STUCCO / SCRATCH & BROWN COAT

MATERIAL SAFETY DATA SHEET
(Complies with OSHA CFR 1910.1200 ANSI Z 400.1-1998)
Approval Date: May 11, 2011

SECTION 1: Chemical Product and Company Identification

Product Name: SPEC MIX® Scratch and Brown Preblended Stucco

Manufacturer Name and Address: **SPEC MIX® Inc.**
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120

Telephone Contact Number and Hours of Operation: (888) 773-2649; 8:00 a.m. – 4:00 p.m. Central Time

Emergency Telephone Contact Number: (800) 222-1222

SECTION 2: Composition/Information on Ingredients

Hazardous Ingredients (*).	CAS No.	OSHA PEL TWA	ACGIH TLV TWA
Portland cement	65997-15-1	15mg/m$^{3(1)}$ 5mg/m$^{3(2)}$	10mg/m^3 NE
Calcium hydroxide (hydrated lime)	1305-62-0	15mg/m$^{3(1)}$ 5mg/m$^{3(2)}$	5mg/m^3
Crystalline silica (sand and gravel)	14808-60-7	see 29 CFR 1910.1000 table z-3 0.05 mg/m$^{3(3)}$	NE
Calcium sulfate	7778-18-9	15mg/m$^{3(1)}$ 5mg/m$^{3(2)}$	10mg/m^3
Calcium carbonate (pulverized limestone)	1317-65-3	15mg/m$^{3(1)}$ 5mg/m$^{3(2)}$	10mg/m^3
May also contain small amounts of:			
Yellow iron oxide	51274-00-1	15mg/m$^{3(1)}$ 5mg/m$^{3(2)}$	NE
Chromium oxide	1308-38-9	0.5mg/m$^{3(4)}$	0.5mg/m$^{3(3)}$
Iron oxide (red iron oxide)	1309-37-1	10mg/m^3	5mg/m^3
Black iron oxide	1317-61-9	15mg/m$^{3(1)}$ 5mg/m$^{3(2)}$	NE

1- PNOC (Particulate not otherwise classified) as total dust
2- PNOC as respirable fraction
3- As respirable fraction
4- Chromium (III) compounds as chromium

***All ingredients in quantities > 1.0 % (0.1 % for carcinogens) that are potentially hazardous per OSHA definitions**
NDA = no data available NE = not established

Some states enforce the PELs that OSHA promulgated in 1989, which were subsequently vacated by the U.S. Supreme Court. Check with your state OSHA agency to determine which PEL is enforced in your jurisdiction.

SECTION 3: Hazards Identification **EMERGENCY OVERVIEW**

Physical Description: Natural gray solid

Odor: None

Potential Health Effects: Warning! Contact with wet mortar can burn eyes and skin. Permanent eye damage can result from eye contact. Dust from the dry material can cause severe irritation and possibly burns to the eyes and respiratory tract with coughing and nasal discharge. Lung damage and possibly pulmonary edema can result from dust exposure. Skin contact may not cause in immediate burning sensation. It is important to begin skin first-aid even if there is no immediate burning sensation. Repeated or prolonged skin contact may cause skin allergic reactions. Personnel responding to a spill of this material should wear appropriate personal protective equipment.

Fire Hazards:	**NFPA Ratings:**	Health = 2	Fire = 0	Reactivity = 0	Special = NDA
	HMIS Ratings:	Health = 2	Fire = 0	Reactivity = 0	Protective Equipment = X

SECTION 4: First Aid Measures

Note: Signs and symptoms of skin burns may be delayed. Begin first aid immediately following skin contact even if there is no immediate burning sensation.
Eye Contact: Hold eye open and rinse slowly and gently with water for 30 minutes. Remove any contact lenses (if easy to do), after the first 5 minutes then continue rinsing the eye. Get medical attention immediately.
Skin Contact: Flush affected area for 20 minutes then wash affected area with mild soap and water. Get medical attention immediately.
Ingestion: Get medical attention immediately. Immediately rinse mouth with plenty of water. Have person sip a glass of water if able to swallow — **NEVER** give anything by mouth to an unconscious person. Do not induce vomiting.
Inhalation: Remove to fresh air. Seek medical attention immediately if breathing becomes difficult.

SECTION 5: Fire Fighting Measures

Extinguishing Media: Noncombustible. Use media suitable for surrounding fire.

Flashpoint: NDA

Hazardous Products of Combustion: Calcium oxide fumes.

Auto Ignition Temperature: NDA

Flammable Limits: LEL;NDA UEL; NDA

Unusual Fire and Explosion Hazards: None known.

Protective Equipment: Use NIOSH/MSHA approved SCBA and bunker gear.

