



## Material Safety Data Sheet

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**PRODUCT NAME:** 3M™ Aviation Window Restoration System by Clearfix Aerospace Sample Kit  
PN CF99  
**MANUFACTURER:** 3M  
**DIVISION:** Aerospace Aircraft Maintenance Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000

**EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)**

**Issue Date:** 09/04/12  
**Supersedes Date:** Initial Issue  
**Document Group:** 30-0419-9

**ID Number(s):**

70-2022-8040-3

**This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:**

29-7966-4, 29-7933-4, 29-7720-5, 29-7769-2

No revision information is available.

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Aviation Window Restoration System by Clearfix™ Aerospace Polish 1 - Clarity  
Restoration, PN CF1  
**MANUFACTURER:** 3M  
**DIVISION:** Aerospace Aircraft Maintenance Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000

**EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)**

**Issue Date:** 05/07/13  
**Supersedes Date:** 10/20/11

**Document Group:** 29-7720-5

#### Product Use:

Intended Use: Abrasive for Aircraft Windshield Restoration

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	75 - 95
ALUMINUM SILICATE	66402-68-4	10 - 30
PROPYLENE GLYCOL	57-55-6	1 - 15
ACRYLIC POLYMER	Trade Secret	1 - 5
ABRASIVE	1318-23-6	1 - 5
SURFACTANT	84133-50-6	1 - 5
2-PHENOXYETHANOL	122-99-6	0.5 - 1
STABILIZER	127519-17-9	<= 0.5
STABILIZER	41556-26-7	< 0.3
SODIUM LAURYL SULFATE	151-21-3	<= 0.1
QUARTZ SILICA	14808-60-7	< 0.03

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** Off-white, little or no odor

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** May cause allergic skin reaction. May cause target organ effects.  
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Skin Contact:**

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Contact with the skin during product use is not expected to result in significant irritation. Dermal Effects: Signs/symptoms may include localized redness, itching, drying and cracking of skin.

**Inhalation:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Ingestion:**

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

May be absorbed following ingestion and cause target organ effects.

**Target Organ Effects:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

**Autoignition temperature**

*No Data Available*

**Flash Point**

*No flash point*

**Flammable Limits(LEL)**

*Not Applicable*

**Flammable Limits(UEL)**

*Not Applicable*

## 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

## 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Not applicable. No unusual fire or explosion hazards are anticipated.

**Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.**

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

### 6.2. Environmental precautions

Place in a closed container approved for transportation by appropriate authorities.

### Clean-up methods

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Clean up residue with detergent and water.

**In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.**

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors, mists or spray. Avoid prolonged or repeated skin contact. Wash hands after handling and before eating. Avoid breathing of dust created by sanding, grinding or machining.

### 7.2 STORAGE

Keep container in well-ventilated area. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust ventilation on open containers. Use in an enclosed process area is recommended. Use in a well-ventilated area. Do not use in a confined area or areas with little or no air movement.

## 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

### 8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields

### 8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

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

### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

### 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

## 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
1,2-Propanediol	AIHA	TWA, as aerosol	10 mg/m <sup>3</sup>	
2-PHENOXYETHANOL	CMRG	TWA	25 ppm	Skin Notation*
Aluminum, insoluble compounds	ACGIH	TWA, respirable fraction	1 mg/m <sup>3</sup>	
STABILIZER	CMRG	TWA	1 mg/m <sup>3</sup>	
POLYETHYLENE GLYCOLS	AIHA	TWA, as particulate	10 mg/m <sup>3</sup>	
PROPYLENE GLYCOL	AIHA	TWA, as aerosol	10 mg/m <sup>3</sup>	

\* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

#### SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Odor, Color, Grade:</b>	Off-white, little or no odor
<b>General Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	No flash point
<b>Flammable Limits(LEL)</b>	<i>Not Applicable</i>
<b>Flammable Limits(UEL)</b>	<i>Not Applicable</i>
<b>Boiling Point</b>	212 °F

