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### Material Safety Data Sheet

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#### 1 Product Identification

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Tradename:                                      3M™ FireDam™ Intumescent Coating WB 1000  
Product ID:                                      CT-0608-7870-0 CT-0609-0246-8  
Intended Use of Product:                      Coating  
Division:    ZD - 3M Canada Company

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#### 2 Composition/Information on Ingredients

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Ingredient Name	CAS Number	Percentage
NON-HAZARDOUS COMPONENTS	Mixture	70 - 80
TITANIUM DIOXIDE	13463-67-7	7 - 13
MELAMINE	108-78-1	7 - 13
PENTAERYTHRITOL	115-77-5	7 - 13
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE	124-17-4	1 - 5
KAOLIN	1332-58-7	1 - 5
AMORPHOUS SILICA	7631-86-9	1 - 2
SYNTHETIC CRYSTALLINE-FREE SILICA GEL	112926-00-8	0.5 - 1.5

NOTE: Each percentage is expressed as the ratio of the weight of the ingredient to the weight of the controlled product.

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### 3 Hazards Identification

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#### Critical Hazards:

May be absorbed following inhalation and cause target organ effects.

May be absorbed following ingestion and cause target organ effects.

Titanium dioxide (CAS# 13463-67-7) is a possible human carcinogen (group 2B) according to the IARC.

See Sections 7 and 11 for further information.

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### 4 First Aid Measures

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#### Instructions for Eye Contact:

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

#### Instructions for Skin Contact:

Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

#### Instructions for Inhalation:

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

#### Instructions for Ingestion:

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.

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### 5 Fire Fighting Measures

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Flash point:	Not applicable
Lower Explosive Limit (%):	Not applicable
Upper Explosive Limit (%):	Not applicable
Autoignition temperature:	Not applicable
Suitable Extinguishing Media:	Non-combustible. Choose material suitable for surrounding fire.
Exposure Hazards during Fire:	No data available.
Combustion Products from Fire:	Aldehydes - During Combustion; Carbon monoxide - During Combustion; Carbon dioxide - During Combustion; Ammonia - During Combustion; Oxides of Nitrogen - During Combustion;
Fire Fighting Procedures:	Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).
NFPA:	Health 1
NFPA:	Fire 1
NFPA:	Reactivity 0
NFPA:	Unusual Reaction Hazard none
Special Instructions:	Not applicable.

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## 6 Accidental Release Measures

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Personal Precautions:	Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill.
Spill Response:	Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. 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. Collect as much of the spilled material as possible. Clean up residue with detergent and water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

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## 7 Handling and Storage

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Storage Requirements:	No data available.
Incompatible Materials:	Store away from acids; Store away from oxidizing agents. Strong bases;
Ventilation:	Keep container in well-ventilated area.
Use Instructions:	Avoid contact with oxidizing agents. Avoid eye contact with vapours, mists, or spray. Avoid breathing of vapours, mists or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

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## 8 Exposure Controls/Personal Protection

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### Personal Protection

Eye Protection:	Avoid eye contact with vapours, mists, or spray. The following should be worn alone or in combination, as appropriate, to prevent
Eye contact:	Indirect vented goggles;
Hand Protection:	The following glove material(s) are recommended: butyl rubber;
Skin Protection:	Avoid skin contact.
Respiratory Protection:	Avoid breathing of vapours, mists or spray. Select one of the following approved respirators based on airborne Concentration of contaminants and in accordance with regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters. Half facepiece or fullface supplied-air respirator.

Ingestion (Prevention):	Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.
Recommended Ventilation:	Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapour, or spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust ventilation on open containers.

#### Ingredient Exposure Data

##### NON-HAZARDOUS COMPONENTS (Mixture)

Specific Ingredient Data	No data available.
LD50 (rat, oral)	No data available.
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	No data available.
TITANIUM DIOXIDE (13463-67-7)	
Specific Ingredient Data	No data available.
LD50 (rat, oral)	> 24000 mg/kg
LC50 (rat, inhalation/4 hours)	> 6820 mg/m <sup>3</sup>
Exposure Limits	
ACGIH:	TWA 10 mg/m <sup>3</sup> (Table A4)
CMRG:	TWA 5 mg/m <sup>3</sup> (as respirable dust)
MELAMINE (108-78-1)	
LD50 (rat, oral)	3161 mg/kg
LD50 (dermal, rabbit)	> 1 g/kg
LC50 (rat, inhalation/4 hours)	3248 mg/m <sup>3</sup>
Exposure Limits	
AIHA:	TWA 5 mg/m <sup>3</sup> (Respirable)
AIHA:	TWA 10 mg/m <sup>3</sup> (Inhalable)
PENTAERYTHRITOL (115-77-5)	
LD50 (rat, oral)	19500 mg/kg
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	
ACGIH:	TWA 10 mg/m <sup>3</sup> (Particulates not otherwise classified)
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE (124-17-4)	
LD50 (rat, oral)	6500 mg/kg
LD50 (dermal, rabbit)	14500 mg/kg
LC50 (rat, inhalation/4 hours)	72500 mg/m <sup>3</sup>
Exposure Limits	No data available.
KAOLIN (1332-58-7)	
Specific Ingredient Data	No data available.
LD50 (rat, oral)	No data available.
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	
ACGIH:	TWA 2 mg/m <sup>3</sup> (Respirable) (Table A4)
AMORPHOUS SILICA (7631-86-9)	
LD50 (rat, oral)	3160 mg/kg
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	
CMRG:	TWA 3 mg/m <sup>3</sup> as respirable dust

SYNTHETIC CRYSTALLINE-FREE  
SILICA GEL (112926-00-8)

Specific Ingredient Data	No data available.
LD50 (rat, oral)	No data available.
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	No data available.

