



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Dynamar™ Polymer Processing Additive FX 5920A

#### Product Identification Numbers

98-0211-8055-3      XA-0100-2087-4

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Polymer processing additive.

For Industrial or Professional use only.

#### 1.3. Supplier's details

**Address:** 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113  
**Telephone:** 136 136  
**E Mail:** productinfo.au@mmm.com  
**Website:** www.3m.com.au

#### 1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

### SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

#### 2.1. Classification of the substance or mixture

Specific Target Organ Toxicity (repeated exposure): Category 2.

#### 2.2. Label elements

The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

**Signal word**  
WARNING!

**Symbols**  
Health Hazard |

**Pictograms**



**Hazard statements**

H373 May cause damage to organs through prolonged or repeated exposure:  
respiratory system |

**Precautionary statements**

**Prevention:**  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

**Response:**  
P314 Get medical advice/attention if you feel unwell.

**Disposal:**  
P501 Dispose of contents/container in accordance with applicable  
local/regional/national/international regulations.

### 2.3. Other assigned/identified product hazards

May cause thermal burns.

### 2.4. Other hazards which do not result in classification

None known.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Calcium Carbonate	471-34-1	< 5
Polyethylene oxide	25322-68-3	60 - 70
Vinylidene Fluoride-Hexafluoropropylene Polymer	9011-17-0	25 - 35
Talc	14807-96-6	1 - 6

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

**Skin contact**

Immediately flush skin with large amounts of cold water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Cover affected area with a clean dressing. Get immediate medical attention.

**Eye contact**

Immediately flush eyes with large amounts of water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Get immediate medical attention.

**If swallowed**

Rinse mouth. If you feel unwell, get medical attention.

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

See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures**

**5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

**5.2. Special hazards arising from the substance or mixture**

Exposure to extreme heat can give rise to thermal decomposition.

**5.3. Special protective actions for fire-fighters**

When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Eliminate all ignition sources if safe to do so. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Avoid inhalation of thermal decomposition products. Avoid skin contact with hot material. For industrial/occupational use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. Keep

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away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

### 7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from oxidising agents.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
Talc	14807-96-6	Australia OELs	TWA(8 hours):2.5 mg/m3	
Polyethylene oxide	25322-68-3	AIHA	TWA(as aerosol):10 mg/m3	
Limestone	471-34-1	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

Sk: Absorption through the skin may be a significant source of exposure.

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Local exhaust required above 400 C.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full face shield.

Indirect vented goggles.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

##### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions.

Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Nitrile rubber.

Select and use gloves according to AS/NZ 2161.

### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

During heating:

Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance specifications. For information about respirators, call 3M on 1800 024 464.

### Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Solid.
<b>Specific Physical Form:</b>	Granules.
<b>Colour</b>	White
<b>Odour</b>	Odourless
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	<i>Not applicable.</i>
<b>Flash point</b>	229 °C [ <i>Test Method:Pensky-Martens Closed Cup</i> ]
<b>Evaporation rate</b>	<i>Not applicable.</i>
<b>Flammability (solid, gas)</b>	Not classified
<b>Flammable Limits(LEL)</b>	<i>No data available.</i>
<b>Flammable Limits(UEL)</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<i>Not applicable.</i>
<b>Vapour density</b>	<i>Not applicable.</i>
<b>Density</b>	1.15 g/cm <sup>3</sup>
<b>Relative density</b>	1.15 [ <i>Ref Std:WATER=1</i> ]
<b>Water solubility</b>	Moderate
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	341 °C [ <i>Details:ASTM D-1929</i> ]
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	<i>Not applicable.</i>
<b>Bulk density</b>	0.7 g/cm <sup>3</sup>
<b>Molecular weight</b>	<i>No data available.</i>

**Volatile organic compounds (VOC)**  
**Percent volatile**  
**VOC less H2O & exempt solvents**

*Not applicable.*  
*Not applicable.*  
*Not applicable.*

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

### 10.2 Chemical stability

Stable.

### 10.3. Conditions to avoid

Sparks and/or flames.

### 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.5 Incompatible materials

Strong oxidising agents.

Aluminium or magnesium powder and high/shear temperature conditions.

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Carbonyl fluoride.	At elevated temperatures. - >300°C
Formaldehyde	At elevated temperatures. - >300°C
Carbon monoxide.	At elevated temperatures. - >300°C
Carbon dioxide.	At elevated temperatures. - >300°C
Hydrogen Fluoride	At elevated temperatures. - >300°C
Toxic vapour, gas, particulate.	At elevated temperatures. - >300°C

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

#### Inhalation

During heating:

Polymer fume fever: Sign/symptoms may include chest pain or tightness, shortness of breath, cough, malaise, muscle aches, increased heart rate, fever, chills, sweats, nausea and headache.

**Skin contact**

During heating:

Thermal burns: Signs/symptoms may include intense pain, redness and swelling, and tissue destruction.

Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

**Eye contact**

During heating:

Thermal burns: Signs/symptoms may include severe pain, redness and swelling, and tissue destruction.

