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**UGEN FERRO ALLOYS PVT. LTD.**  
PHUENTSHOLING : BHUTAN

## Material Safety Data Sheet (MSDS) - Quartzite

### SECTION 1 – IDENTIFICATION OF MATERIAL AND SUPPLIER

- **Product Name:** Quartzite
- **Synonym:** Natural Stone - Quartzite  
A naturally occurring metamorphic rock, primarily composed of quartz ( $\text{SiO}_2$ ), used in architectural and industrial applications such as manufacturing of Ferrosilicon, countertops, tiles, and wall cladding.

### Company Identification: M/s. UGEN FERRO ALLOYS PVT. LIMITED

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### SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	Percentage (%)
14808-60-7	Crystalline Silica (Quartz)	0-99
68476-25-5	Feldspar	0-5
1318-94-1	Muscovite	0-2
—	Opaque Minerals	0-2

### SECTION 3 - HAZARDS IDENTIFICATION

- May be harmful if inhaled
- Contains crystalline silica, which may cause cancer (Category 1A - Carcinogenicity)
- Respirable quartz dust may cause lung damage (Category 1A - Specific Target Organ Toxicity)
- Avoid dust inhalation, ingestion, and direct contact







- **Eye Contact:** May cause irritation.
- **Skin Contact:** May cause irritation.
- **Inhalation:** May cause respiratory irritation and long-term lung damage.
- **Ingestion:** Not applicable for intact quartzite products.

- **Inhalation:** Move to fresh air, keep calm, seek medical attention.
- **Skin Contact:** Wash with plenty of water and soap.
- **Eye Contact:** Flush with water for at least 15 minutes; consult an eye specialist.
- **Ingestion:** Not applicable for intact quartzite products.

- **Fire Behavior:** Non-flammable, does not ignite.
- **Extinguishing Media:** ☒Foam, ☒Water spray, ☒Dry powder, ☒Carbon dioxide.
- **Fire Risks:** No specific hazards.
- **Firefighter Safety:** Wear self-contained breathing apparatus (SCBA) if exposed to dust or fumes.

- **Personal Precautions:** Avoid dust inhalation, wear protective gear.
- **Environmental Precautions:** Prevent dust dispersion, use HEPA filters.
- **Cleanup Measures:** Use vacuum systems or damp sweeping to minimize airborne dust.

- **Handling:** Prevent dust formation, wear protective clothing.
- **Storage:** Store in original container, away from acids and ignition sources.

- **Crystalline Silica (OSHA):** TWA 0.1 mg/m<sup>3</sup>
- **Silica Fume (ACGIH):** TWA 0.025 mg/m<sup>3</sup>







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### Hygiene Measures:

- Wash hands and face after handling.
- Ensure eyewash stations & safety showers nearby.

### Personal Protection Equipment (PPE):

- **Respiratory:** NIOSH-approved particulate respirator.
- **Hands:** Chemical-resistant gloves.
- **Eyes:** Safety goggles/splash-resistant eyewear.
- **Skin:** Protective clothing per risk assessment.

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- **Physical State:** Solid,
- **Color:** Varies (typically grey, white, or pink),
- **Odor:** Odorless
- **Melting Point:** Not applicable
- **Density:** Varies depending on mineral composition

### SECTION 10 - STABILITY AND REACTIVITY

- **Reactivity:** Not available
- **Chemical Stability:** Stable in normal conditions and storage conditions.
- **Possibility of Hazardous Reactions:** Not available
- **Conditions to Avoid:** Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
- **Incompatibility (Materials to Avoid):** Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
- **Hazardous Polymerization:** Will not occur.
- **Hazardous Decomposition Products:** None.
- **Reacts with hydrofluoric acid,** releasing toxic gases

### SECTION 11 - TOXICOLOGICAL INFORMATION

#### Primary Routes of Exposure:

- None for intact quartzite products.
- **Inhalation and contact exposure** (eyes, hands, or body) if handling **broken quartzite** or engaging in **cutting procedures**.







