SECTION 1 - MATERIAL IDENTIFICATION

Chemical Name and Synonyms: Plicast C/G LWI 23 LI
Al₂O₃ 52.2 %  SiO₂ 29.1 %
Chemical/Mineral Family: Alumino Silicate
Recommended Use: Refractory/Construction/maintenance/repair material

SECTION 2 - HAZARDOUS IDENTIFICATION

Signal Word: Danger
Hazard statement: H315: Causes skin irritation, H335: May cause respiratory irritation
H320: Causes eye irritation H351: Suspected of causing cancer
H373: May cause damage to lung through prolonged or repeated inhalation.

This product contains crystalline silica, a substance that has been listed by:
1. IARC: sufficient evidence for the carcinogenicity of crystalline silica to humans. (Group 1)
2. Canadian WHMIS: D2A - Materials Causing Other Toxic Effects
3. ACGIH: A2-Suspected Human Carcinogen.
4. NTP: a substance known to be a human carcinogen.

Primary Route of Entry: Inhalation, Ingestion, Skin Contact
Target Organs: respiratory tract (nose & throat), eyes, skin
Potential Health Effects:
Eyes: May cause irritation. Abrasive action of dust can damage eye.
Skin: May cause irritation
Ingestion: May cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting, abdominal pain and diarrhea.
Inhalation: Effects of overexposure:
1. Acute: Exposure to nuisance dust may cause temporary irritation or discomfort to skin, eyes, nose, throat or lungs and may aggravate bronchial disorders.
2. Chronic: Long term inhalation of respirable quartz, cristobalite, fused silica and/or amorphous silica may cause silicosis (delayed lung injury) and other respiratory disorders. In addition there is sufficient evidence for the carcinogenicity of crystalline silica to humans.
### SECTION 3 - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients (checked)</th>
<th>C.A.S. No.</th>
<th>Weight %</th>
<th>TLV ACGIH mg/m³</th>
<th>OSHA PEL mg/m³</th>
<th>EINECS</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Quartz***</td>
<td>14808-60-7</td>
<td>3.98</td>
<td>0.025 (resp. dust)</td>
<td>10 mg/m³ %SiO₂+2 (resp)</td>
<td>238-878-4</td>
</tr>
<tr>
<td>X Cristobalite***</td>
<td>14464-46-1</td>
<td>3.50</td>
<td>0.025 (resp. dust)</td>
<td>1/2(10 mg/m³ %SiO₂+2 (resp))</td>
<td>238-455-4</td>
</tr>
<tr>
<td>□ Amorphous Silica***</td>
<td>69012-64-2</td>
<td></td>
<td>0.025 (resp. dust)</td>
<td>Not Established</td>
<td>273-761-1</td>
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<tr>
<td>□ Fused Silica***</td>
<td>60676-86-0</td>
<td></td>
<td>0.025 (resp. dust)</td>
<td>80 mg/m³ %SiO₂</td>
<td>262-373-8</td>
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<tr>
<td>□ Zirconium Silicate***</td>
<td>14940-68-2</td>
<td>10</td>
<td>15 (total), 5 (resp.)</td>
<td>239-019-6</td>
<td></td>
</tr>
<tr>
<td>□ Aluminum Phosphate</td>
<td>13530-50-2</td>
<td></td>
<td>2 mg/m³ TWA (as Al)</td>
<td>236-875-2</td>
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<tr>
<td>□ Alumina</td>
<td>1344-28-1</td>
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<td>1 (resp. dust)</td>
<td>15 (total), 5 (resp.)</td>
<td>215-691-6</td>
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<tr>
<td>□ Aluminosilicate(Mullite)</td>
<td>1302-93-8</td>
<td>19. - 29.</td>
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<td>15 (total), 5 (resp.)</td>
<td>215-113-2</td>
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<td>□ Aluminosilicate(Kyanite)</td>
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<tr>
<td>□ Bauxite</td>
<td>1318-16-7</td>
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<td>15 (total), 5 (resp.)</td>
<td>206-991-8</td>
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<tr>
<td>□ Silicon Carbide</td>
<td>409-21-2</td>
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<td>15 (total), 5 (resp.)</td>
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<tr>
<td>□ Pyrophylite</td>
<td>12269-78-2</td>
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<td>15 (total), 5 (resp.)</td>
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<tr>
<td>□ Spinel</td>
<td>1302-67-6</td>
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<td>15 (total), 5 (resp.)</td>
<td>215-227-2</td>
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<tr>
<td>□ Andalusite</td>
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<td>15 (total), 5 (resp.)</td>
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<tr>
<td>□ Zirconiumdioxide</td>
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<td>10</td>
<td>15 (total), 5 (resp.)</td>
<td>266-043-4</td>
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<tr>
<td>□ Calcium Aluminate Cement</td>
<td>65997-16-2</td>
<td>46. - 56.</td>
<td>10</td>
<td>265-064-6</td>
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<tr>
<td>□ Calcium Silicate Cement</td>
<td>65997-15-1</td>
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<td>10</td>
<td>265-064-6</td>
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<tr>
<td>□ Clay</td>
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<td>15 (total), 5 (resp.)</td>
<td>233-135-0</td>
</tr>
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<td>□ Aluminum Sulfate</td>
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<td>15 (total), 5 (resp.)</td>
<td>231-784-4</td>
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<tr>
<td>□ Bentonite</td>
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<td>310-127-6</td>
</tr>
<tr>
<td>□ Perlite</td>
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<td>9.9 - 19.</td>
<td>10</td>
<td>310-127-6</td>
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<td>□ Sodium Sulfate</td>
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<td>215-687-4</td>
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<tr>
<td>□ Titanium Oxide</td>
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<td>10</td>
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<td>□ Organic Fiber</td>
<td>9003-07-0</td>
<td>0.05 - 0.5</td>
<td>10 (total), 3 (resp.)</td>
<td>215 (total), 5 (resp.)</td>
<td>9003-07-0</td>
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</tbody>
</table>