Vapor Density	1.1 [ <i>Ref Std:</i> AIR=1]
Vapor Pressure	17.5 mmHg [@ 20 °C]
Specific Gravity	1.2
pH	<i>No Data Available</i>
Melting point	32 °F
Solubility in Water	Negligible
Evaporation rate	1 [ <i>Ref Std:</i> WATER=1]
Hazardous Air Pollutants	0 % weight
Volatile Organic Compounds	0 % weight
Kow - Oct/Water partition coef	<i>No Data Available</i>
Viscosity	<i>No Data Available</i>

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

### Materials and Conditions to Avoid:

#### 10.1 Conditions to avoid

None known

#### 10.2 Materials to avoid

Strong oxidizing agents

**Hazardous Polymerization:** Hazardous polymerization will not occur.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Reclaim solvent if feasible. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

Since regulations vary, consult applicable regulations or authorities before disposal.

## SECTION 14: TRANSPORT INFORMATION

**ID Number(s):**  
70-2022-8030-4

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

#### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
2-PHENOXYETHANOL (GLYCOL ETHERS)	122-99-6	0.5 - 1

### STATE REGULATIONS

Contact 3M for more information.

### CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

The components of this product are listed on the Canadian Domestic Substances List.

All components of this product are listed on the Inventory of Existing Chemical Substances in China or are exempt. Contact 3M for more information.

### INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## SECTION 16: OTHER INFORMATION

**NFPA Hazard Classification**



**Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None**

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 5: Unusual fire and explosion hazard information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 8: Engineering controls information was modified.

Section 6: Personal precautions information was modified.

Section 6: Methods for cleaning up information was modified.

Copyright was modified.

Section 8: Respiratory protection information was added.

Section 8: Respiratory protection - recommended respirators information was deleted.

Section 8: Respiratory protection - recommended respirators was deleted.

Section 8: Respiratory protection - recommended respirators guide was deleted.

Section 8: Respiratory protection - recommended respirators punctuation was deleted.

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Aviation Window Restoration System by Clearfix™ Aerospace UV Coating and Applicator

**MANUFACTURER:** 3M

**DIVISION:** Aerospace Aircraft Maintenance Division

**ADDRESS:** 3M Center, St. Paul, MN 55144-1000

**EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)**

**Issue Date:** 06/21/12

**Supersedes Date:** 06/01/12

**Document Group:** 29-7769-2

**Product Use:**

Intended Use: Coating

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
ISOPROPYL ALCOHOL	67-63-0	80 - 90
2-BUTOXYETHANOL	111-76-2	1 - 10
ACRYLIC POLYMER	Trade Secret	1 - 10
STABILIZER	127519-17-9	0.1 - 0.75
BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL) SEBACATE	41556-26-7	< 0.3

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** Clear, transparent coating, alcohol odor

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause allergic skin reaction. May cause target organ effects.

## 3.2 POTENTIAL HEALTH EFFECTS

### Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

### Skin Contact:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

### Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

### Ingestion:

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

May be absorbed following ingestion and cause target organ effects.

### Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Blood Effects: Signs/symptoms may include generalized weakness and fatigue, skin pallor, changes in blood clotting time, internal bleeding, and/or hemoglobinemia.

### Carcinogenicity:

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
ISOPROPYL ALCOHOL MANUFACTURE (STRONG-ACID PROCESS)	TW67630A	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	53 °F [ <i>Test Method: Closed Cup</i> ]
<b>Flammable Limits(LEL)</b>	2.0 % volume
<b>Flammable Limits(UEL)</b>	12.7 % volume

## 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

## 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

**Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.**

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

### 6.2. Environmental precautions

Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities.

### Clean-up methods

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Seal the container.

**In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.**

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Avoid contact with oxidizing agents.

### 7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container

tightly closed. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust ventilation on open containers. Use in an enclosed process area is recommended. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement.

