

# FIRE MOISTURE RESISTANT (FMR) GYPSUM BOARD

## 1. IDENTIFICATION

### Product identifier

USG Middle East Fire Moisture Resistant (FMR) Gypsum Board

### Synonym(s)

USG ME Fire Moisture Resistant (FMR) Gypsum Board

### Recommended use

Interior use.

### Recommended restrictions

Use in accordance with manufacturer's recommendations.

### Manufacturer / Importer / Supplier / Distributor information/Company name

USG Middle East Ltd

7410 (WASIL) Street #23, Cross 76 (Right)

Second Industrial City

Dammam 34326 - 4201, Kingdom of Saudi Arabia

Tel: +966 13 812 0995 / Fax: +966 13 812 1029

E-mail: info@usgme.com / marketing@usgme.com

Website: <https://www.usgme.com>

## 2. HAZARD(S) IDENTIFICATION

### Physical hazards

Not classified.

### Health hazards

Not classified.

### OSHA defined hazards

Not classified.

### Label elements

#### Hazard symbol

None.

#### Signal word

None.

#### Hazard statement

None.

#### Precautionary statement

##### Prevention

Observe good industrial hygiene practices.

##### Response

Get medical attention/advice if you feel unwell.

##### Storage

Store as indicated in Section 7.

##### Disposal

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

### Hazard(s) not otherwise classified (HNOC)

None known.

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

### Mixtures

Chemical name	CAS number	%
Calcium sulfate dihydrate (alternative CAS 10101-41-4)	13397-24-5	85
Cellulose	9004-34-6	< 10
Crystalline Silica	14808-60-7	< 5
Starch	9005-25-8	< 5

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**Composition comments**

All concentrations are in percent by weight unless ingredient is a gas.

The gypsum used to manufacture these panels contains respirable crystalline silica ranging up to 0.56 percent by weight, depending on source, as indicated by bulk sampling methods. Industrial hygiene laboratory testing using both personal and area sampling measured no detectable respirable crystalline silica when cutting the product by "score and snap," rotary saw, or circular saw. Good work practices which minimize the extent of dust generation should be followed, and actual employee exposure must be determined by workplace industrial hygiene testing.

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**Inhalation**

Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.

**Skin contact**

Contact with dust: Rinse area with plenty of water. Get medical attention if irritation develops or persists.

**Eye contact**

Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.

**Ingestion**

Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**

Under normal conditions of intended use, this material does not pose a risk to health. Dust may irritate throat and respiratory system and cause coughing.

**Indication of immediate medical attention and special treatment needed**

Provide general supportive measures and treat symptomatically.

**General information**

Ensure that medical personnel are aware of the material(s) involved.

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**Suitable extinguishing media**

Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media**

Not applicable.

**Specific hazards arising from the chemical**

Not a fire hazard.

**Special protective equipment and precautions for firefighters**

Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire-fighting equipment/instructions**

Use standard firefighting procedures & consider the hazards of other involved materials.

**Specific methods**

Cool material exposed to heat with water spray and remove it if no risk is involved.

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**Personal precautions, protective equipment and emergency procedures**

See Section 8 of the SDS for Personal Protective Equipment.

**Methods and materials for containment and cleaning up**

No specific clean-up procedure noted. For waste disposal, see Section 13 of the SDS.

**Environmental precautions**

Avoid discharge to drains, sewers, and other water systems.

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**Precautions for safe handling**

Use work methods which minimize dust production. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices. When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 1.2 M extends beyond the supports on either end.

Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the job site. Gypsum panels are very heavy, awkward loads posing the risk of severe back injury. Use proper lifting techniques.

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**4. FIRST-AID MEASURES****5. FIRE-FIGHTING MEASURES****6. ACCIDENTAL RELEASE MEASURES****7. HANDLING AND STORAGE**

**Conditions for safe storage, including any incompatibilities**

Store in a cool, dry, well-ventilated place. Store away from incompatible materials. Protect product from physical damage. Protect from weather and prevent exposure to sustained moisture. Gypsum Association literature (GA-801-07) recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 10 CM from the wall to decrease the risk of falling board and no more than 15 CM to avoid too much lateral weight against the wall.

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	CAS number	Value	Form
Calcium sulfate dihydrate (alternative CAS10101-41-4 ) (CAS13397-24-5)	PEL	5 mg/m <sup>3</sup>	Respirable fraction
Cellulose (CAS 9004-34-6)	PEL	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> 15 mg/m <sup>3</sup>	Total dust. Respirable fraction. Total dust

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	CAS number	Value	Form
Calcium sulfate dihydrate (alternative CAS 10101-41-4 (CAS 13397-24-5)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction
Cellulose (CAS 9004-34-6)	TWA TWA	10 mg/m <sup>3</sup>	Respirable fraction

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	CAS number	Value	Form
Calcium sulfate dihydrate (alternative CAS 10101-41-4 (CAS 13397-24-5)	TWA	5 mg/m <sup>3</sup>	Respirable.
Cellulose (CAS 9004-34-6)	TWA TWA	10 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Total Respirable. Tota

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls personal protective equipment**

Provide sufficient ventilation for operations causing dust formation.

**Eye/face protection**

Wear approved safety goggles.

**Skin protection Hand protection**

It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.

**Other**

Normal work clothing (long sleeved shirts and long pants) is recommended.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use. Observe any medical surveillance requirements.

**Thermal hazards**

None.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

#### Physical state

Solid.

#### Form

Panel.

#### Color

Gray to off-white.

### Odor

Low to no odor.

### Odor threshold

Not applicable.

### pH

6-8

### Melting point/freezing point

Not applicable.

