

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

DFB Gypsum Industries Suite # 105, Business & Finance Center, I.I Chundrigar Road, Karachi 74000, Pakistan.	Product Safety: (+92 21) 111 DFB - GYP Website: www.dfb.com.pk
PRODUCT NAME	Paper faced Gypsum Board, DFB GypBoard™ Standard Type
PRODUCT USE	Gypsum Board accommodate wide range of walls and construction of high STC (Sound Transmission Class) wall systems, and also use in ceiling applications.

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV (mg/m3)	PEL(mg/m3)
Gypsum or Calcium Sulfate Dihydrate (CaSo4 . 2H2O)	> 85 ~ 90	10	1 5 ^(T) 5 ^(R)
Cellulose	<10	10	1 5 ^(T) 5 ^(R)
Starch	<3	10	1 5 ^(T) 5 ^(R)
Gypsum contains naturally occurring crystalline silica, generally of the quartz form. Due to its natural occurrence, the exact percentage of crystalline silica is unknown. Both the PEL and TLV are 0.1 mg/m3 for respirable quartz dust.			
May be available with foil backing			
Aluminum Foil	<3	10	1 5 ^(T) 5 ^(R)
Ethylene Vinyl Acetate Polymer	<2	(NE)	(NE)
All ingredients of this product are included in the U.S Environmental Protection Agency's Toxic Substance Control Act Chemical Substance Inventory and the Canadian Domestic Substance List (DSL).			
T – Total Dust	R – Respirable Dust	NE – Not Established	
WT – Weight	PEL – Permissible Exposure Limit	TLV – Threshold Limit Value	

SECTION 3 HAZARD IDENTIFICATION

Contains No Asbestos	HMIS (Hazard Material Identification System) Hazard Class No. 1, 0, 0
-----------------------------	---

EMERGENCY OVERVIEW:

△WARNING!

This product is not expected to produce any unusual hazards during normal use. Cutting, sanding or otherwise machining this product may generate large amount of dust. Dust may cause upper respiratory tract, lung, eye, nasal and skin irritation.

SECTION 3
HAZARD IDENTIFICATION (Continue)

POTENTIAL HEALTH EFFECTS:

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Eyes	Airborne dust or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	No toxic effects from powdered gypsum are noticed where air contains contaminate to excess. The frequent exposures may have a drying effect on the skin. Possible itching and irritation may be experienced.
Inhalation	Inhalation of dust can irritate the nose, throat, and the 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 may cause gastric disturbances if swallowed. Gypsum 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).

SECTION 4
FIRST AID PROCEDURES

Eyes	In case of contact, do not rub or scratch your eyes. Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
Skin	Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
Inhalation	Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
Ingestion	Gypsum is non-hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

SECTION 5
FIRE FIGHTING MEASURES

Flash Point	Not Determined
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).
Fire and Explosion Hazards	None
Hazardous Combustion Products	Above 1450oC, material can decompose and release sulfur dioxide (SO2) and oxides of carbon.

SECTION 6
ACCIDENTAL RELEASE MEASURES

No special precautions for product in purchased form.

General Recommendations:

- Wear appropriate personal protection (See Section 8).
- Maintain proper ventilation.
- Pick-up larger pieces to avoid a tripping hazard. Return large pieces of damaged/scraped material for recycling. Sweep or vacuum remaining material into a waste container for disposal. Use a light water spray to minimize dust generation.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

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.
Utilize proper lifting techniques when moving product and employ mechanical/ergonomic assistance when possible (i.e. move with forklifts, hold in place with lifts) to minimize the risk of back injury.

STORAGE:

Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10).
Protect product from physical damage. Protect from weather and prevent exposure to sustained moisture.
Gypsum Association literature 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 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.

SECTION 8
EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Good general ventilation should be sufficient to control airborne dust levels.
Provide local and general exhaust ventilation to maintain a dust level below the PEL/TLV exposure limits (See Section 2).

RESPIRATORY PROTECTION:

Wear approved respirator when permissible exposure limit to dust may be exceeded.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

**SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Paper with gray to off white core	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H₂O = 1)	2.31
Odor Threshold	Not Determined	Solubility in water (g/100g)	0.26/100g
Physical State	Solid	Partition Coefficient	Not Applicable
pH @ 25 ° C	~ 7	Auto-ignition Temp	Not Determined
Melting Point	Not Applicable	Decomposition Temp	1450°C
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Varies
Flash Point	Not Determined	Bulk Density	~ 55 lb/ft ³
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	172 grams
Upper Flammable Limit (UFL)	Not Determined	Molecular Formula	CaSO ₄ .2H ₂ O
Lower Flammable Limit (LFL)	Not Determined	VOC Content	Zero
Vapor Pressure (mm Hg)	Not Applicable	Percent Volatile	Zero

**SECTION 10
CHEMICAL STABILITY AND REACTIVITY**

STABILITY	Stable in dry environments.
CONDITIONS TO AVOID	Contact with strong acids may result in generation of carbon dioxide with incompatibles
INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	Will not occur.
HAZARDOUS DECOMPOSITION	Above 1450oC gypsum will decompose to calcium oxide (CaO), with releases of sulfur dioxide (SO ₂) and various oxides of carbon.

**SECTION 11
TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS:

There is no information on toxic kinetics, metabolism and distribution. There have been reports of irritation to mucus membranes of the eyes and respiratory tract upon acute exposure to dusts in excess of the recommended limits.

The acute oral toxicity study [OECD TG 420, Fixed dose procedure] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD₅₀ value was more than 2,000-mg/kg b.w. for female rats (Sprague-Dawley)

CHRONIC EFFECTS / CARCINOGENICITY:

Chronic exposure to crystalline silica (a naturally occurring contaminant in gypsum) in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance which may be reasonably anticipated to be a carcinogen.

Gypsum wallboard panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained.

SECTION 12
ECOLOGICAL INFORMATION

Gypsum Board does not present an ecological hazard to the environment.

Ecotoxicological Information

Toxicity studies performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect.

Environmental Fate

Gypsum is a naturally occurring mineral. Biodegradation and/or bioaccumulation potential is not applicable.

SECTION 13
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with Environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

SECTION 14
TRANSPORT INFORMATION

DOT INFORMATION: Not a hazardous material per Department of Transportation (DOT) shipping requirements.

Shipping Name:

Same as product name.

Hazard Class:

Not classified.

SECTION 15
OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.

Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of the material. Information contained herein is believed to be true and accurate, but all statements or suggestions are made without any warranty, express or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained for the use thereof. For more information: (+92 21) 111 DFB – GYP (111 332 – 497) or www.dfb.com.pk

KEEP OUT OF REACH OF CHILDREN.