### 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields

#### 8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Neoprene

Nitrile Rubber

#### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full facepiece air-purifying respirator suitable for particulates

Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

#### 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not ingest. Wash hands after handling and before eating.

### 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
2-BUTOXYETHANOL	ACGIH	TWA	20 ppm	
2-BUTOXYETHANOL	OSHA	TWA	240 mg/m <sup>3</sup>	Skin Notation*
BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL) SEBACATE	CMRG	TWA	1 mg/m <sup>3</sup>	
ISOPROPYL ALCOHOL	ACGIH	TWA	200 ppm	
ISOPROPYL ALCOHOL	ACGIH	STEL	400 ppm	
ISOPROPYL ALCOHOL	OSHA	TWA	980 mg/m <sup>3</sup>	

\* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Odor, Color, Grade:</b>	Clear, transparent coating, alcohol odor
<b>General Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	53 °F [ <i>Test Method: Closed Cup</i> ]
<b>Flammable Limits(LEL)</b>	2.0 % volume
<b>Flammable Limits(UEL)</b>	12.7 % volume
<b>Boiling Point</b>	83 °C
<b>Vapor Density</b>	2.1 [ <i>Ref Std: AIR=1</i> ]
<b>Vapor Pressure</b>	44 mmHg [ <i>@ 77 °F</i> ]
<b>Specific Gravity</b>	0.81
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	90 °C
<b>Solubility in Water</b>	Moderate
<b>Evaporation rate</b>	11 [ <i>Ref Std: ETHER=1</i> ]
<b>Hazardous Air Pollutants</b>	0 % weight
<b>Volatile Organic Compounds</b>	753 g/l
<b>Kow - Oct/Water partition coef</b>	<i>No Data Available</i>
<b>VOC Less H2O &amp; Exempt Solvents</b>	753 g/l
<b>Viscosity</b>	<i>No Data Available</i>

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

### Materials and Conditions to Avoid:

#### 10.1 Conditions to avoid

Sparks and/or flames

#### 10.2 Materials to avoid

Strong oxidizing agents

**Hazardous Polymerization:** Hazardous polymerization will not occur.

### Hazardous Decomposition or By-Products

#### Substance

Carbon monoxide

Carbon dioxide

Oxides of Nitrogen

#### Condition

During Combustion

During Combustion

During Combustion

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Incinerate in an industrial or commercial facility. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

Since regulations vary, consult applicable regulations or authorities before disposal.

## SECTION 14: TRANSPORT INFORMATION

### ID Number(s):

70-2022-8032-0, 70-2022-8038-7

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

### 311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
ISOPROPYL ALCOHOL (ISOPROPYL ALCOHOL MANUFACTURE (STRONG-ACID PROCESS))	67-63-0	80 - 90
2-BUTOXYETHANOL (GLYCOL ETHERS)	111-76-2	1 - 10

## STATE REGULATIONS

Contact 3M for more information.

## CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

## INTERNATIONAL REGULATIONS

Contact 3M for more information.

**This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.**

## SECTION 16: OTHER INFORMATION

### NFPA Hazard Classification

**Health: 2 Flammability: 2 Reactivity: 0 Special Hazards: None**

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

### Revision Changes:

Section 3: Potential effects from skin contact information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 8: Engineering controls information was modified.

Section 8: Respiratory protection information was modified.

Section 8: Prevention of swallowing information was modified.

Section 15: Inventories information was modified.

Section 2: Ingredient table was modified.

