



## MATERIAL SAFETY DATA SHEET READY MIXED CONCRETE

### SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Product Name:** Freshly Mixed Unhardened (Plastic) Concrete also called Ready Mix Concrete, Portland Cement Concrete, and/or Flowable Fill.

**CAS Number:** NA

**Product Use:** Concrete is widely used as a structural component in construction applications.

**Note:** This MSDS covers many types of concrete. Individual composition of hazardous constituents will vary between types of concrete.

**Manufacturer:** Paragon Concrete Company  
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### SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	Percent by Weight	CAS Number	Exposure Limits	
			Respirable Dust (R)	Total Dust (T)
			OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Portland Cement*	10-25	65997-15-1	10 (T), 5 (R)	10 (T), 5(R)
Aggregates*	35-90	Limestone 1317-65-3 Sand & Gravel None	10 (T), 5 (R)	10 (T), 5(R)
Fly Ash*	0-15	68131-74-8	10 (T), 5 (R)	10 (T), 5 (R)
Slag Cement*	0-15	65996-69-2	10 (T), 5 (R)	10 (T), 5 (R)
Water	5-25	77321-85	NA	NA
Crystalline Silica SiO <sub>2</sub>	>1	14808-60-7	30 (T), 10 (R)	2 (T), 0.05 (R)

\*Each of these ingredients may have quartz (silica SiO<sub>2</sub>) as a component. The percent of silica varies greatly from product to product and also with the same product. Silica exposure may occur when respirable dust is present. Dust is not present in Freshly Mixed Unhardened Concrete.

Concrete contains cement, which is manufactured from materials mined from the earth, and is processed using energy provided by fuels. Trace amounts of chemicals may be detected during chemical analysis such as: potassium and sodium sulfate compounds, chromium compounds, nickel compounds, and other trace compounds.

The chemical admixtures are present in quantities comprising less than 1%. These chemical admixtures can be both dry and/or liquid. Admixtures contained in Freshly Mixed Unhardened Concrete at the time of delivery would have no effect on the hazards associated with the Fresh Mixed Unhardened Concrete.

Component product Material Safety Data Sheets are available upon request.

### SECTION 3: PRECAUTIONS FOR SAFE HANDLING AND USE

**Personal Protective Equipment:** Use barrier creams, gloves, boots, and clothing to protect skin from prolonged contact with plastic concrete. Particularly protect abrasions of the skin from contact with plastic concrete. Wear safety glasses or goggles when placing methods cause splashing of the plastic concrete.

**Waste Disposal Methods:** Spills of plastic concrete should be allowed to harden, when it can be disposed of as common waste. All disposals should be in accordance with local regulations.

**Additional Precautions:** Any cutting, grinding, or scarifying of dry hardened concrete can cause dusting of concrete. Use local or general ventilation to control exposures to below applicable exposure limits. Use NIOSH/MSHA approved respirators when exposure limits are exceeded.

## SECTION 4: HAZARD IDENTIFICATION

<b>Emergency Overview:</b>	Unhardened concrete is an odorless semi-fluid, flowable, granular paste of varying color and texture. It is not combustible or explosive. Exposure of sufficient duration to wet concrete can cause serious, potentially irreversible tissue (skin, eye, respiratory tract) damage in the form of chemical (caustic) burns. Take appropriate precautions to minimize direct contact with the product.
<b>Routes of Entry:</b>	Skin Contact, Eye Contact, and Ingestion.
<b>Effects of Acute Exposure:</b>	Plastic concrete can dry the skin and cause alkali burns (cement dermatitis). Prolonged exposure may irritate the skin and cause a burning sensation, particularly in areas of prior abrasion or irritation. Contact with plastic concrete can cause irritation of the eye. Ingestion may cause throat irritation.
<b>Effects of Chronic Exposure:</b>	Hypersensitive individuals may develop an allergic dermatitis. This product may contain crystalline silica. Since freshly mixed unhardened concrete is a wet product, the risk of silica inhalation is negligible and should not present a significant health hazard.
<b>Emergency and First Aid Procedures:</b>	Irrigate eyes with copious amounts of water. Wash exposed areas of the body with soap and water. Saturated or contaminated clothing should be removed and washed before re-use. If irritation persists, obtain medical attention.
<b>Carcinogenic Potential:</b>	Freshly Mixed Unhardened Concrete is not listed as a carcinogen by the NTP, OSHA, or the IARC. Concrete frequently contains crystalline silica in concentrations greater than 0.1%. However, crystalline silica is classified by the IARC as a carcinogenic to human. The NTP has characterized respirable silica as "known to be a human carcinogen". Crystalline silica in wet concrete is not respirable and does not pose a health hazard.

## SECTION 5: FIRE & EXPLOSION HAZARD DATA

<b>Flash Point:</b>	NA	<b>Unusual Fire and Explosion Hazards:</b>	None
<b>LEL:</b>	NA	<b>Flammable Limits:</b>	NA
<b>UEL:</b>	NA	<b>Special Fire Fighting Procedures:</b>	NA
<b>Extinguishing Media:</b>	NA		

## SECTION 6: REACTIVITY DATA

<b>Stability:</b>	Stable	<b>Hazardous Decomposition Products:</b>	None known
<b>Conditions to Avoid:</b>	None known	<b>Hazardous Polymerization:</b>	Will not occur
<b>Incompatibility (Materials to Avoid):</b>	Strong acids		

## SECTION 7: PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling Point:</b>	NA	<b>Specific Gravity:</b>	1.5-3.0
<b>Vapor Pressure:</b>	NA	<b>Melting Point:</b>	NA
<b>Vapor Density:</b>	NA	<b>Evaporation Rate:</b>	NA
<b>Solubility in Water:</b>	Slightly (0.1-1.0%)	<b>Appearance and Color:</b>	Odorless gray, plastic, flowable, granular mud
<b>pH (in water):</b>	12-13		

## SECTION 8: OTHER INFORMATION

### Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists	NIOSH: National Institute for Occupational Safety and Health
CAS: Chemical Abstract Service	NTP: National Toxicology Program
IARC: International Agency for Research on Cancer	OSHA: Occupational Safety and Health Administration
LEL: Lower Exposure Limit	PEL: Permissible Exposure Limit
MSHA: Mine Safety and Health Administration	TLV: Threshold Limit Value
NA: Not Applicable	UEL: Upper Exposure Limit

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