processing time and temperature. Hazardous decomposition products including toxic and corrosive hydrogen fluoride may be liberated during processing at high temperatures (effects may not be immediately painful or visible).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Wt/Wt	GHS Classification**
Ethene, 1,1-difluoro-, homopolymer	24937-79-9	<= 100 %	Not classified

**For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES**4.1. Description of necessary first-aid measures:****Inhalation:**

If inhaled, remove victim to fresh air.

Skin:

In case of contact, immediately flush skin with plenty of water. If molten polymer gets on the skin, cool rapidly with cold water. Do not peel solidified product off the skin. Obtain medical treatment for thermal burns. Remove material from clothing. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:

Immediately flush eye(s) with plenty of water. Obtain medical treatment for thermal burns.

Ingestion:

If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information if applicable) and Section 11 (Toxicology Information) of this SDS.

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

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

Notes to physician:

If thermal decomposition of this product occurs releasing HF, additional first aid measures are required. HF decomposition by-product is extremely corrosive and can cause severe burns which may not be immediately visible or painful. Exposure to HF may be fatal if absorbed through the skin, inhaled or swallowed.

:

In all cases of major hydrogen fluoride exposure (including skin burns about the size of the palm of the hand) hypocalcemia may be present. Monitor calcium levels frequently and EKG for signs of calcium depletion. Patients with burns of the neck or face, or with signs of respiratory irritation, should be monitored for delayed pulmonary edema, and edema of the upper airway with respiratory obstruction. Respiratory care should be closely supervised and may include further administration of 2.5% calcium gluconate by nebulization. Do not administer anesthetics after skin contact as the level of pain is an indication of the effectiveness of the calcium gluconate treatment. If pain continues longer than 30 minutes, consider injecting calcium gluconate (5%) into the skin and subcutaneous tissue beneath, around and within the affected area. If swallowed, DO NOT induce vomiting. Administer 4 to 8 ounces of water followed by 2 to 4 ounces of an antacid containing calcium or magnesium.

:

First Aid Supplies for Hydrogen Fluoride Use of the following has been shown to be useful for HF treatment as explained above: 2.5% calcium gluconate gel, 1.0% calcium gluconate in saline ocular solution, 2.5% calcium gluconate in saline inhalant, antacid containing calcium or magnesium.

SECTION 5: FIREFIGHTING MEASURES**Extinguishing media (suitable):**

Water spray, Carbon dioxide (CO₂), Foam, Dry chemical

Extinguishing media (unsuitable):

None Identified

Protective equipment:

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:

Fire fighting equipment should be thoroughly decontaminated after use.

Hazardous combustion products:

When burned, the following hazardous products of combustion can occur:

Carbon oxides

Hydrogen fluoride

Hazardous organic compounds

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Sweep up and shovel into suitable properly labeled containers for prompt disposal. Possible fall hazard – floor may become slippery from leakage/spillage of product. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate provincial or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

6.2. Methods and materials for containment and cleaning up: None.

Elimination: See chapter 13

SECTION 7: HANDLING AND STORAGE

Handling

General information on handling:

Avoid breathing dust.

Avoid breathing processing fumes or vapors.

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin, and clothing.

Storage

General information on storage conditions:

Keep containers tightly closed in a cool, well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage.

Storage stability – Remarks:

Stable under recommended storage conditions.

Storage incompatibility – General:

Store separate from:

Powdered metals

Alkali metals

Boron oxide

Finely divided aluminium

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Airborne Exposure Guidelines:****Particles Not Otherwise Specified / Nuisance Dust (Proprietary)**

US. ACGIH Threshold Limit Values

Form:	Respirable particles.
Time weighted average	3 mg/m3
Form:	Inhalable particles.
Time weighted average	10 mg/m3

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection:

Avoid breathing dust., Avoid breathing processing fumes or vapors., Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components and substances released during processing., Consult respirator manufacturer to determine appropriate type equipment for a given application., Observe respirator use limitations specified by NIOSH or the manufacturer., For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

Skin protection:

Processing of this product releases vapors or fumes which may cause skin irritation. Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after contact with processing fumes or vapors. Wash thoroughly after handling. NOTE: In the event of thermal decomposition resulting in an HF exposure or release, decontamination of the equipment involves the use of protective equipment. Contact an Industrial Hygienist or safety personnel for type of equipment necessary.

Eye protection:

Use good industrial practice to avoid eye contact. Processing of this product releases vapors or fumes which may cause eye irritation. Where eye contact may be likely, wear chemical goggles and have eye flushing equipment available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**Color:** white

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Physical state:	solid
Form:	pellets
Odor:	odourless
Odor threshold:	No data available
Flash point	Not applicable
Lower flammable limit (LFL):	No data available
Upper flammable limit (UFL):	No data available
pH:	Not applicable
Density:	1.760 g/cm ³ (68 °F (20 °C))
Specific Gravity (Relative density):	1.760 (68 °F (20 °C))Water=1 (liquid)
Bulk density:	1.000 - 1.100 kg/m ³ 68 °F (20 °C)
Initial boiling point/boiling range:	No data available
Melting point/range:	313 - 338 °F (156 - 170 °C)
Freezing point:	No data available
Evaporation rate:	No data available
Solubility in water:	68 °F (20 °C) insoluble
Solubility in other solvents: [qualitative and quantitative]	Soluble in: DIMETHYLACETAMIDE DIMETHYLFORMAMIDE
Viscosity, dynamic:	No data available
Oil/water partition coefficient:	(No data available)
Thermal decomposition:	> 662 °F (> 350 °C)

Flammability (solid, gas): Not relevant

SECTION 10: STABILITY AND REACTIVITY**Reactivity/Stability:**

The product is stable under normal handling and storage conditions.