SECTION 6: Accidental Release Measures

Do not attempt to clean up chemical spills without appropriate personal protective equipment (see section 8). For a spill of the dry material, use a HEPA (high efficiency particle air) vacuum to collect material and place in sealable containers for disposal. For a wet spill, absorb or cover with dry earth, sand or other noncombustible material and transfer to containers for disposal. Neutralize spill area. Use materials that can withstand the potentially corrosive nature of this product. Do not get water inside containers. See Disposal Comments in Section 13.

SECTION 7: Handling and Storing

Handling: Avoid contact with eyes and skin. Avoid generating and breathing dusts. Dust may be generated from cutting, grinding, drilling, sawing, or otherwise disturbing hardened concrete. Use with proper personal protective equipment (see Section 8).

Storage: Store upright in a cool, dry, well-ventilated area out of direct sunlight. Protect containers from physical damage. Do not roll containers. Keep containers tightly closed at all times. Do not reuse container. Store away from incompatible materials (see Section 10). Keep out of reach of children.

SECTION 8: Exposure Controls and Personal Protective Equipment

Engineering Controls: If industrial hygiene surveys show that exposures exceed TLVs or other exposure limits, use a combination of local exhaust and general dilution/ventilation to control exposures. If that is not feasible, see recommendations under “Respiratory Protection.”

Skin: Wear safety glasses with side shields and goggles or face shield.

Respiratory Protection: NIOSH approved N-95 cartridge respiratory protection is necessary if any of the standards in Section 2 are exceeded. Seek professional advice prior to respirator selection or use. Follow OSHA respirator regulations (29 CFR 1910.134). Use a positive pressure air supplied respirator if there is a potential for an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection

Safety Equipment: Eyewash and deluge shower

SECTION 9: Physical and Chemical Parameters

Physical State: Solid
Odor: None
Vapor Density (air = 1): NDA
Percent Volatile By Volume: NDA
Melting Point: NDA
Viscosity: NDA
Bulk Density: NDA
PH: NDA

Appearance: Natural gray
Vapor Pressure: NDA
Evaporation Rate (n-butyl acetate = 1): NDA
Freezing Point: NDA
Boiling Point: NDA
Specific Gravity: NDA
Solubility: Slightly soluble in water

SECTION 10: Stability and Reactivity

Stability: Stable

Incompatible Materials and Conditions to Avoid: Not compatible with most other materials. Avoid strong acids. Silica will dissolve in hydrofluoric acid and produce a corrosive gas silicone tetra fluoride. Contact with oxidizing agents such as fluorine, chlorine tetra fluoride, manganese trioxide, and oxygen difluoride may cause fires. Calcium hydroxide has been reported to undergo violent reactions with maleic anhydride, nitroethane, nitromethane, nitroparaffins, nitropropane, and phosphors.

Hazardous Polymerization: Not expected.

Hazardous Decomposition Products: Oxides of calcium

SECTION 11: Toxicological Information

Product Based Information:
There is limited toxicological data available for this product. Exposure can occur with the dry product, the wetted product, or to dusts when hardened stucco is ground, cut, drilled, sanded or otherwise disturbed. Routes of exposure include inhalation, eye and skin contact, and ingestion. Inhalation of the dusts of the dry product or from the disturbed hardened product can cause respiratory tract irritation with coughing and nasal discharge. Shortness of breath and reduced pulmonary function may also result from inhalation. Alveolar damage and pulmonary edema resulted in animal studies form exposure to the dry product. This product contains crystalline silica. Prolonged overexposure to quartz or crystalline silica dust can cause pneumoconiosis, silicosis (a permanent fibrotic lung disease) and potentially lung cancer. Dust can cause inflammation of the lining tissue in the nose and inflammation of the cornea. Eye contact with the wet or dry product can cause burns and permanent damage to the eyes. Skin contact with the wet product can cause burns (corrosive). Repeated or prolonged skin contact with the wet product can cause drying of the skin, dermatitis and possibly allergic skin reactions. Skin contact with the dry product can cause irritation and possibly burns. Ingestion of either the wet or dry product is expected to cause severe irritation and likely burns to the mouth, throat, esophagus, and possibly the stomach. Nausea, vomiting and diarrhea may also occur. There were no data located addressing potential reproductive, developmental, or mutagenic effects following exposure to this product.

Ingredient Based Information:
This product contains calcium hydroxide (CAS# 1305-62-0). Calcium hydroxide is a strong base and can cause a moderately caustic irritation to all exposed body surfaces, including the eyes and the respiratory tract. Exposure by all routes causes moderate to severe irritation. Eye contact can cause burns. Ingestion is expected to cause nausea, vomiting and diarrhea along with irritation to the mouth, throat, esophagus, stomach and gastrointestinal tract. The rat-oral LD50 is 7340 mg/kg. Rats fed tap water containing 50 and 350 mg/L had reduced food intake with restlessness and aggression 2 months after exposure, and decreased body weight, decreased erythrocytes and phagocytes and hemoglobin 3 months after exposure. At autopsy these animals had inflammation of the small intestine, dystrophic changes of the stomach, kidneys and liver. There were no data located regarding potential reproductive, developmental or carcinogenic effects following exposure.

