



MATERIAL SAFETY DATA SHEET

MOS – Component A

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
NOT REGULATED		NOT REGULATED

SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: MOS – Component A
Use: Fluid applied cold adhesives.

Code of MSDS: CA U DRU SS FS 088 A
Formula Number : Not applicable
Revision date: March 16, 2006
Revised by: Marie-Claude Fontaine, Health and Safety Supervisor
 (800) 567-1492
mcfontaine@soprema.ca

Distributor: Soprema USA
 310 Quadral Drive
 Wadsworth (Ohio) 44281
 UNITED STATES
 Tel.: (800) 356-3521

In case of emergency:
 SOPREMA (8:00am to 5:00pm – Eastern time): (800) 356-3521
 CHEMTREC (USA) (24h.): (800) 424-9300
 Poison Control Centre: Consult local telephone directory

EMERGENCY OVERVIEW!!!

White or off-white colored crystals, odourless. May cause kidney damage. Possible nausea and vomiting by ingestion. May cause irritation of skin and eyes. May cause slight irritation and transient cornea injury. Dust may be irritating but not likely to cause injury. Inhalation of fumes may cause metal-fume fever.

SECTION II. COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Magnesium Chloride, Hexahydrate	7791-18-6	100	Not published	Not published

SECTION III. POTENTIAL HEALTH EFFECTS

HEALTH HAZARDS: (*Acute and Chronic*)

May cause kidney damage.

SKIN CONTACT:

May cause irritation. (1)

EYE CONTACT:

May cause mild eye irritation. Slight irritation may cause transient cornea injury. (1)

INHALATION:

May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. (1)

CARCINOGENICITY:

N/A (1)

INGESTION:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea.. (1)

OTHER PRECAUTIONS:

Not for food or drug use. Do not take internally. (1)

SECTION IV. FIRST AID MEASURES

SKIN CONTACT:

Remove contaminated clothing. Wash thoroughly with soap and water. If irritation persists, get medical attention.

EYE CONTACT:

Flush thoroughly with water for at least 15 minutes. If irritation persists, get medical attention.

INHALATION:

In case of gas or vapour inhalation, move victim to fresh air. If breathing is difficult, give oxygen. If breathing stops, give respiratory assistance. Obtain medical assistance.

INGESTION:

Do not induce vomiting. immediately contact local poison control centre. Should vomiting occur, be sure to keep the victim's head below hips to avoid aspiration of vomit into the lungs. Maintain the victim at rest and obtain immediate medical attention.

SECTION V. FIRE-FIGHTING MEASURES

FLAMMABILITY: Non-flammable

FLASH POINT: Not applicable

INFLAMMABILITY LIMITS IN AIR: (% in volume) Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Material will not burn. Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

None

COMBUSTION PRODUCTS:

Hydrogen chloride and chlorine may be generated by thermal decomposition or combustion. Toxic and/or irritating gases or fumes can emanate from empty containers when submitted to high temperatures

EXTINGUISHING MEDIA:

Foam anti-alcohol or universal, dry chemical powder, CO₂, foam.

SECTION VI. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK:

No special precautions. Sweep up and return to container.

SECTION VII. HANDLING AND STORAGE

HANDLING:

Avoid contact with eye, skin or clothing. Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Minimize dust generation and accumulation. Practice reasonable care and precautions.

STORAGE:

KEEP OUT OF THE REACH OF CHILDREN. Material is deliquescent, so caking may occur with moisture and long time storage.

SECTION VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

PROTECTIVE GLOVES: Wear appropriate protective gloves to prevent skin exposure.

RESPIRATORY PROTECTION: Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH approved respirator when necessary.

EYES: Safety glasses recommended.

VENTILATION: Local exhaust: ventilation for nuisance dust.