Hazardous reactions:

Hazardous polymerization does not occur.

Materials to avoid:

The following materials are incompatible when combined with molten polymer.

Silica (Glass fiber), TiO₂ are incompatible with high processing temperature (>536°F / >280°C).

Boron nitride / oxides

Alkali metals

Finely divided aluminium

Powdered metals

Conditions / hazards to avoid:

Thermal decomposition will generate hydrogen Fluoride (HF) Thermal decomposition of the polymer begins to generate HF at 662 °F (310 °C) and the evolution of HF becomes more rapid at 752 °F (400 °C). Laboratory testing by Thermogravimetric Analysis (TGA) in nitrogen has shown that these polymers provide high polymer thermal stability with decomposition occurring at temperatures above 662°F (350°C). To avoid thermal decomposition, do not overheat. Decomposition is promoted at high temperature with Silica/Glass and TiO₂ (>536°F / >280°C). Do not clean tooling with open flame to avoid thermal decomposition. Avoid prolonged heating above the upper processing limit of 536°F (280°C)

Recommended melt processing conditions are typically maintained below 500 °F (260°C) and rarely exceed a melt temperature of 536°F (280°C). We recommend that you consult your technical personnel if a melt temperature above normal melt processing conditions are being considered. In the event of polymer thermal decomposition, which lead to the generation of black char, an acrid smell, visible outgassing, or strong acrid smell, it is recommended that the following steps be taken. 1. Shut off equipment if possible. 2. Ventilate the area and evacuate all personnel immediately 3. Call the emergency number listed on the first page of this SDS.

Hazardous decomposition products:

Temperature exceeding 350°C:

Thermal decomposition giving toxic and corrosive products :

Hydrogen fluoride

Carbon oxides

Hazardous organic compounds

SECTION 11: TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for Ethene, 1,1-difluoro-, homopolymer (24937-79-9)**Acute toxicity**

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Oral:

Practically nontoxic.. (rat) LD50 > 6,000 mg/kg.

Repeated dose toxicity

Subcutaneous administration to rabbit / No adverse systemic effects reported.

Repeated administration to rat, mouse, rabbit / No adverse effects reported. (Solvent extracts were tested.)

Genotoxicity**Assessment in Vitro:**

No genetic changes were observed in a laboratory test using: bacteria

Genotoxicity**Assessment in Vivo:**

No genetic changes were observed in a laboratory test using: mice

Other information

The information presented is from representative materials with this Chemical Abstract Service (CAS) Registry number. The results vary depending on the size and composition of the test substance.

SECTION 12: ECOLOGICAL INFORMATION

Chemical Fate and Pathway

No data are available.

Ecotoxicology

No data are available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal:

Where possible recycling is preferred to disposal or incineration. Dispose of in an approved landfill if allowed locally. Incinerate only if the incinerator is fitted to scrub out hydrogen fluoride and other acidic combustion gases. Dispose of in a permitted waste management facility if incineration or landfill is not practical. Pigmented, filled and/or solvent laden product may require special disposal practices in accordance with federal, provincial and local regulations.

Dispose of in accordance with federal, provincial and local regulations. Consult a regulatory specialist to determine appropriate provincial or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, provincial and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

SECTION 14: TRANSPORT INFORMATION

Canadian Transportation of Dangerous Goods (TDG): not regulated

International Maritime Dangerous Goods Code (IMDG): not regulated

SECTION 15: REGULATORY INFORMATION**Chemical Inventory Status**

US. Toxic Substances Control Act	TSCA	The components of this product are all on the Active TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	All components of this product are listed or exempted
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	All components of this product are listed or exempted
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	All components of this product are listed or exempted
Korea. Korean Existing Chemicals Inventory (KECI)	KECI	All components of this product are listed or exempted
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	All components of this product are listed or exempted
New Zealand. Inventory of Chemical Substances	NZIOC	Not all components of this product are listed or exempted
Australian Inventory of Industrial Chemicals	AU AIICL	All components of this product are listed or exempted
Taiwan Chemical Substance Inventory (TCSI)	TCSI	All components of this product are listed or exempted

Canada - Federal Regulations**National Pollution Release Inventory (NPRI)**

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

SECTION 16: OTHER INFORMATION

Latest Revision(s):

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Reference number:	600000836
Date of Revision:	09/12/2022
Date Printed:	09/13/2022

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Arkema has implemented a Medical Policy regarding the use of Arkema products in Medical Devices applications that are in contact with the body or circulating bodily fluids (<http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html>) Arkema has designated Medical grades to be used for such Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices, and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.

It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies). It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.

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