### Initial boiling point and boiling range

Not applicable.

### Flash point

Not applicable.

### Evaporation rate

Not applicable.

### Flammability (solid, gas)

Not applicable.

### Upper/lower flammability or explosive limits

#### Flammability limit - lower (%)

Not applicable.

#### Flammability limit - upper (%)

Not applicable.

#### Explosive limit - lower (%)

Not applicable.

#### Explosive limit - upper (%)

Not applicable.

### Vapor pressure

Not applicable.

### Vapor density

Not applicable.

### Relative density

2.32(Gypsum)(H<sup>2</sup>O=1)

### Solubility(ies)

0.26g/100g (H<sup>2</sup>O)

### Partition coefficient (n-octanol/water)

Not applicable.

### Auto-ignition temperature

Not applicable.

### Decomposition temperature

1450 °C.

### Viscosity

Not applicable.

### Other information

#### Bulk density

750-820 kg/m<sup>3</sup>

#### Particle size

Varies.

#### VOC (Weight %)

0 %

#### Formaldehyde Emissions

Complies with Class E1 for Formaldehyde Emissions

## 10. STABILITY AND REACTIVITY

### Reactivity

Not available.

### Chemical stability

Material is stable under normal conditions.

### Possibility of hazardous reactions

Hazardous polymerization does not occur.

### Conditions to avoid

Contact with incompatible materials.

### Incompatible materials

Strong oxidizing agents.

### Hazardous decomposition products

Calcium oxides, carbon dioxide, and carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Not likely, due to the form of the product.

#### Ingestion Inhalation

Mechanical processing may generate dust. Gypsum dust has an irritant action on mucous membranes of the upper respiratory tract and eyes (1).

Under normal conditions of intended use, this material does not pose a skin hazard.

#### Skin contact

Gypsum was not found to be a skin irritant (2).

Mechanical processing may generate dust. Direct contact with eyes may cause temporary irritation (1).

#### Eye contact

Under normal conditions of intended use, this material does not pose a risk to health.

## Symptoms related to the physical, chemical and toxicological characteristics

### Information on toxicological effects

Low hazard.

#### Acute toxicity

Gypsum was not found to be a skin irritant.

#### Skin corrosion/irritation

Gypsum does not cause serious eye damage or irritation.

#### Serious eye damage/eye irritation

No data available, but based on results from the skin sensitization study, calcium sulfate is not expected to be a respiratory sensitizer. Not a skin sensitizer (2).

#### Respiratory or skin sensitization

sulfate is not expected to be a respiratory sensitizer.

Not a skin sensitizer (2).

#### Skin sensitization

No evidence of mutagenic potential exists (3,4,5).

#### Germ cell mutagenicity

No evidence of carcinogenic potential exists (6).

#### Carcinogenicity

No evidence of reproductive toxicity exists (2).

#### Reproductive toxicity

Not toxic to lung tissue.

#### Specific target organ toxicity - Reproductive toxicity

Not toxic to lung tissue (6).

#### Specific target organ toxicity - Repeated exposure

Due to the physical form of the product it is not an aspiration hazard.

#### Aspiration hazard

Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
<b>Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)</b>	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) > 1970 mg/l, 96 hours
<b>Persistence and degradability</b>		Not applicable for the salt of inorganic compounds. Calcium sulfate dissolves in water without undergoing chemical degradation.
<b>Bioaccumulative potential Mobility in soil</b>		Bioaccumulation is not expected.
<b>Mobility in soil</b>		Calcium sulfate has a low potential for adsorption to soil. If water is applied, gypsum dissolves and the calcium and sulfate ions are mobile and penetrate the subsoil (7).
<b>Other adverse effects</b>		None expected.

## 13. DISPOSAL CONSIDERATIONS

### Disposal instructions

Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.

#### Local disposal regulations

Dispose of in accordance with local regulations.

#### Hazardous waste code

Not regulated.

#### Waste from residues / unused products

Dispose of in accordance with local regulations.

#### Contaminated packaging

Dispose of in accordance with local regulations.

#### 14. TRANSPORT INFORMATION

##### DOT

Not regulated as a hazardous material by DOT.

##### IATA

Not regulated as a dangerous good.

##### IMDG

Not regulated as a dangerous good.

##### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This product is a solid. Therefore, bulk transport is governed by IMS- BC code.

#### 15. REGULATORY INFORMATION

##### Saudi Arabian Inventory of Chemical Substance:

CAS# 13397-24-5 Calcium sulfate dihydrate

CAS# 9004-34-6 Cellulose

CAS# 14808-60-7 Crystalline Silica

CAS# 9005-25-8 Starch

#### 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

##### Issue date

5-August-2021

##### Revision date

5-may-2025

##### Version #

03

##### Further information

###### NFPA Ratings:

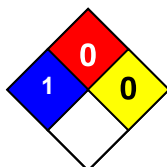
Health: 1

Flammability: 0

Physical hazard: 0

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

###### NFPA Ratings



##### Abbreviations and acronyms

NFPA: National Fire Protection Association.

1. US National Library of Medicine (NLM) (1998). Hazardous Substances Data Bank (HSDB).
2. Tested by LG Life Science/Toxicology Center, Korea (2002). National Institute of Environmental Research (NIER).
3. Dopp E et al. (1995). Environ. Health Perspect. 103(3), 268-271.
4. Cremer H.H. et al. (1988). Wiss. Umwelt. 4, 202-205.
5. Fujita H et al. (1988). Kenkya Nenpo-Tokyo-Toritsu Eisei Kenkynsho. 39, 343-350. 6. Shainberg et al. (1989). Advanced Soil Sci. 9, 1-111.

##### Disclaimer

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