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

ODOUR AND APPEARANCE:	White or off-white colored crystals, odorless
VAPOUR DENSITY (air = 1):	Not available
VAPOUR PRESSURE:	Not available
EVAPORATION RATE (Butyl acetate = 1):	Not available
BOILING POINT (760 mm Hg):	Decomposes
MELTING POINT:	Loses water of hydration Decomposes at 116-118°C
SPECIFIC GRAVITY (H₂O = 1):	1.569
SOLUBILITY IN WATER (20°C):	Cold 167 gm/100 cc Hot 367 gm/100 cc

SECTION X. STABILITY AND REACTIVITY

STABILITY:	Will dehydrated at 100°C and emit hydrogen chloride fume at 110° C.
INCOMPATIBILITY:	Solution can be corrosive to some metals. Explosive when combined with 2-furan percarboxylic acid. Magnesium chloride dissolves in aqueous solutions giving off considerable ammounts of heat; Incompatible with strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS:	Hydrogen chloride, chlorine when heated at more than 118°C.
HAZARDOUS POLYMERISATION:	Will no occur.
CONDITIONS TO AVOID:	None.

SECTION XI. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:	
LD50 (oral, mouse):	7600 mg/kg.
LD50 (oral, rat):	8100 mg/kg.
IRRITANCY:	No data available.
SENSITIZER:	No data available.
CARCINOGEN:	Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
TERATOGEN:	No data available.
REPRODUCTIVE TOXICITY:	No data available.
MUTAGEN:	No data available.
SYNERGISTIC PRODUCTS:	No data available.

SECTION XII. ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:	Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial and federal regulations may require that environmental and / or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life.
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SECTION XIII. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:	Dispose in accordance with all applicable federal, state and local environment regulations.
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SECTION XIV. TRANSPORT INFORMATION

NAME OF PRODUCT:	MOS – Component A	IDENTIFICATION NUMBER:	Not Regulated
CLASSIFICATION (TDG - DOT):	Not regulated	SHIPPING NAME:	Not Regulated
CONTAINERS FOLLOW THE STANDARDS OF:		PACKING GROUP:	Not Regulated
Canada:	CAN / CGSB-43.150-97		
USA:	CFR 49 parts 100 to 199		

SECTION XV. REGULATORY INFORMATION

WHMIS: Not controlled.
DSL: No data available.
TSCA: Not listed in the Toxic Substances Control Act Inventory (TSCA – United States).

HMIS (USA):	Health Hazard:	1	NFPA (USA):	Fire Hazard:	0
	Fire Hazard:	0		Reactivity:	0
	Reactivity:	0		Health:	1
	Personal protection:	2		Specific Hazard:	0

SECTION XVI. OTHER INFORMATION**Glossary:**

ACGIH: American Conference of Governmental Industrial Hygienists
ANSI: American National Standards Institute
ASTM: American Society for Testing and Materials
CAS: Chemical Abstract Services
CFR: Code of Federal Regulations (United States)
CSA: Canadian Standardisation Association
DOT: Department of Transportation (United States)
DSL: Domestic Substances List (Canada)
EPA: Environmental Protection Agency (United States)
HMIS: Hazardous Material Information System
IARC: International Agency for Research on Cancer
LC50: (Lethal concentration₅₀) Concentration of a substance in air that causes death of 50% mortality of a defined animal population
LD50: (Lethal dose₅₀) Single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause the death of 50% of a defined animal population.
NFPA: National Fire Protection Association (United States)
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety & Health Administration (United States)
PEL: Permissible Exposure Limit
RCRA: Resource Conservation and Recovery Act (United States)
RTECS: Registry of Toxic Effects of Chemical Substances
TDG: Transportation of Dangerous Goods
TLV: Threshold Limit Value
TWA: Time-weighted average
TSCA: Toxic Substances Control Act (United States)
WHMIS: Workplace Hazardous Materials Information System (Canada)

References:

(1) Material Safety Data Sheet of supplier.

This MSDS has been prepared by: Marie-Claude Fontaine
For information: SOPREMA Canada 1-800- 567-1492

The Material Safety Data Sheets of SOPREMA are available on Internet at the following site: <http://www.soprema.ca>

Justification of the update:

- New product.