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

**Ingestion**

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

**Additional Health Effects:**

**Prolonged or repeated exposure may cause target organ effects:**

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Polyethylene oxide	Dermal	Rabbit	LD50 > 20,000 mg/kg
Polyethylene oxide	Ingestion	Rat	LD50 32,770 mg/kg
Vinylidene Fluoride-Hexafluoropropylene Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Vinylidene Fluoride-Hexafluoropropylene Polymer	Ingestion	Rat	LD50 6,000 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Polyethylene oxide	Rabbit	Minimal irritation
Vinylidene Fluoride-Hexafluoropropylene Polymer	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Polyethylene oxide	Rabbit	Mild irritant
Vinylidene Fluoride-Hexafluoropropylene Polymer	Rabbit	Mild irritant
Talc	Rabbit	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation

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**Skin Sensitisation**

Name	Species	Value
Polyethylene oxide	Guinea pig	Not classified

**Respiratory Sensitisation**

Name	Species	Value
Talc	Human	Not classified

**Germ Cell Mutagenicity**

Name	Route	Value
Polyethylene oxide	In Vitro	Not mutagenic
Polyethylene oxide	In vivo	Not mutagenic
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Polyethylene oxide	Ingestion	Rat	Not carcinogenic
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Polyethylene oxide	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Polyethylene oxide	Ingestion	Not classified for male reproduction	Rat	NOAEL 5699 +/-1341 mg/kg/day	5 days
Polyethylene oxide	Not specified.	Not classified for reproduction and/or development		NOEL N/A	
Polyethylene oxide	Ingestion	Not classified for development	Mouse	NOAEL 562 mg/animal/day	during gestation
Talc	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesis
Calcium Carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	prematuring & during gestation

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Polyethylene oxide	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Calcium Carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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Polyethylene oxide	Inhalation	respiratory system	Not classified	Rat	NOAEL 1,008 mg/l	2 weeks
Polyethylene oxide	Ingestion	kidney and/or bladder   heart   endocrine system   hematopoietic system   liver   nervous system	Not classified	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Vinylidene Fluoride-Hexafluoropropylene Polymer	Ingestion	liver	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 weeks
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis   respiratory system	Not classified	Rat	NOAEL 18 mg/m <sup>3</sup>	113 weeks
Calcium Carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Exposure Levels**

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

**Interactive Effects**

Not determined.

**SECTION 12: Ecological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

**12.1. Toxicity****Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

**Chronic aquatic hazard:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Calcium Carbonate	471-34-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Calcium Carbonate	471-34-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l

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Calcium Carbonate	471-34-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Calcium Carbonate	471-34-1	Green algae	Experimental	72 hours	Effect Concentration 10%	>100 mg/l
Polyethylene oxide	25322-68-3	Atlantic Salmon	Experimental	96 hours	LC50	>1,000 mg/l
Vinylidene Fluoride-Hexafluoropropylene Polymer	9011-17-0		Data not available or insufficient for classification			
Talc	14807-96-6		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Calcium Carbonate	471-34-1	Data not available-insufficient			N/A	
Polyethylene oxide	25322-68-3	Experimental Biodegradation	28 days	BOD	53 % BOD/ThBOD	OECD 301C - MITI test (I)
Vinylidene Fluoride-Hexafluoropropylene Polymer	9011-17-0	Data not available-insufficient			n/a	
Talc	14807-96-6	Data not available-insufficient			N/A	

**12.3 : Bioaccumulative potential**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Calcium Carbonate	471-34-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene oxide	25322-68-3	Estimated Bioconcentration		Bioaccumulation factor	2.3	Estimated: Bioconcentration factor
Vinylidene Fluoride-Hexafluoropropylene Polymer	9011-17-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

**12.4. Mobility in soil**

Please contact manufacturer for more details

### 12.5 Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include HF. Facility must be capable of handling halogenated materials.

## SECTION 14: Transport Information

### Australian Dangerous Goods Code (ADG) - Road/Rail Transport

**UN No.:** Not applicable.

**Proper shipping name:** Not applicable.

**Class/Division:** Not applicable.

**Sub Risk:** Not applicable.

**Packing Group:** Not applicable.

**Hazchem Code:** Not applicable

**IERG:** Not applicable.

### International Air Transport Association (IATA) - Air Transport

**UN No.:** Not applicable.

**Proper shipping name:** Not applicable.

**Class/Division:** Not applicable.

**Sub Risk:** Not applicable.

**Packing Group:** Not applicable.

### International Maritime Dangerous Goods Code (IMDG)- Marine Transport

**UN No.:** Not applicable.

**Proper shipping name:** Not applicable.

**Class/Division:** Not applicable.

**Sub Risk:** Not applicable.

**Packing Group:** Not applicable.

**Marine Pollutant:** Not applicable.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Australian Inventory Status:

The chemical components contained within this product are listed on the Australian Inventory of Chemical Substances and are in compliance with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

## SECTION 16: Other information

### Revision information:

Update to Section 3, Composition/information on ingredients.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our

knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

**3M Australia SDSs are available at [www.3m.com.au](http://www.3m.com.au)**