



Product Name: HARDENING COMPOUND

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

HARDENING COMPOUND

Synonyms

Michel's HARDENING COMPOUND

Product Use

Embalming Powder.

Restrictions on Use

This product should only be used by Licensed Embalmers.

Details of the supplier of the safety data sheet

Dr. G.H. Michel - Restor-Skin Company

PO Box 337, 202 Sixth Street

East Brady, PA 16028

Phone: 1-800-635-3403

Emergency Phone #: 1-724-526-3565

E-mail: fourcogs16028@yahoo.com

Product Code

Product Size(s): 25# (3 gal. pail) & 40# (5 gal. pail)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Combustible Dust -

Acute Toxicity - Oral - Category 4

Acute Toxicity - Inhalation - Dust/Mist - Category 4

Serious Eye Damage/Eye Irritation - Category 2A

Respiratory Sensitization - Category 1A

Skin Sensitization - Category 1A

Carcinogenicity - Category 1A

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 1 (lungs, kidneys, nervous system, respiratory system)

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (kidneys, nervous system, respiratory system)

Hazardous to the Aquatic Environment - Acute - Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Harmful if swallowed.
 Harmful if inhaled.
 Causes serious eye irritation.
 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.
 May cause allergic skin reaction.
 May cause cancer.
 May damage fertility or the unborn child.
 Causes damage to organs.
 Causes damage to organs through prolonged or repeated exposure.
 Toxic to aquatic life.

Precautionary Statement(s)

Prevention

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Use only outdoors or in a well-ventilated area.
 Wear eye protection/face protection.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Wear respiratory protection.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.
 Do not eat, drink or smoke when using this product.
 Avoid release to the environment.
 Wear protective gloves.

Response

If exposed: Call a POISON CENTER or doctor/physician.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 Rinse mouth.
 Call a POISON CENTER or doctor if you feel unwell.

Storage

Store locked up.

Disposal

Dispose of in accordance with all applicable federal, state and local regulations.

Statement of Unknown Toxicity

97.62% of the mixture consists of ingredient(s) of unknown acute toxicity.

Other Hazards

Dust-air mixtures may pose a dust explosion hazard.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
30525-89-4	Paraformaldehyde	1-5
10034-76-1	Calcium sulfate hemihydrate	>90
14808-60-7	Quartz	<0.5
Not available	Trade secret	1-5

Component Related Regulatory Information

The chemical identity and/or percentage of composition is being withheld as a trade secret.

Section 4 - FIRST AID MEASURES

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention, if needed.

Skin

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

IF SWALLOWED: Immediately call a doctor.

Most Important Symptoms/Effects

Acute

Harmful by inhalation and if swallowed. Causes serious eye irritation. May cause allergic skin reaction. May cause allergic or asthmatic symptoms or breathing difficulties if inhaled. Causes damage to organs: lungs, kidney, nervous system, respiratory system,

Delayed

May cause allergic reaction. May cause cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: kidney, nervous system, respiratory system

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water.

Unsuitable Extinguishing Media

Do not use water jet.

Special Hazards Arising from the Chemical

Slight fire hazard.

Hazardous Combustion Products

Oxides of carbon, formaldehyde vapors.

Fire Fighting Measures

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Use methods suitable to fight surrounding fire. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Avoid inhalation of material or combustion by-products.

Special Protective Equipment and Precautions for Firefighters

Wear personal protective clothing and equipment such as self-contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Remove all ignition sources. Stop leak if you can do it without risk. Absorb spill with inert material. Shovel material into appropriate container for disposal. Do not touch or walk through spilled product. Avoid breathing vapors or fumes. Avoid release to the environment.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from heat, sparks, and flames. Avoid generating dust or fumes. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing and eye/face protection. Do not breathe dust/ fume/ gas/mist/ vapors/spray. Wear eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up.

Keep away from heat, sparks and flame. Keep away from incompatible materials.

Incompatible Materials

Caustic soda, strong acid, soda ash, other alkalis, amines, oxygen, hydrogen peroxide, other strong oxidizing agents.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Calcium sulfate hemihydrate	10034-76-1
ACGIH:	10 mg/m ³ TWA inhalable fraction
Quartz	14808-60-7
ACGIH:	0.025 mg/m ³ TWA respirable fraction
NIOSH:	0.05 mg/m ³ TWA respirable dust
	50 mg/m ³ IDLH respirable dust
OSHA (US):	((30)/(%SiO ₂ + 2) mg/m ³ TWA) total dust ; ((250)/(%SiO ₂ + 5) mppcf TWA) respirable fraction ; ((10)/(%SiO ₂ + 2) mg/m ³ TWA) respirable fraction
Mexico:	0.1 mg/m ³ TWA LMPE-PPT respirable fraction
Trade secret	Not available
ACGIH:	2 mg/m ³ TWA inhalable fraction
	6 mg/m ³ STEL inhalable fraction
NIOSH:	5 mg/m ³ TWA
Mexico:	5 mg/m ³ TWA LMPE-PPT

EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures

There are no biological limit values for any of this product's components.