### SECTION 4 - FIRST AID MEASURES

- **Eyes:** Immediately flush eyes with plenty of water and get medical attention.
- **Skin:** Wash with soap and water. Get medical attention if irritation develops or persists.
- **Ingestion:** If swallowed, seek medical attention.
- **Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. Get immediate attention. If symptoms persist, seek medical attention.

### SECTION 5 - FIRE FIGHTING MEASURES

- **Unusual Fire and Explosive Hazards:** The product will not burn. Improper mixing and bake-out of materials may result in steam spalling during initial heating. Refer to mixing instructions and bake-out schedules for proper procedures.
- **Fire Fighting Equipment:** Fire fighters should wear full protective gear and self-contained breathing apparatus (SCBA).

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Steps to be taken if material is released or spilled:** Wear protective clothing as described in Section 8 of this sheet. Use routine housekeeping procedures, avoid dusting, collect material in closed containers or bags.

**Waste Disposal Method:** According to the EPA (40CFR 261.3) wastes are not hazardous wastes. Wastes may be disposed of in a landfill, however, in accordance with federal, state, and local regulations.

### SECTION 7 - HANDLING AND STORAGE

To ensure product quality, store material in a dry place. Minimize dust generation and avoid inhalation and contact with refractory dusts during processing, installation, maintenance and tear-out. After handling of refractory dusts from processing, installation, maintenance or tear-out, wash exposed skin areas thoroughly. Wash clothing contaminated with dusts.
Waste Disposal Method: According to the EPA (40CFR261.3) wastes are not hazardous wastes. Wastes may be disposed of in a landfill, however, in accordance with federal, state, and local regulations. However, dusts generated during maintenance and tear-out operations may be contaminated with other hazardous substances (e.g. metals). Therefore, appropriate waste analysis may be necessary to determine proper disposal. Waste characterization and disposal/treatment methods should be determined by a qualified environmental professional in accordance with applicable federal, state and local regulations.
SECTION 15 - REGULATORY INFORMATION

CANADIAN WHMIS: D2A
CANADIAN EPA: Components of this product are listed on the Domestic Substance List (DSL).
U.S. FEDERAL REGULATIONS:
SARA TITLE III: EPCRA Section 302 (EHSs):
This product does not contain ingredients subject to reporting requirements of 40 CFR Part 355, Appendices A and B (Extremely Hazardous Substances).
CERCLA Section 304:
This product does not contain ingredients subject to state and local reporting under Section 304 of SARA Title III as listed in 40 CFR Part 302, Table 302.4
SECTION 311/312 HAZARD CATEGORIES:
Product (airborne particulates) is categorized as an immediate (acute) health hazard and a delayed (chronic) health hazard as defined by SARA Title III Section 311/312 (40 CFR 370).
SECTION 313 TOXIC CHEMICALS: None
TSCA: Components of this product are listed on the TSCA Inventory.

SECTION 16 - OTHER INFORMATION

Only Trained personnel should use this material.

Abbreviations:
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act
DOT: Department of Transportation
EPA: Environmental Protection Agency
IARC: International Agency for Research on Cancer
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
SARA: Superfund Amendment and Reauthorization Act
WHMIS: Workplace Hazardous Materials Information System (Canada)

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