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## 9 Physical and Chemical Properties

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Physical form, Color, Odour:	Liquid; Viscous; White; Odourless;
Odour Threshold:	No data available.
pH:	Not Available
Boiling point/boiling range:	>= 100 °C
Melting point/melting range:	Not applicable
Vapour pressure:	<= 17.5 mmHg at 20 °C
Water Solubility:	Not Available
Specific gravity:	1.4 Water=1
Vapour density:	Not Available
Volatile organic compounds:	0.26 lb/gal
Evaporation rate:	No data available.
Viscosity:	7000 - 9000 centipoise at 23 °C
Percent Volatile:	2.28 %
Other data:	Solids: 70 %

VOC DATA (Maximum VOC less water and exempt compounds):	< 56 gms/liter
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## 10 Stability and Reactivity

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Conditions to Avoid:	None known.
Materials to Avoid:	Strong acids; Strong bases; Strong oxidizing agents;
Hazardous Decomposition:	Aldehydes - During Combustion; Carbon monoxide - During Combustion; Carbon dioxide - During Combustion; Ammonia - During Combustion; Oxides of Nitrogen - During Combustion;
Stability and Reactivity:	Stable. Hazardous polymerization will not occur.

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## 11 Toxicological Information

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Effects from Eye Contact:	
Mild Eye Irritation:	Signs/symptoms may include redness, pain, and tearing.
Effects from Skin Contact:	Mild Skin Irritation: Signs/symptoms can include localized redness, swelling, and itching.

Effects from 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.
Effects from 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.
Sensitization Information:	No data available.
Carcinogenicity:	Titanium dioxide (CAS# 13463-67-7) is a possible human carcinogen (group 2B) according to the IARC.
Mutagenicity:	No data available.
Reproductive Effects:	No data available.
Component Based Information:	No data available.
Product Based Information:	No data available.
Other Effects & Information:	Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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## 12 Ecological Information

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Environmental Data:	
Persistence/Biodegradability:	The components labeled 'readily biodegradable' are expected to fully degrade in wastewater treatment and in most aerobic water or soil environments.
Readily Biodegradable:	Diethylene Glycol Monobutyl Ether Acetate (124-17-4) The components labeled 'insignificant biodegradation' did not degrade significantly in ready biodegradation tests.
Insignificant biodegradation:	Melamine (108-78-1)
Recalcitrant:	Pentaerythritol (115-77-5) The components labeled 'recalcitrant' are resistant to biodegradation. They are therefore likely to persist in the environment.
Bioaccumulation Potential:	Tests have shown that the components labeled 'Don't bioconcentrate' did NOT bioconcentrate or accumulate in the test organisms
Don't bioconcentrate:	Melamine (108-78-1); Pentaerythritol (115-77-5); Ammonium Polyphosphate (68333-79-9); Synthetic Crystalline-Free Silica Gel (112926-00-8); Silica (7631-86-9)

The components labeled 'Log Kow <3' have measured or calculated log Kow values <3 indicating they are unlikely to bioconcentrate to high concentrations in aquatic organisms by partitioning into lipid tissues.

Log Kow <3:	Diethylene Glycol Monobutyl Ether Acetate (124-17-4)
Ecotoxicity Data:	This substance is likely to have insignificant toxicity to aquatic organisms because polymers generally have high molecular weights, are stable, and are insoluble in water. Polymers generally don't biodegrade and are not likely to bioconcentrate.
Polymer:	Vinyl Acetate/Ethylene Copolymer (Trade Secret)

There is insufficient component information to calculate the ecotoxicity of this product.

There is insufficient component information to calculate the wastewater treatment system effects of this product.

The components labeled 'No information' have no environmental fate and effects data available.

No Information: Kaolin (1332-58-7); Acetic Acid Ethenyl Ester, Polymer with Ethene and Sodium Ethenesulfonate (26266-19-3)

The components labeled 'Inorganic' do not biodegrade, but may be removed by other mechanisms.

Inorganic: Titanium Dioxide (13463-67-7); Silica (7631-86-9); Ammonium Polyphosphate (68333-79-9);  
Synthetic Crystalline-Free Silica Gel (112926-00-8)

Ecofate Data: Not determined.

Special statements for 2001/58/EC: Handling this product according to recommendations is important to minimize re-lease to the environment. It is recommended that the environmental information in-cluded in this section be used to help determine appropriate handling of this product for your uses.

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## 13 Disposal Considerations

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Product as Sold: Incinerate in an industrial or commercial facility in the presence of a combustibile material.  
As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

Product Packaging: No data available.

Special Instructions: Since regulations vary, consult applicable regulations or authorities before disposal.

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## 14 Transport Information

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### Transportation of Dangerous Goods

TDG Classification: Non-Regulated Material

Special Information: Contact 3M for more information.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation clas-sifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classifica-tion and not the packaging, labeling, or marking requirements. The original 3M package is certified for Canadian ground ship-ment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

### International Dangerous Goods Classification

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## 15 Regulatory Information

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WHMIS Classification: D2A  
NOTE: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.  
Product Certifications: The product on this MSDS, or all its components, is included on the following countries' chemical inventories, as noted:  
CICS - Chinese Inventory of Chemical Substances  
TSCA - Toxic Substances Control Act (USA)

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## 16 Other Information

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Reason for Reissue: The following Sections and topics have been updated or revised:  
Section 9 - Physical and Chemical Properties;

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