This product contains Portland cement (CAS# 65995-15-1). Portland cement essentially contains five compounds:

$3CaO \bullet SiO_2$	Tricalcium Silicate	CAS #12168-85-3
$2CaO \bullet SiO_2$	Dicalcium Silicate	CAS #10034-77-2
$3CaO \bullet Al_2O_3$	Tricalcium Aluminate	CAS #12042-78-3
$4CaO \bullet Al_2O_3 \bullet Fe_2O_3$	Tetracalcium Aluminoferrite	CAS #12068-35-8
$CaSO_4 \bullet 2H_2O$	Calcium Sulfate Dihydrate (Gypsum)	CAS #778-18-9(# 13397-24-5)

The Portland cement may contain trace quantities (<0.05%) amounts of chromium salts or compounds (including hexavalent chromium) or other metals (including nickel compounds). Other trace constituents may include potassium and/or sodium sulfate compounds. Exposure can occur by eye or skin contact, inhalation, or ingestion. Eye contact can cause irritation. Portland cement is considered a primary skin irritant. Repeated or prolonged skin contact can cause dermatitis. Skin sensitivity may occur if hexavalent chromium is present. Inhalation of dusts may cause dyspnea based on a cross sectional study of 2736 Portland cement workers and 755 controls. In this study, 5.4% of the cement workers had dyspnea v.s. 2.7% of the controls. Ingestion can cause irritation to the mouth, throat, esophagus and stomach with nausea, vomiting and diarrhea. Data located were inconclusive regarding the association between occupational exposure to Portland cement and various cancers (e.g. stomach and lung). No data were located addressing potential reproductive or developmental affects following occupational exposure. Portland cement contains calcium sulfate (CAS# 7778-18-9). Calcium sulfate, when added to water may exist in more hydrated forms. Exposure to calcium sulfate can occur by inhalation, ingestion and eye and skin contact. Inhalation of calcium sulfate dust causes upper respiratory tract irritation primarily as a nuisance dust. Data from human occupational exposures indicate that calcium sulfate caused no lung disease in calcium sulfate miners. Ingestion may result in abdominal pain, vomiting or diarrhea. Ingestion of large amounts could cause obstruction of the gut in the pyloric region. Skin contact with calcium sulfate is not expected to cause irritation. However, skin contact with more hydrated forms of calcium sulfate may cause thermal burns during the hardening process. Eye contact with calcium sulfate may result in mechanical irritation. No adverse affects were reported after application of calcium sulfate to rabbit eyes. Calcium sulfate dihydrate was shown to cause carcinogenic effects in one study. There were no additional data located regarding the potential carcinogenic, reproductive or developmental effects following exposure to calcium sulfate.

This product contains crystalline silica (CAS# 14808-60-7). Silica (crystalline) is a composed of colorless crystals. Inhalation of crystalline silica is the most significant route of exposure. Inhalation of crystalline silica can lead to silicosis. Silicosis is a disabling, progressive and sometimes fatal lung disease that is characterized by the presence of typical nodulation of the lungs leading to fibrosis. Inhalation of high concentrations of crystalline silica over a short period of time (as little as a few weeks) can cause acute silicosis. Signs and symptoms of acute silicosis include progressive tiredness, fever, weight loss, cough and shortness of breath, wheezing, changes in the chest x-ray, and nonspecific chest illness. In acute silicosis, the lungs show a diffuse ground-glass appearance similar to pulmonary adema and lacking in the nodular pattern in the lungs. Chronic inhalation of lower concentrations can result in silicosis that develops and lasts over many months or years. Those with existing respiratory or lung problems may be at an increased risk from exposure. Clinical signs and symptoms of silicosis generally progress with continued exposure, advancing age, and continued smoking habits. Clinical signs and symptoms of silicosis include cough, tiredness, wheezing, and nonspecific chest illnesses. Symptoms may continue to worsen even after exposure is stopped. The risk of onset of silicosis and the progression to pulmonary lesions is related to the dust concentrations and duration of exposure. Silicosis predisposes to active tuberculosis with the combined diseases progressing more rapidly than silicosis alone. The crystalline silica that remains in the lungs can also cause emphysema, obstructive airway disease and lymph node fibrosis in humans. Occupational exposure to crystalline silica has been associated with lung cancer in some studies. Exposure to crystalline silica dust has also been associated with progressive systemic sclerosis (scleroderma) and may cause perturbations in the immune system based on human data and animal studies. Crystalline silica has been shown to inhibit human leukocyte elastase in, *in vitro* studies. This may result in a decrease in bactericidal activity and set the stage for opportunistic infections. IARC has determined that crystalline silica in the form of quartz or cristobalite from occupational sources in carcinogenic to humans (IARC group 1). The National Toxicology Program Considers crystalline silica a known human carcinogen. There are no data located addressing reproductive or developmental hazards of silica (crystalline) exposure.