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### Acute Effects of Crystalline Silica:

- No known acute effects from exposure to intact quartzite.
- **Broken or cut quartzite** may cause **cuts to hands and exposed skin**.
- **Dry cutting operations** may lead to **eye irritation**.
- In rare cases, exposure to **high silica dust levels** may trigger **acute silicosis**, a form of **nodular pulmonary fibrosis**.
- Symptoms of acute silicosis include **labored breathing and early fatigue**, though these can also arise from other causes.

### Chronic Effects of Crystalline Silica:

- No known chronic effects from intact quartzite.
- **Prolonged exposure to respirable silica dust** above occupational limits may lead to **silicosis** (a nodular pulmonary fibrosis).
- **Silicosis is associated with:**
  - **Pulmonary tuberculosis**
  - **Chronic bronchitis & emphysema**
  - **Bronchial asthma & other airway diseases**
  - **Autoimmune disorders & chronic renal disease**
- Recent studies show **workers exposed to high silica concentrations** are at significant risk of **developing chronic silicosis**.

### Potential Adverse Interactions:

- **Silicosis complications** may include **severe mycobacterial or fungal infections**, increasing the risk of **tuberculosis (TB)**.
- Existing **respiratory diseases** may worsen with silica exposure.
- **Smoking + silica dust exposure** may increase the risk of lung disease.

### Carcinogen Status:

- **Respirable crystalline silica** is classified by the **International Agency for Research on Cancer (IARC)** as a **Group I Carcinogen** (carcinogenic to humans).
- The **National Toxicology Program (NTP)** lists it as **"Known to be a Human Carcinogen."**
- **OSHA** recognizes **crystalline silica** as a **carcinogen** under the **Hazard Communication Standard**.

### Acute Toxicity:

- **Not available**







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### Overview of Animal Testing:

- Studies show **intratracheal quartz instillation** in rats, mice, and hamsters forms **silicotic nodules** in the lungs.

### Oral (Silica) Lethality:

Test Subject	LD50 (Lethal Dose 50%)
Rat (oral)	>22,500 mg/kg
Mouse (oral)	>15,000 mg/kg
Carp (LC50)	>10,000 mg/l (72 hr)

## SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity:** No known significant effects or critical hazards.
- Aquatic Ecotoxicity:** No data available.
- Persistence & Degradability:** No data available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

- Waste** should be disposed of in a landfill certified to accept such materials in accordance with federal, state, and local regulations.
- Dispose of **surplus or non-recyclable** materials via a licensed waste contractor.
- Landfill** is only recommended when recycling is not feasible
- Avoid **dispersal** into soil, waterways, drains, and sewers.

## SECTION 14 - TRANSPORT INFORMATION

### Classification:

- Land Transport (USDOT, TDG):** Not classified as a dangerous good.
- Sea Transport (IMDG):** Not classified as a dangerous good.
- Air Transport (IATA/ICAO):** Not classified as a dangerous good.







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## SECTION 15 - REGULATORY INFORMATION

### United States Regulations:

- **HCS Classification:** Carcinogen. Target organ effects.
- **TSCA Inventory:** All components are listed or exempted.
- **SARA Hazard Categories:** No products found under SARA 302/304/311/312.
- **California Prop 65:** Contains a chemical known to cause cancer.

### State Regulations:

State	Regulatory Status
Massachusetts	Quartz listed
New York	No components listed
New Jersey	Quartz listed
Pennsylvania	Quartz listed
California Prop 65	Contains a chemical known to cause cancer

## SECTION 16 – OTHER INFORMATION

### HMIS III Rating:

- **Health:** 1□
- **Flammability:** 1
- **Physical Hazard:** 0

**Disclaimer:** This information is accurate to the best of our knowledge. However, neither the supplier nor its subsidiaries assume liability for completeness. **Final determination of suitability is the user's responsibility.**