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## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Aviation Window Restoration System by Clearfix™ Aerospace Polish 2 - Optics  
Restoration, PN CF2  
**MANUFACTURER:** 3M  
**DIVISION:** Aerospace Aircraft Maintenance Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000

**EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)**

**Issue Date:** 05/07/13  
**Supersedes Date:** 10/20/11  
**Document Group:** 29-7933-4

#### Product Use:

Intended Use: Polish/Abrasive for Aerospace Windshield Restoration

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	60 - 80
ALUMINUM SILICATE	66402-68-4	10 - 30
PROPYLENE GLYCOL	57-55-6	1 - 15
FUSED SILICA	60676-86-0	1 - 5
ABRASIVE	1318-23-6	1 - 5
SURFACTANT	84133-50-6	0.5 - 5
SODIUM CARBOXYMETHYL CELLULOSE	9004-32-4	0.1 - 2
XANTHAN GUM	11138-66-2	0.1 - 2
2-PHENOXYETHANOL	122-99-6	0.1 - 2
QUARTZ SILICA	14808-60-7	< 0.4
METHYL P-HYDROXYBENZOATE	99-76-3	< 0.15
SODIUM LAURYL SULFATE	151-21-3	<= 0.1

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** Off-white, little or no odor

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** May cause allergic skin reaction. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Skin Contact:**

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Dermal Effects: Signs/symptoms may include localized redness, itching, drying and cracking of skin.

**Inhalation:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Ingestion:**

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

May be absorbed following ingestion and cause target organ effects.

**Target Organ Effects:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	SEQ677	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	SEQ677	Known human carcinogen	National Toxicology Program Carcinogens

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	No flash point
<b>Flammable Limits(LEL)</b>	<i>Not Applicable</i>
<b>Flammable Limits(UEL)</b>	<i>Not Applicable</i>

### 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Not applicable. No unusual fire or explosion hazards are anticipated.

**Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.**

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

### 6.2. Environmental precautions

Place in a closed container approved for transportation by appropriate authorities.

#### Clean-up methods

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Clean up residue with detergent and water.

**In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.**

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors, mists or spray. Wash hands after handling and before eating. Avoid breathing of dust created by sanding, grinding or machining.

## 7.2 STORAGE

Keep container in well-ventilated area. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from oxidizing agents.

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust ventilation on open containers. Use in an enclosed process area is recommended. Use in a well-ventilated area.

## 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

### 8.2.1 Eye/Face Protection

The following eye protection(s) are recommended: Safety Glasses with side shields

### 8.2.2 Skin Protection

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

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

### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

### 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

## 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
1,2-Propanediol	AIHA	TWA, as aerosol	10 mg/m <sup>3</sup>	
2-PHENOXYETHANOL	CMRG	TWA	25 ppm	Skin Notation*
Aluminum, insoluble compounds	ACGIH	TWA, respirable fraction	1 mg/m <sup>3</sup>	
POLYETHYLENE GLYCOLS	AIHA	TWA, as particulate	10 mg/m <sup>3</sup>	
PROPYLENE GLYCOL	AIHA	TWA, as aerosol	10 mg/m <sup>3</sup>	
QUARTZ SILICA	ACGIH	TWA, respirable fraction	0.025 mg/m <sup>3</sup>	
QUARTZ SILICA	OSHA	TWA concentration, respirable	0.1 mg/m <sup>3</sup>	
QUARTZ SILICA	OSHA	TWA concentration, as total dust	0.3 mg/m <sup>3</sup>	
SILICA, AMORPHOUS	OSHA	TWA concentration	0.8 mg/m <sup>3</sup>	
SILICA, AMORPHOUS	OSHA	TWA	20 millions of particles/cu. ft.	

\* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists  
CMRG: Chemical Manufacturer Recommended Guideline  
OSHA: Occupational Safety and Health Administration  
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Odor, Color, Grade:</b>	Off-white, little or no odor
<b>General Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	No flash point
<b>Flammable Limits(LEL)</b>	<i>Not Applicable</i>
<b>Flammable Limits(UEL)</b>	<i>Not Applicable</i>
<b>Boiling Point</b>	212 °F
<b>Vapor Density</b>	1.1 [ <i>Ref Std: AIR=1</i> ]
<b>Vapor Pressure</b>	17.5 mmHg [ <i>@ 20 °C</i> ]
<b>Specific Gravity</b>	1.2
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	32 °F
<b>Solubility in Water</b>	Negligible
<b>Evaporation rate</b>	1 [ <i>Ref Std: WATER=1</i> ]
<b>Hazardous Air Pollutants</b>	0 % weight
<b>Volatile Organic Compounds</b>	0 % weight
<b>Kow - Oct/Water partition coef</b>	<i>No Data Available</i>
<b>Viscosity</b>	<i>No Data Available</i>

**SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Stable.

**Materials and Conditions to Avoid:**

**10.1 Conditions to avoid**

None known

**10.2 Materials to avoid**

Strong oxidizing agents

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Hazardous Decomposition or By-Products**

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

Oxides of Nitrogen

During Combustion

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Reclaim solvent if feasible. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

Since regulations vary, consult applicable regulations or authorities before disposal.

## SECTION 14: TRANSPORT INFORMATION

### ID Number(s):

70-2022-8031-2

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
2-PHENOXYETHANOL (GLYCOL ETHERS)	122-99-6	0.1 - 2

### STATE REGULATIONS

Contact 3M for more information.

## CALIFORNIA PROPOSITION 65

**Ingredient**

SILICA, CRYSTALLINE (AIRBORNE  
PARTICLES OF RESPIRABLE SIZE)

**C.A.S. No.**

None

**Classification**

\*\*Carcinogen

\*\* WARNING: contains a chemical which can cause cancer.

## CHEMICAL INVENTORIES

Contact 3M for more information.

## INTERNATIONAL REGULATIONS

Contact 3M for more information.

**This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.**

## SECTION 16: OTHER INFORMATION

### NFPA Hazard Classification

**Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None**

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

### Revision Changes:

Section 5: Unusual fire and explosion hazard information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 8: Engineering controls information was modified.

Section 2: Ingredient table was modified.

Section 15: California proposition 65 ingredient information was modified.

Section 6: Personal precautions information was modified.

Section 6: Methods for cleaning up information was modified.

Copyright was modified.

Section 8: Respiratory protection information was added.

Section 8: Respiratory protection - recommended respirators information was deleted.

Section 8: Respiratory protection - recommended respirators was deleted.

Section 8: Respiratory protection - recommended respirators guide was deleted.

Section 8: Respiratory protection - recommended respirators punctuation was deleted.

Section 8: Hand protection information was deleted.

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**MATERIAL SAFETY DATA SHEET 3M™ Aviation Window Restoration System by Clearfix™ Aerospace Polish 2 - Optics  
Restoration, PN CF2 05/07/13**

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## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Aviation Window Restoration System by Clearfix™ Aerospace Cleanser Spray, PN CCL  
**MANUFACTURER:** 3M  
**DIVISION:** Aerospace Aircraft Maintenance Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000

**EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)**

**Issue Date:** 05/07/13

**Supersedes Date:** 07/06/11

**Document Group:** 29-7966-4

#### Product Use:

Intended Use: Cleaner for Optic Restoration

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	95 - 99
ISOPROPYL ALCOHOL	67-63-0	1 - 5
Surfactants	Mixture	< 1.5
METHYL P-HYDROXYBENZOATE	99-76-3	<= 0.1

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** No odor, water white liquid

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** May cause allergic skin reaction.

May cause target organ effects.

#### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Skin Contact:**

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Prolonged or repeated exposure may cause:

Dermal Effects: Signs/symptoms may include localized redness, itching, drying and cracking of skin.

**Inhalation:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

**Ingestion:**

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

May be absorbed following ingestion and cause target organ effects.

**Target Organ Effects:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

**Autoignition temperature**

*No Data Available*

**Flash Point**

No flash point

**Flammable Limits(LEL)**

*Not Applicable*

**Flammable Limits(UEL)**

*Not Applicable*

### 5.2 EXTINGUISHING MEDIA

Material will not burn.

### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** No unusual fire or explosion hazards are anticipated.

**Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.**

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Ventilate the area with fresh air.

### 6.2. Environmental precautions

Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities.

### Clean-up methods

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Clean up residue with detergent and water.

**In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.**

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray.

