POLYLEVEL® 220 TRENCH BREAKER FOAM

TECHNICAL INFORMATION

Product Description

PolyLevel 220 Trench Breaker Foam is a water-blown, two-component, liquid polyurethane system that when combined, expands into a lightweight, rigid material used for exterior applications around utilities and pipelines. PolyLevel Trench Breaker is applied as a liquid and then expands approximately 35 times in volume in 15 to 20 seconds. The material exhibits low exothermic reaction temperature and therefore, can be placed in continuous, successive lifts without danger of charring or ignition.

All of Supportworks' PolyLevel blends are NSF/ANSI/CAN 61 -2022 and NSF/ANSI/CAN 372 – 2022 certified. These two certifications verify that no harmful material or contaminants from the polyurethane foam will be introduced into the groundwater system.

Typical Material Properties

Viscosity of Resin @ 77˚F:	1200 cps
Viscosity of Isocyanate @ 77˚F:	225 cps
Lbs. per gallon of Resin:	9.85 lbs.
Lbs. per gallon of Isocyanate:	10.25 lbs.
Shelf life of System:	6 months

Typical Reaction Properties

Cream Time @ 77˚F:	3–5 seconds
Rise Time @ 77˚F:	8–14 seconds

Mix Ratio

By Weight of Resin:	91 parts
By Weight of Isocyanate:	100 parts
By Volume of Resin:	100 parts
By Volume of Isocyanate:	100 parts

Typical Physical Properties

Density (ASTM D1622):	2.2 ± .02 pcf
Compressive Strength (ASTM D1621):	40 ± 3 psi

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APPLICATION INFORMATION

Equipment & Component Ratios

PolyLevel 220 Trench Breaker (PL-220TB) components should be mixed at a 1:1 ration by machines suited for two-component spray polyurethane systems. Consult with Foundation Supportworks for information regarding appropriate equipment and the processes recommended. Material and hose temperatures typically range between 95-130˚F and the spray pressures between 1,200 – 1,500 psi. The PL-220TB **R-side** component (**PL-220TBRD** – Drum / **PL-220TBRT** – Tote) is connected to the resin transfer pump while the **A-side** (**PLAD** - Drum / **PLAT** - Tote) should be connected to the isocyanate pumps.

Storage & Use of Chemicals

It is recommended that materials be stored out of direct sunlight. The temperature range of storage should fall between 60-90˚F. If chemicals are not properly pre-heated / heated, the isocyanate and resin may not mix appropriately and could cause processing problems. This is especially important as ambient temperatures become lower with seasonal changes. Prolonged exposure of the 'A' side to temperatures below 40˚F may cause the component to freeze. Keep drums tightly closed and always avoid A-side exposure to water in any form, including humidity. Contact with water will result in crystallization of some of the A- side material and could cause processing or equipment issues.

Safe Handling

Use caution with the removal of the bungs from the containers as there may be a buildup of pressure. Avoid breathing all vapors. If one comes into contact with the chemical, immediately rinse the area for 15 minutes and seek medical attention, if needed.

These guidelines provide important health and safety considerations associated with working with polyol resin blends. Polyurethane foams are often made using "systems," sometimes called "A-side" and "B-side," or "iso side" and "resin side." The hazards of the polyol resin are different from those of the diisocyanates, and different precautions should be taken when handling the individual components. This guide gives a brief summary of hazards that may be associated with the "resin side" of systems and addresses important issues to consider in the safe handling of these chemicals. (AX-228, 2013)

For further information, refer to **"Guidance for Working with MDI and Polymeric MDI: Things You Should Know"** from AX-205 *https://polyurethane.americanchemistry.com/Resources-and-Document-Library/11364.pdf* published by the Center for the Polyurethanes Industry (CPI), 700 2nd Street, NE, Washington, DC 20002

Caution

Polyurethane products manufactured or produced from this liquid system may present a serious fire hazard if improperly used or allowed to remain exposed or unprotected. The character and magnitude of any such hazard will depend on a broad range of factors which are controlled and influenced by the manufacturing and production process, by the mode of application or installation and by the function and usage of the particular product. ***Any flammability rating contained in this literature is not intended to reflect hazards presented by this or any other material under actual fire conditions. These ratings are used solely to measure and describe the product's response to heat and flame under controlled laboratory conditions.*** Each person, firm or corporation engaged in the manufacture, production, application, installation or use of any polyurethane product should carefully determine whether there is a potential fire hazard associated with such product in a specific usage, and utilize all appropriate precautionary and safety measures.