This product may contain small amounts of iron oxide fume (CAS# 1309-37-1), yellow iron oxide (CAS# 51274-00-1) and black iron oxide (CAS# 1317-61-9). Exposure to iron and iron compounds can occur by ingestion, inhalation of dusts or fumes, or eye or skin contact. Ingestion of significant amounts of iron containing compounds is of significant concern but is unlikely in an occupational setting. Inhalation of dusts or fumes of iron oxide may cause mild upper respiratory irritation. Repeated or chronic inhalation of dusts or fumes can cause mottling of the lungs, a condition known as siderosis. Siderosis is generally considered a benign pneumoconiosis and does not usually cause significant physiologic impairment. Skin contact with iron or iron compounds is not expected to cause irritation. Metallic iron bodies in the eye can produce a “rust ring” of yellow brown staining and cause irritation, hyperemia of the conjunctiva and inflammatory cells in the anterior chamber. There were no data located addressing the mutagencity of iron and iron compounds. Most available data indicate that adverse developmental effects following ingestion of iron, iron oxide or iron compounds given during pregnancy are not likely. There were no data located addressing the potential carcinogenic effects following exposure to iron or iron compounds.

This product may contain small amounts of calcium carbonate (CAS# 1317-65-3). Calcium carbonate is an odorless, tasteless powder or crystal. In general, there have been no adverse health effects reported in the literature among workers using calcium carbonate. Skin or eye contact with moderate amounts of calcium carbonate may result in irritation. Calcium carbonate had no effect when applied to the surface of rabbit eyes. Inhalation of large amounts may result in respiratory irritation. Calcium carbonate has not been associated with pneumoconiosis and inhalation of the dust has not been associated with adverse effects. Acute single ingestion of calcium carbonate may result in mild gastrointestinal distress. The rat-oral LD50 for calcium carbonate is 6450mg/kg. Chronic ingestion of large amounts(4-60g/day for 2 to 30 days) may result in metabolic disturbances. Available data indicate that exposure to calcium carbonate is not expected to cause carcinogenic, reproductive, or developmental effects.

Possible Target Organs: All tissues (possibly corrosive) and respiratory system (e.g,. lungs).

Medical Conditions that may be Aggravated by Exposure: Skin (e.g., sensitive skin) and respiratory or lung disorders (e.g., asthma, bronchitis).

Carcinogens: IARC has determined that crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC group 1). The National Toxicology Program (NTP) considers crystalline silica of a respirable size a known human carcinogen.

SECTION 12: Ecological Information

Ecotoxicity: NDA **Environmental Fate:** NDA

SECTION 13: Disposal Considerations

This material (as packaged) may be considered a hazardous waste. Be aware that the waste owner has responsibility of final disposal. Regulations may also apply to empty containers, liners or rinsate. Laws may be changed or be reinterpreted; state and local regulations may be different from federal regulations. This information applies to materials as manufactured; contamination or processing may change waste characteristics and requirements.

SECTION 14: Transport Information

DOT Hazard Description: ND

SECTION 15: Regulatory Information

Chemical Inventories: All components of this product listed in Section 2 are included on the TSCA inventory list, the DSL/NDSL and the EINECS

Reportable Quantities (RQ): None

SARA TITLE III (Superfund Amendments and Reauthorization Act):

Section 302 Extremely Hazardous Materials: None

Section 304 Notification of Accidental Release: None

Sections 311/312 Hazard Categories:

Immediate (Acute) Health Effects:	YES
Delayed (Chronic) Health Effects:	YES
Fire Hazard:	NO
Sudden Release of Pressure Hazard:	NO
Reactivity Hazard:	NO

Section 313 Toxic Chemical Release Reporting: Not listed

STATE REGULATORY INFORMATION: Since each state has the authority to promulgate standards more stringent than the federal government, this section cannot provide an inclusive list of all state regulations that apply to this product. Questions related to state regulations should be directed toward local officials.

STATUS UNDER CALIFORNIA PROPOSITION 65: This product contains chemicals know to the state of California to cause cancer.

SECTION 16: Other Information

For additional information, refer to the 2000 Emergency Response Guidebook and the ACGIH Documentation of the Threshold Limit Values.

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