



# CHEM-CRETE HPG551

## Hydrophobic Polyurethane Grout

### PRODUCT DESCRIPTION

Chem-Crete HPG551 is a two-part (Part A & Part B) polyurethane injection material, when these two parts are reacted, they produce a rigid, closed-cell foam. This product is used as an effective stabilizer in water-bearing soils and can lift sunken floors, slabs and roadways. Also, it can be used to fill voids to prevent leaking of liquids like water into a closed space.

Both parts of Chem-Crete HPG551 do not contain any solvents or volatile materials. The low viscosity of these materials permits easy installation and injection of the product for maximum effectiveness. The reaction of Part A & Part B results in an expansion of about 10 times of the original mix volume to produce a 6 pound per cubic foot foam. The temperature of the materials when mixed and the temperature of the soil into which the material is introduced control the speed of the reaction.

### FIELDS OF APPLICATION

Chem-Crete HPG551 is used to lift sunken floors, slabs and roadways also it is used a voids filler to prevents leaking of liquids like water into a closes space.

### PRODUCT FEATURES

- Ready-to-use system.
- Low viscosity permits reliable penetration.
- Rapid reaction producing expanded closed cell foam.
- Good adhesion to substrate.

### PACKAGING

Product	Packaging
Chem-Crete HPG551 – Part A	55 Gal (208 Liters) Drum
Chem-Crete HPG551 – Part B	55 Gal (208 Liters) Drum

### TECHNICAL DATA

#### Physical properties for uncured material of Chem-Crete HPG551:

Property @ 25°C (77°F)	Part A	Part B	Test Method
Color	clear	brown	visual
Specific gravity	1.04-1.05	1.22-1.24	ASTM D891
Viscosity @ 77°F (25°C)	200-250 centipoises	175-225	ASTM D4878
Storage stability	Minimum 12 months	Minimum 12 months	-
pH	not established	not established	-
Hazard class	not regulated	9	-
Solids	100%	100%	-
Corrosiveness	non-corrosive	non-corrosive	-
Flash point	191°F (88 °C)	390°F (199 °C)	-
Mixing Ration	1 A: 1 B By Volume		-

#### Physical properties of cured materials:

Property	Value	Test Method
Free-rise foam density, Lb/ft <sup>3</sup> (g/cc)	6 ± 0.5 (0.096 ± 0.008)	ASTM D1622
Shrinkage by volume, %	0	In-house
Toxicity	non-toxic	1-2
Compression Strength @ 10% Deformation, psi (kPa)	80-90 (552 – 620)	ASTM D1621

### APPLICATION DATA

**Site Preparation:** in situations where sand, loam or clay need to be stabilized, Chem-Crete HPG551 can be utilized. These applications may exist on the outside of tunnels, footings for bridges or in utility shafts of dams. For many projects, the method of stabilizing the surrounding soil is simply drilling holes through the concrete and injecting the grout at predetermined intervals. Each individual situation requires thorough evaluation on how to best add structure to the soil.

**Grout Preparation:** perform a pre-blend of both parts of Chem-Crete HPG551 with to ensure the desired gel time meets the requirements for a particular application. Note that the temperature of the components will affect the reaction time; hotter materials will decrease the reaction or working time, and colder materials will increase the reaction time. Furthermore, pH and other factors present within the application site may affect the reaction or work time.

**Application Method:** Chem-Crete HPG551 is best installed using multi-component pumps. The mix ratio of the material is 1 part by the volume of Chem-Crete HPG551 – Part A to 1 part by the volume of Chem-Crete HPG551 – Part B. Flush the pump and all mechanical components of all residual grout when injection is finished.

**Precautions:** this material is intended to be used by trained individuals with the proper equipment. This grout contains reactive materials, which result in an exothermic reaction and have the potential to cause burns when in contact with skin. Consider the following safety measures:

- Wear protective gloves, clothing, goggles, hearing Protection for noise reduction and hard hats for falling debris.
- Do not eat, drink or smoke while in active contact with these materials.
- Avoid skin contact.
- Wash hands thoroughly with soap and cool to tepid water. Never wash the skin with a solvent.
- Anyone experiencing difficulty breathing when working with these materials or showing an allergic reaction should seek fresh air immediately and consult a physician if symptoms persist.

**Limitations:** application at ambient temperatures below approx. 5°C is not recommended. Exposure to temperatures exceeding 65°C for prolonged periods is not recommended.

**Pot life:** pot life at 68°F (20°C) is 1 - 2 minutes

### CLEANING

Tools and equipment must be cleaned immediately after use, Mineral Spirits solvent can be used for this purpose.

**Caution:** Solvents are flammable and also may affect the injection pump's seals if exposed to solvent for long period. Check the equipments manufacturer for suitability of cleaning solvents.

**Spills:** All spills of Chem-Crete HPG551 should be cleaned up by absorbing the substance into an inert material and transferring it to an open top drum. Do not seal the waste drums for 24 hours to allow the Chem-Crete HPG551 to react completely. Dispose of waste material in accordance with state and local regulations.

### STORAGE

Open containers of material should be used quickly to avoid moisture contamination. If a container needs to be resealed, it should be blanketed with nitrogen or dry air [less than -40°F (-40°C) dew point] to minimize water exposure. Refer to the material safety data sheets (MSDS) for further information regarding these materials.

### SAFETY PRECAUTIONS

After full cure Chem-Crete HPG551 is physiologically harmless. Keep the resin and hardener away from the eyes, mouth and skin. Do not breathe in the vapors. The uncured mixture can cause irritation of the skin. For best protection, wear rubber or plastic gloves. In case of contamination, wipe the resin immediately from the skin using paper towels and then wash with soap and water or hand cleaning detergent.

### TECHNICAL ASSISTANCE

Please contact International Chem-Crete Corporation for Technical Personnel.

### WARRANTY

**LIMITED WARRANTY:** International Chem-Crete Inc. warrants that, at the time and place we make shipment, our materials will be of good quality and will conform to our published specifications in force on the date of acceptance of the order.

**DISCLAIMER:** The information contained herein is included for illustrative purposes only and, to the best of our knowledge, is accurate and reliable. International Chem-Crete Inc. is not under any circumstances liable to connection with the use of information. As International Chem-Crete Inc. has no control over the use to which others may put its products, it is recommended that the products be tested to determine the suitability for specific applications and/or our information is valid in particular circumstances. Responsibility remains with the architect or engineer, contractor and owner of the design, application and proper installation of each product. Specifier and user shall determine the suitability of the product for specific application and assume all responsibility in connection therewith. AM25319.

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