This MSDS contains all the information required by ANSI Z-400.1-1998 standard (United States), by regulation 29 CFR Part 1910.1200 of the Hazard Communication Standard of OSHA, and is in accordance with standard DORS/88-66 OF WHMIS Canada.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier or any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



MATERIAL SAFETY DATA SHEET

MOS – Component B

Disponible en français

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
Not Controlled		Not Regulated

SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: MOS – Component B
Use: Fluid applied cold adhesives.

Code of MSDS: CA U DRU SS FS 089 A
Formula Number : Not applicable
Revision date: March 16, 2006
Revised by: Marie-Claude Fontaine, Health and Safety Supervisor
 (800) 567-1492
mcfontaine@soprema.ca

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 310 Quadral Drive
 Wadsworth (Ohio) 44281
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 CHEMTREC (USA) (24h.): (800) 424-9300
 Poison Control Centre: Consult local telephone directory

EMERGENCY OVERVIEW!!!

May cause irritation of eyes, skin or nasal passages. May cause irritation of the upper respiratory passages. Inhalation of magnesium oxide fume may cause metal fume fever, however, no evidence of metal fume fever resulting from industrial exposure to magnesium oxide fume has been found. Symptoms of metal fume fever include: cough, tightness of chest, sweating, headache, fever, muscle aches, nausea, vomiting and tiredness.

SECTION II. COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Magnesium Oxide	1309-48-4	94-98	10 mg/m ³	Not published
Calcium Oxide	1305-78-8	1.5-4	2 mg/m ³	Not published
Magnesium Oxide Fume *	1309-48-4		10 mg/m ³	Not published

* Magnesium Oxide Fume may be generated if product is heated to volatilization.

SECTION III. POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY:

Skin, eye, inhalation, ingestion. (1)

INHALATION:

May cause irritation of the upper respiratory passages. Inhalation of magnesium oxide fume may cause metal fume fever, however, no evidence of metal fume fever resulting from industrial exposure to magnesium oxide fume has been found. Symptoms of metal fume fever include; cough, tightness of chest, sweating, headache, fever, muscle aches, nausea, vomiting and tiredness. (1)

SKIN CONTACT:

May cause irritation of skin or nasal passages. (1)

EYE CONTACT:

May cause irritation of eyes. (1)

SECTION IV. FIRST AID MEASURES

SKIN CONTACT:

Not expected to cause a problem. However, if irritation occurs, flush affected area with water. If irritation persists, obtain medical advice.

EYE CONTACT:

If irritation occurs, immediately flush eyes with water for at least 15 minutes. Obtain medical attention.

INHALATION:

If symptoms of exposure are experienced (see Hazardous Ingredients), remove victim to fresh air. Obtain medical attention.

INGESTION:

Rinse mouth with and/or drink water if conscious. Do not induce vomiting. Immediately contact local poison control centre. Should vomiting occur, be sure to keep the victim's head below hips to avoid aspiration of vomit into the lungs. Maintain the victim at rest and obtain immediate medical attention.

SECTION V. FIRE-FIGHTING MEASURES

FLAMMABILITY: Not flammable

EXPLOSION DATA: Sensitivity to mechanical impact: No special sensitivity
Sensitivity to static charge: No special sensitivity

FLASH POINT METHOD: Not applicable

AUTO-IGNITION TEMPERATURE: Not applicable

INFLAMMABILITY LIMITS IN AIR: Not applicable

HAZARDOUS COMBUSTION PRODUCTS:

N/A

EXTINGUISHING AGENTS:

Foam anti-alcohol or universal, dry chemical powder, CO₂, foam.

SECTION VI. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK:

Pick up spills without creating dust. Place material into a dry container and cover. Hold in sealed container for disposal.

SECTION VII. HANDLING AND STORAGE

HANDLING:

Avoid inhalation of dust. Avoid contact with eye, skin or clothing. Wash thoroughly after handling. Wash hands before eating. Clean area frequently to avoid build up of dust. Wear applicable personal protective equipment. Practice reasonable care and precautions.

