



MATERIAL SAFETY DATA SHEET

HMIS
 H = 1
 F = 0
 R = 1
 PPE = See Section 8

Section I

Manufacturer: Siplast, an Icopal Group Company
 (800) 643-1591 or (800) 922-8800

Address: 1000 E. Rochelle Blvd., Irving, TX 75062

Emergency Phone No.: CHEMTREC, (800) 424-9300 (U.S.), (703) 527-3887 (outside of U.S.)

Product Class: Lightweight Concrete Decks

Trade Name: NVS®Premix

Chemical Names and Family: Expanded Vermiculite, Quartz (Sand) and Portland Cement

Product Use: Preformulated Mixture for Lightweight Concrete Decks

Formula: Blend of Vermiculite, Sand and Portland Cement

CAS # (Chemical Abstract Service): Mixture-Not applicable

Transportation Hazard Classification United States DOT

Proper Shipping Name: Not applicable
 Hazard Class: Nonhazardous
 Identification #: Not applicable
 Label(s) Required: Not applicable
 Surface Freight Classification: Vermiculite other than crude

Section II - Ingredients

INGREDIENT	EXPOSURE LIMITS		
	OSHA PEL	ACGIH TLV	NIOSH REL
Quartz CAS # 14808-60-7	TWA: 0.1 mg/m ³ for quartz as respirable dust	TWA: 0.1 mg/m ³ for quartz as respirable dust	Not available
Respirable dust CAS # 14808-60-7	10 mg/m ³ ----- % quartz + 2	0.1 mg/m ³ (as quartz)	50 ug/m ³ - 10 hr TWA as quartz
Total dust CAS # 14808-60-7	30 mg/m ³ ----- % quartz + 2	Not available	Not available
Portland cement CAS #65997-15-1 Up to 95% by weight Respirable dust Total dust	5 mg/m ³ 15 mg/m ³	10 mg/m ³	Not applicable
Calcium sulfate dihydrate CAS # 13397-24-5 Up to 10% by weight Respirable dust Total dust	5 mg/m ³ 15 mg/m ³	10 mg/m ³	Not applicable

INGREDIENT	EXPOSURE LIMITS		
	OSHA PEL	ACGIH TLV	NIOSH REL
Calcium carbonate CAS #1317-65-3 Up to 5% by weight Respirable dust Total dust	5 mg/m ³ 15 mg/m ³	10 mg/m ³	Not applicable
Crystalline silica CAS #14808-60-7 Up to 0.75% by weight Respirable dust	0.1 mg/m ³	0.1 mg/m ³	Not applicable
Magnesium oxide CAS #1309-48-4	10 mg/m ³	10 mg/m ³	Not applicable
Calcium oxide CAS #1306-78-8 Nuisance dust	5 mg/m ³	2 mg/m ³	Not applicable
Respirable dust	5 mg/m ³	5 mg/m ³	Not applicable
Total dust	15 mg/m ³	10 mg/m ³	Not applicable
Chromates	.01 mg(CrO ₃)/m ³	.5 mg(Cr)/m ³	Not applicable

Trace Elements

As portland cement is made from materials mined from the earth and is processed using energy provided by fuels, trace amounts of naturally occurring, potentially harmful chemicals might show up during chemical analysis. For example, these products may contain up to 25% of insoluble residue, some of which may be crystalline silica. Other trace components may include potassium and sodium sulfate compounds, chromium compounds and nickel compounds.

INGREDIENT: (Chemical Name, CAS #, & Common Name)	% BY WT.
¹ Quartz (crystalline silica) CAS # 14808-60-1	Up to 10%

¹Natural sand or gravel

Section III - Physical Data

Boiling Point: Not applicable
Evaporation Rate (Butyl Acetate = 1): Not applicable
% Volatile by Volume: Not applicable
Vapor Pressure (mm Hg.): Not applicable
Vapor Density (AIR =1): Not applicable
Solubility in Water: Negligible
Bulk Density (lb./cu. ft): 8-12
Appearance and Odor: Brown or gray free flowing aggregate. Earthy odor.
Odor Threshold: None established
pH: In water 12-13
Specific Gravity (H₂O=1): 3.15

Section IV - Fire and Explosion Data

Flash Point: None
Method Used: Not applicable
Flammable Limits: LEL: Not applicable
UEL: Not applicable
N.F.P.A. Rating: Not applicable
Extinguishing Media: Not applicable
Special Procedures: None
Unusual Hazards: None known

Section V - Health Hazard Data

Emergency Overview

Portland cement is a light gray powder that poses little immediate hazard. A single short-term exposure to the dry powder is not likely to cause serious harm. However, exposure of sufficient duration to wet portland cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns, including third degree burns. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry portland cement.

Potential Health Effects

Relevant Routes of Exposure:

Eye contact, skin contact, inhalation, and ingestion.

EYE CONTACT: Exposure to airborne dust may cause immediate or delayed irritation or inflammation. Eye contact by larger amounts of dry powder or splashes of wet portland cement may cause effects ranging from moderate eye irritation to chemical burns and blindness. Such exposures require immediate first aid and medical attention to prevent significant damage to the eye.

SKIN CONTACT: Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing skin contact, particularly contact with wet cement. Exposed persons may not feel discomfort until hours after the exposure has ended and significant injury has occurred.

Exposure to dry portland cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry portland cement contacting wet skin or exposure to moist or wet portland cement may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns.

