MATERIAL SAFETY DATA SHEET
IMPERIAL Finish Plaster

MSDS # 53-250-007

United States Gypsum Company
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A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
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SECTION 1
CHEMICAL PRODUCT AND IDENTIFICATION

PRODUCT(S): IMPERIAL Finish Plaster
CHEMICAL FAMILY: A mixture of Calcium Sulfate Hemihydrate ($CaSO_4 \bullet ½H_2O$) and sand

SECTION 2
COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m^3)	PEL(mg/m^3)	CAS NUMBER
Plaster of Paris (CaSO4•½H2O)	>65	10	15(T)/5(R)	26499-65-0
Crystalline Silica (Sand)	<25	0.05(R)	0.1(R)	14808-60-7
Gypsum (CaSO4•2H2O)	<10	10	15(T)/5(R)	13397-24-5

(T) – Total (R) – Respirable (NE) – Not Established

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

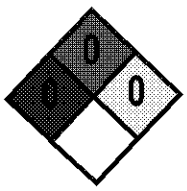
Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL)

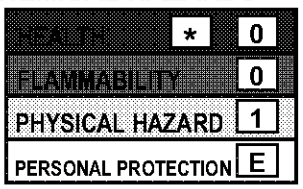
SECTION 3
HAZARD IDENTIFICATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:
Health: 0
Fire: 0
Reactivity: 0



HIMS Ratings:
Health: *0
Fire: 0
Reactivity: 1



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

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.

*Respirable crystalline silica can cause lung disease and/or cancer. E – Safety glasses, gloves and dust respirator

EMERGENCY OVERVIEW

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. When mixed with water, this material hardens and becomes very hot – sometimes quickly. **DO NOT** attempt to make a cost enclosing any part of the body using this material.

Respirable crystalline silica is classified as a carcinogen and long term breathing of respirable crystalline silica dust can cause silicosis and/or lung cancer. Take necessary measures to avoid exposure to respirable crystalline silica.

SECTION 3 HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

ACUTE:

Eyes: Direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

Skin: When mixed with water, this material hardens and becomes very hot – sometimes quickly. **DO NOT** attempt to make a cost enclosing any part of the body using this material. Failure to follow these instructions can cause severe burns that may require surgical removal of affected tissue or amputation of limb. Direct, prolonged or repeated contact with the skin may cause irritation. Rinse with water until skin is free of material to avoid irritation, then wash skin thoroughly with mild soap and water. Repeated exposure may dry skin.

Inhalation: Dust exposures generated during the handling of the product may irritate eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

Ingestion: Unlikely to occur, but if ingested may cause gastric disturbances if swallowed. Plaster of paris is non-toxic, however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region. See First Aid Measures - Ingestion (Section 4).

CHRONIC:

Inhalation: Prolonged and repeated exposure to free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. Exposure to respirable crystalline silica during the use of this product has not been tested. Exposures to respirable crystalline silica might be possible during the normal use of this product. Actual exposure levels must be determined by workplace hygiene testing.

Skin: Repeated contact may dry the skin, causing cracking or dermatitis. Sensitive individuals may develop an allergic dermatitis.

Eyes: No known effects.

Ingestion: No known effects.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4
FIRST AID MEASURES

FIRST AID PROCEDURES:

Eyes: Flush thoroughly with water for 15 minutes. If irritation persists, consult physician.

Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.

Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.

Ingestion: This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician. This product contains gypsum plaster. Plaster of paris hardens and, if ingested, may result in obstruction of the gut, especially the pyloric region. Drinking gelatin solutions or large volumes of water may delay setting.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

Notes to Physician: Treatment should be directed at the control of symptoms and the clinical condition.

SECTION 5
FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.		
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).		
Unusual Fire and Explosion Hazards:	None		
Hazardous Combustion Products:	Above 1450º C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO_2).		
Flash Point:	None Known	**Auto Ignition:**	Not Applicable
Method Used:	Not Applicable	**Flammability Classification:**	Not Applicable, may act as a fire retardant
Upper Flammable Limit (UFL):	Not Applicable		
Lower Flammable Limit (LFL):	Not Applicable	**Rate of Burning:**	Not Applicable

SECTION 6
ACCIDENTAL RELEASE MEASURES

CONTAINMENT:
No special precautions. Wear appropriate personal protection (See Section 8).

CLEAN-UP:
Use normal clean up procedures. If dry, shovel or sweep up material from spillage and place collected material into a container for recovery or waste disposal. Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Wear appropriate protective equipment. Maintain proper ventilation. If vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. If sweeping is necessary, use dust suppressant. Do not use compressed air for clean up. These procedures will help minimize potential exposures. If washed down, may plug drains. If already mixed with water, scrape up and place in container.

DISPOSAL:
Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters. Slurry may plug drains. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7
HANDLING AND STORAGE

HANDLING:
Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).
Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8).
Minimize dust generation and accumulation. Use good safety and industrial hygiene practices.

STORAGE:
Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10).
Dew point conditions or other conditions causing presence of liquid will harden this material during storage.
Protect product bags or containers from physical damage and weather.
Keep bags or other containers tightly closed to prevent moisture contact.

SECTION 8
EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.

If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2).

Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:

Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face: Wear eye protection (safety glasses or goggles) to avoid possible eye irritation.
Skin: Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.
General: Selection of Personal Protective Equipment will depend on environmental working conditions & operations.

SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off white	**Viscosity**	Not Applicable
Physical State	Solid (powder)	**Solubility (H2O)**	0.67-0.88 g/100 g solution
Odor	Low to no odor	**Boiling Point**	Not Applicable
pH @ 25 ° C	~7	**Melting Point**	Not Applicable
Particle Size	Varies	**Softening Point**	Not Applicable
Molecular Weight	Mixture	**Freezing Point**	Not Applicable
Bulk Density	Not Determined	**Vapor Density (Air = 1)**	Not Applicable
Specific Gravity (H_20 = 1)	2.5	**Vapor Pressure (mm Hg)**	Not Applicable
Percent Volatile	Zero	**Evaporation Rate (BuAc = 1)**	Not Applicable
VOC Content	Zero		

SECTION 10
CHEMICAL STABILITY AND REACTIVITY

STABILITY: Stable in dry environments. Dew point conditions or other conditions causing presence of liquid will harden this material.

CONDITIONS TO AVOID: Contact with acids, water, high humidity, and incompatibles.

INCOMPATIBILITY: Acids. Exposure to water and acids must be supervised because the reactions are vigorous and produce large amounts of heat. Crystalline silica in contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires. Crystalline silica will dissolve in hydrofluoric acid and produce a corrosive gas – silicon tetrafluoride.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: Above 1450° C - calcium oxide (CaO) and sulfur dioxide SO_2

SECTION 11
TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

The sulfate ion has caused gastro-intestinal disturbance in humans following large oral doses.

Limited studies involving the repeated inhalation of an (unspecified) calcium sulfate failed to identify any particular target organs in monkeys, rats and hamsters.

No evidence of mutagenicity was found in Ames bacterial tests.

Plaster of paris: Oral LD50 rat > 5000 mg/kg
Dermal LD50 – None Determined
Skin Irritation LD50 – None Determined
Eye Irritation LD50– None Determined

LD_{50}: Not Available for product.
LC_{50}: Not Available for product.

CHRONIC EFFECTS / CARCINOGENICITY:

Respirable crystalline silica: Chronic overexposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

Exposure to respirable crystalline silica during the use of this product has not been tested. Exposures to respirable crystalline silica might be possible during the normal use of this product. Actual exposure levels must be determined by workplace hygiene testing.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12
ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology.

Ecotoxicity value: Not determined.

SECTION 13
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Slurry may plug drains.

SECTION 14
TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name:	Same as product name.
Hazard Class:	Not classified
UN/NA #:	None. Not classified.
Packing Group:	None.
Label (s) Required:	Not applicable.
GGVSec/MDG-Code:	Not classified.
ICAO/IATA-DGR:	Not applicable.
RID/ADR:	None
ADNR:	None

SECTION 15
REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Plaster of Paris ($CaSO_4 \cdot \frac{1}{2}H_2O$)	>65	NL	NL	NL	NL	NL	NL
Crystalline Silica (Sand)	<25	NL	NL	NL	NL	NL	NL
Gypsum ($CaSO_4 \cdot 2H_2O$)	<10	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed
SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)
SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)
SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313
CERCLA Hazardous Substances: Reportable Quantity (RQ)
CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)
RCRA Hazardous Waste: RCRA hazardous waste code

Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

SECTION 15 REGULATORY INFORMATION (continued)

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. All components of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification:
Plaster of Paris ($CaSO_4 \cdot \frac{1}{2}H_2O$)	>65	Not Listed	Not Listed
Crystalline Silica (Sand)	<25	1406	D2A
Gypsum ($CaSO_4 \cdot 2H_2O$)	<10	Not Listed	Not Listed

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #
WHMIS Classification: Workplace Hazardous Material Information System

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. See Section 11 : Toxicology Information for detailed information

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Respirable Crystalline Silica	1	1	A2	Listed

See Section 11 : Toxicology Information for detailed information

IARC – International Agency for Research on Cancer (World Health Organization)
1- Carcinogenic to humans
2A – Probably carcinogenic to humans
2B – Possibly carcinogenic to humans
3 - Not classifiable as a carcinogen
4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS)
1- Known to be carcinogen
2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists
A1 – Confirmed human carcinogen
A2 – Suspected human carcinogen
A3 – Animal carcinogen
A4 - Not classifiable as a carcinogen
A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

SECTION 16
OTHER INFORMATION

Label Information:

ΔWARNING!

When mixed with water, this material hardens and becomes very hot – sometimes quickly. **DO NOT** attempt to make a cost enclosing any part of the body using this material. Failure to follow these instructions can cause severe burns that may require surgical removal of affected tissue or amputation of limb.
Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. Avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Respirable crystalline silica dust can cause permanent lung damage, cancer, and other diseases. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician.
Product safety information: (800) 507-8899 or www.usg.com
KEEP OUT OF REACH OF CHILDREN.

Key/Legend

TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
CAA	Clean Air Act
EPCRA	Emergency Planning & Community Right-to-know Act
RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
UN/NA#	United Nations/North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

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