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of these product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical safety goggles with a face shield to protect against skin and eye contact when appropriate.

Skin Protection

Wear appropriate work clothing.

Respiratory Protection

Wear respiratory protection.

Glove Recommendations

Wear gloves appropriate for type of operation.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Off White Powder	Physical State	solid
Odor	pungent	Color	off-white
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Freezing point	Not available	Evaporation Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	0.2%	Partition coefficient: noctanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	Not available	Molecular Weight	Not available

Other Information

No additional information is available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions

Hazardous polymerization is not expected to occur.

Conditions to Avoid

Avoid formation of dust. Avoid sparks or flame and incompatible materials. Keep away from incompatible materials.

Incompatible Materials

Caustic soda, strong acid, soda ash, other alkalis, amines, oxygen, Hydrogen peroxide, other strong oxidizing agents.

Hazardous decomposition products

Oxides of carbon, formaldehyde vapors.

Thermal decomposition products

Oxides of carbon, formaldehyde vapors.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Harmful if inhaled. May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

Skin Contact

Causes mild skin irritation. Causes an allergic skin reaction.

Eye Contact

Causes serious eye irritation.

Ingestion

May be harmful if swallowed.

Acute and Chronic Toxicity**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Paraformaldehyde (30525-89-4)

Oral LD50 Rat 800 mg/kg

Inhalation LC50 Rat 1070 mg/m³ 4 h

Quartz (14808-60-7)

Oral LD50 Rat 500 mg/kg

Trade secret (Not available)

Oral LD50 Rat 3493 mg/kg

Dermal LD50 Rabbit >10000 mg/kg

Immediate Effects

Harmful by inhalation and if swallowed. Causes serious eye irritation. May cause allergic or asthmatic symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Causes damage to organs: Nervous System, kidney, respiratory system.

Delayed Effects

May cause allergic reaction. Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: Nervous System, kidney, respiratory system.

Irritation/Corrosivity Data

Causes serious eye irritation.

Respiratory Sensitization

May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

May cause cancer.

Quartz	14808-60-7
ACGIH:	A2 - Suspected Human Carcinogen
IARC:	Monograph 100C [2012] ; Monograph 68 [1997] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen
DFG:	Category 1 (causes cancer in man, alveola fraction)
OSHA:	Present (respirable size)
NIOSH:	potential occupational carcinogen
Trade secret	Not available
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No information available.

Tumorigenic Data

No information available.

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity –

Single Exposure Nervous System, kidney, respiratory system, lungs

Specific Target Organ Toxicity - Repeated Exposure

Nervous System, respiratory system, kidney

Aspiration hazard

No data available for this product.

Medical Conditions Aggravated by Exposure

No data available.

Additional Data

No additional information is available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life.

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with federal, state, provincial, and local regulations. The responsibility for proper waste disposal lies with the owner of the waste.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated as a hazardous material

IATA Information:

UN#: Not regulated as a hazardous goods.

ICAO Information:

UN#: Not regulated as a hazardous goods.

IMDG Information:

UN#: Not regulated as a hazardous goods.

TDG Information:

UN#: Not regulated as a hazardous goods.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Paraformaldehyde	30525-89-4
CERCLA:	1000 lb final RQ ; 454 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** No **Reactivity:** No U.S.

State Regulations

The following components appear on one or more of the following state hazardous substances list:

Component	CAS	CA	MA	MN	NJ	PA
Paraformaldehyde	30525-89-4	Yes	Yes	No	Yes	Yes
Quartz	14808-60-7	No	Yes	Yes	Yes	Yes
Trade secret	Not available	Yes	Yes	Yes	No	Yes

Not listed under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Paraformaldehyde	30525-89-4	1 %
Quartz	14808-60-7	1 %
Trade secret	Not available	1 %

Component Analysis - Inventory Paraformaldehyde (30525-89-4)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX	TW
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Calcium sulfate hemihydrate (10034-76-1)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX	TW
No	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	Yes

Quartz (14808-60-7)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Trade secret (Not available)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX	TW
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 28, 2016 / SDS Update Rev 1: October 10, 2016 / SDS Update Rev 2: May 17, 2018

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC

- International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; JP - Japan; Kow - Octanol/water partition coefficient; KECI - Korea Existing Chemicals Inventory; KECL – Korea Existing Chemicals List; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorization, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information Disclaimer:

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