STORAGE:

Store in a dry area in sealed containers. Keep away from incompatible materials such as inter halogens and strong acids. Product reacts exothermically with water to form magnesium hydroxide and heat/steam.

SECTION VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

SKIN: Wear coveralls.

RESPIRATORY: If adequate engineering controls are not available, wear respiratory approved by NIOSH/MSHA for dusts/mists, as applicable. If magnesium oxide fumes are likely to be produced then ensure that a NIOSH/MSHA respirator approved for fumes is used. In conditions of oxygen deficiency, or where airborne concentrations exceed 100 mg/m³, wear positive pressure or pressure demand supplied air respirator protection or SCBA.

EYES: Wear safety goggles in high dust concentrations, unless full face-piece respiratory protection is worn.

ENGINEERING CONTROLS: Wherever possible use engineering controls to minimize inhalation of dust. Engineering controls may include; process enclosure, local exhaust ventilation, and handling of material in a wet state. Local exhaust ventilation with or without process enclosure is important where large quantities are handled, as in bagging operations.

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
ODOUR AND APPEARANCE:	White to light brown, odorless.
VAPOUR DENSITY (air = 1):	Not available
VAPOUR PRESSURE:	Not available
EVAPORATION RATE:	Not available
BOILING POINT:	3600°C
MELTING POINT:	Approximately 2800°C
SPECIFIC GRAVITY:	Approximately 3.58 g/cc
WATER SOLUBILITY AT 20°C:	6 g/100 ml
pH:	10.3

SECTION X. STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
INCOMPATIBILITY:	Magnesium oxide reacts violently or ignites with interhalogens such as chlorine trifluoride (ClF ₃) or bromine pentafluoride (BrF ₅), and incandescently with phosphorus pentachloride (PCl ₅).
HAZARDOUS DECOMPOSITION PRODUCTS:	Magnesium fume may be generated if heated to volatilization. Heat and steam may be generated upon contact with water.

SECTION XI. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:	No data available. (1)
IRRITANCY:	May cause irritancy of eyes, skin or nasal passages. (1)
SENSITIZER:	No data available. (1)
CARCINOGEN:	Magnesium oxide is not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP or OSHA. (1)
TERATOGEN:	No data available. (1)
REPRODUCTIVE TOXIN:	No data available. (1)
MUTAGEN:	No data available. (1)
SYNERGISTIC PRODUCTS:	None known. (1)

SECTION XII. ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:	Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial and federal regulations may require that environmental and / or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life.
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SECTION XIII. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:	Dispose in accordance with all applicable Federal, Provincial, State and local environment regulations.
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SECTION XIV. TRANSPORT INFORMATION

NAME OF PRODUCT:	MOS – Component B	IDENTIFICATION NUMBER:	Not regulated
CLASSIFICATION (TDG - DOT):	Not regulated	SHIPPING NAME:	Not regulated
CONTAINERS FOLLOW THE STANDARDS OF:		PACKING GROUP:	Not regulated
Canada:	CAN / CGSB-43.150-97		
USA:	CFR 49 parts 100 to 199		
This product has been classified in accordance with the hazard criteria of the CPR and this MSDS contains all the information required by the CFR.			

SECTION XV. REGULATORY INFORMATION

WHMIS: Not controlled.
DSL: All constituents of this product are included on the Domestic Substances List (DSL – Canada)
TSCA: All constituents of this product are included on the Toxic Substances Control Act Inventory (TSCA – United States).

HMIS (USA):	Health Hazard:	1	NFPA (USA):	Fire Hazard:	0
	Fire Hazard:	0		Reactivity:	0
	Reactivity:	0 (with water)		Health:	1
	Personal protection:	2		Specific Hazard:	0

SECTION XVI. OTHER INFORMATION**Glossary:**

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ANSI: American National Standards Institute
ASTM: American Society for Testing and Materials
CAS: Chemical Abstract Services
CFR: Code of Federal Regulations (United States)
CSA: Canadian Standardisation Association
DOT: Department of Transportation (United States)
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EPA: Environmental Protection Agency (United States)
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