### 7.2 STORAGE

Keep from freezing.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields

#### 8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with

your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.  
Gloves made from the following material(s) are recommended: Nitrile Rubber

### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

### 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

## 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ISOPROPYL ALCOHOL	ACGIH	TWA	200 ppm	
ISOPROPYL ALCOHOL	ACGIH	STEL	400 ppm	
ISOPROPYL ALCOHOL	OSHA	TWA	980 mg/m <sup>3</sup>	

#### SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Odor, Color, Grade:</b>	No odor, water white liquid
<b>General Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	No flash point
<b>Flammable Limits(LEL)</b>	<i>Not Applicable</i>
<b>Flammable Limits(UEL)</b>	<i>Not Applicable</i>
<b>Boiling Point</b>	212 °F
<b>Vapor Density</b>	1.1 [ <i>Ref Std: AIR=1</i> ]
<b>Vapor Pressure</b>	17.5 mmHg [ <i>@ 20 °C</i> ]
<b>Specific Gravity</b>	1 [ <i>Ref Std: WATER=1</i> ]
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	32 °F
<b>Solubility in Water</b>	Complete
<b>Evaporation rate</b>	1 [ <i>Ref Std: WATER=1</i> ]
<b>Hazardous Air Pollutants</b>	0 % weight
<b>Volatile Organic Compounds</b>	29 g/l
<b>Kow - Oct/Water partition coef</b>	<i>Not Applicable</i>
<b>Viscosity</b>	1 centipoise

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

**Materials and Conditions to Avoid:**

**10.1 Conditions to avoid**

None known

**10.2 Materials to avoid**

None known

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Hazardous Decomposition or By-Products**

**Substance**

Carbon monoxide  
Carbon dioxide  
Oxides of Sulfur

**Condition**

During Combustion  
During Combustion  
During Combustion

**SECTION 11: TOXICOLOGICAL INFORMATION**

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

**SECTION 12: ECOLOGICAL INFORMATION**

**ECOTOXICOLOGICAL INFORMATION**

Not determined.

**CHEMICAL FATE INFORMATION**

Not determined.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Reclaim if feasible. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

Since regulations vary, consult applicable regulations or authorities before disposal.

**SECTION 14: TRANSPORT INFORMATION**

**ID Number(s):**  
70-2022-8033-8

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

#### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

### STATE REGULATIONS

Contact 3M for more information.

### CHEMICAL INVENTORIES

Contact 3M for more information.

### INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## SECTION 16: OTHER INFORMATION

### NFPA Hazard Classification

Health: 2 Flammability: 0 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

#### Revision Changes:

Section 1: Product use information was modified.  
Section 10: Hazardous decomposition or by-products table was modified.  
Section 9: Vapor density value was modified.  
Section 9: Vapor pressure value was modified.  
Section 9: Boiling point information was modified.  
Section 5: Flammable limits (UE) information was modified.  
Section 5: Flammable limits (LEL) information was modified.  
Section 5: Autoignition temperature information was modified.  
Section 5: Flash point information was modified.  
Section 9: Property description for optional properties was modified.  
Section 9: Specific gravity information was modified.  
Section 9: pH information was modified.  
Section 9: Melting point information was modified.  
Section 9: Solubility in water text was modified.  
Section 1: Initial issue message was modified.  
Section 9: Flash point information was modified.  
Section 9: Flammable limits (LEL) information was modified.  
Section 9: Flammable limits (UEL) information was modified.  
Section 9: Autoignition temperature information was modified.

Section 2: Ingredient table was modified.

Section 8: Exposure guidelines ingredient information was modified.

Section 6: Methods for cleaning up information was modified.

Copyright was modified.

Section 8: Respiratory protection - recommended respirators information was deleted.

Section 8: Respiratory protection - recommended respirators was deleted.

Section 8: Respiratory protection - recommended respirators guide was deleted.

Section 8: Respiratory protection - recommended respirators punctuation was deleted.

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