Some individuals may exhibit an allergic response upon exposure to portland cement, possibly due to trace amounts of chromium. The response may appear in a variety of forms ranging from mild rash to severe skin ulcers. Persons already sensitized may react to their first contact with the product. Other persons may first experience this effect after years of contact with portland cement products.

INHALATION: Portland cement may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free crystalline silica may aggravate other lung conditions. It also may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease, and/or other diseases. (Also, "Carcinogenic potential" below.)

Exposure to portland cement may cause irritation to the moist membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.

INGESTION: Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten.

Portland cement is not listed as a carcinogen by NTP, OSHA, or IARC. It may, however, contain trace amounts of substances listed as carcinogens by these organizations.

Crystalline silica, a potential trace level contaminant in portland cement, is not listed as a carcinogen by the Occupational Safety and Health Administration (OSHA). IARC has designated crystalline silica as carcinogenic to humans (Group 1). The NTP indicates that crystalline silica is reasonably anticipated to be a carcinogen (Group 2).

Medical conditions which may be aggravated by inhalation or dermal exposure:

Pre-existing upper respiratory and lung diseases.

Unusual (hyper) sensitivity to hexavalent chromium (chromium +6) salts.

Section VI - Reactivity Data

Stability: Stable X Unstable _____

Conditions to Avoid: Unintentional contact with water.

Hazardous Decomposition or Byproducts: See Section 10

Hazardous Polymerization: May occur ____ Will not occur X

Section VII - Spill & Disposal Information - U.S. Only

Observing the above precautions, sweep up or shovel spilled material and place in suitable containers for recycle or disposal. Dampen with water spray or use other methods to clean spill which avoid creating dust.

Discard empty packaging promptly. Avoid excessive handling of empty packaging, which may result in unnecessary release of airborne particulates.

Do not wash NVS Premix down drains.

Allow materials to "dry" before disposal.

Section VIII - Special Protection Information

Warning Statements:

CAUTION! MAY CAUSE SLIGHT IRRITATION.

Product contains vermiculite (CAS # 1318-00-9) and quartz (crystalline silica (CAS # 14808-60-7).

Eye contact may cause minor physical irritation. Inhalation of dust may cause upper respiratory irritation with coughing and sneezing.

Long-term exposure to airborne respirable quartz (crystalline silica) dust can decrease lung function and create risk of silicosis, pneumoconiosis, lung cancer and other lung disease.

Precautionary Measures:

Avoid contact with eyes.

Avoid creating and inhaling dust.

Provide adequate ventilation and respiratory protection.

Equip mixers with dust covers.

Respiratory Protection:

Wear a NIOSH approved (Type TC-21C-XXX) dust respirator to prevent exposures above the limits specified in Section II.

Ventilation:

Local Exhaust: Not generally required, but should be used where available.

Mechanical: Not generally required, but should be used where available.

Special: None

Other: None

Skin Protection: Not generally required.

Eye Protection: Goggles recommended where exposure to excessive dust is likely.

Other Protective Clothing or Equipment: Normal work clothes.

Work/Hygienic Practices:

Use bag opening and disposal which minimizes dust release. Equip mixers with dust covers.

Section IX - Emergency and First Aid Procedures

EYES: In case of eye contact, do not rub eyes. Flush eyes with plenty of water while holding eyelids apart. If irritation, blinking or tearing occur and persist, consult a physician.

SWALLOWED: Adverse health effects are not expected if swallowed. Consult a physician if symptoms develop.

INHALATION: If inhaled, get fresh air. If symptoms persist, consult a physician.

Section X - Government Reporting Information - U.S. Only

SARA Title III Reporting Information:

Tier I & II Hazard Categories: Delayed - chronic, Immediate - acute

Contains Extremely Hazardous - SARA III Section 302 Ingredient: No

Contains Toxic Chemical Release - SARA III Section 313 Ingredient: No

California Proposition 65: Product sold in the state of California is labeled to comply with Proposition 65.

Non-hazardous Ingredient Disclosure: Water
STATUS UNDER USDOL-OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200

Portland cement is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.

STATUS UNDER CERCLA/SUPERFUND, 40 CRF 117 AND 302 - Not listed.

HAZARD CATEGORY UNDER SARA (TITLE III), SECTION 311 AND 312 - Portland cement qualifies as "hazardous substance" with delayed health effects.

STATUS UNDER SARA (TITLE III), SECTION 313
Not subject to reporting requirements under Section 313.

STATUS UNDER TSCA (AS OF MAY 1997)

Some substances in portland cement are on the TSCA inventory list.

Trade Name: NVS[®] Premix
Page Five

STATUS UNDER THE FEDERAL HAZARDOUS SUBSTANCES ACT – Portland cement is a “hazardous substance” subject to statues promulgated under the subject act.

STATUS UNDER CALIFORNIA PROPOSITION 65

This product contains chemicals (trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the manufacturer to give the above warning in the absence of definitive testing to prove that the defined risks do not exist.

STATUS UNDER CANADIAN ENVIRONMENTAL PROTECTION ACT – Not listed.

STATUS WHMIS

Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class E – Corrosive Material) and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS).

The data included herein are presented according to Siplast's practices current at the time of preparation hereof, are made available solely for the consideration, investigation and verification of the original recipients hereof and do not constitute a representation or warranty for which Siplast assumes legal responsibility. It is the responsibility of a recipient of this data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.