AMBI-JACK 4.0

SLAB JACKING SYSTEM MEDIUM VISCOSITY

AMBI-JACK 4.0 Product Data Sheet
Issued 03/25/2025

DESCRIPTION

AMBI-JACK 4.0 is a hydrophobic, water based, two-component, slab jacking polyurethane foam system intended for use by qualified contractors trained in the processing and application of concrete lifting and geostabilization foams. **AMBI-JACK 4.0** requires the use of an A-side component (Isocyanate) with a water based B-side component (Resin).

APPLICATIONS

PARKING AREAS • CONCRETE ROADWAYS • HIGHWAYS • RUNWAYS • DRIVEWAYS • GARAGE APRONS • PATIOS • POOL DECKS • SIDEWALKS & WALKWAYS • PORCHES • ON-GRADE SLABS • BASEMENT SLABS • CONCRETE STOOPS • FOUNDATIONS • TANKS

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	PRELIMINARY VALUE
Core Density	ASTM D 1622	4.0 – 4.4 lbs/ft³
Compressive Strength	ASTM D 1621	70 – 80 psi
Curing Rate	90% of Compressive Strength within 30 minutes.	
Tensile Strength	ASTM D 1623	97 psi
Shear Strength	ASTM C 273	50 psi
Water Absorption	ASTM D 570	<0.02%
Dimensional Stability @ 180°F Dry @ 158°F 100% RH @ -20°F Dry	ASTM D 2126	 1.13% -0.60% -0.32%
Flexrual Strength	ASTM D-790	In Progress
Closed Cell Content	ASTM D 1940	>85%

AMBI-JACK 4.0 does not contain volatile blowing agents. The drums and totes of **AMBI-JACK 4.0** may be premixed on site to control the viscosity and foam reaction rates.

AMBI-JACK 4.0 Resin (B-Component) is available in 425 lb. net weight steel and plastic drums and one-way totes of 2,125 lbs. **AMBIT PMDI-ISO** Isocyanate (A-Component is available in 500 lb. net weight steel drums and non-returnable totes of 2,500 lbs.

New York State Department of Transportation (NYSDOT) Panel Test

NYSDOT Panel Test GTP-9 is a Hydro-Insensitivity of High Density Polyurethane Foam Test

Hydro-Insensitivity	Pass
90% Compressive Strength < 30 min	Pass
Percentage of Density Retention > 90%	Pass

Proportioning Equipment	Data
Room Temp. (°F)	70
Room Humidity (%)	38.50
A-Side/B-Side Temp. (°F)	110/110
Hose Temp. (°F)	110
Pressure (Psi)	1200

AMBI-JACK 4.0 is a hydrophobic polyurethane foam system designed for soil stabilization and concrete lifing. When reacted in a water filled container, the reacting mixture does not mix with water. The water remains clear, indicating that the resin has not migrated to the water phase. The foam does not absorb appreciable amounts of water. The foam passes the requirements of ALDOT-434-09 and TxDOT 3086.

LIQUID COMPONENT PROPERTIES

PROPERTY	PMDI-ISO ISOCYANATE (A-COMPONENT)	AMBI-JACK 4.0 RESIN (B-COMPONENT)
Color	Brown	Clear
Viscosity @ 77˚F @100˚F @120˚F	180 – 220 cps	 600 cps 202 cps 116 cps
Specific Gravity	1.23 g/mL	1.01 – 1.02 g/mL
Shelf Life of Properly Stored Unopened Drum	12 months	6 months
Storage Temperature	50 – 105˚F	50 – 105˚F
Mixing Ratio (Volume)	1:1	54.47: 45.52

The viscosity of the components decreases with increasing temperature. The foam reactivity is faster with temperature increases of the components. The resin may be heated to decrease the viscosity for a better mix or to control the reaction rate.

REACTIVITY PROFILE

Mix Time	5 seconds
Pour Time	3 seconds
Cream Time	9 seconds
String Gel Time	23 seconds
Tack Free Time	30 seconds
Rise Time	45 seconds

* Hand mixed using a lightening mixer at 3,000 RPM for 12 seconds, liquid components at 75°F.

These values represent independent third party lab tested values.

RECOMMENDED PROCESSING PARAMETERS

Initial Primary Heater A-Side Isocyanate Temperature	85° – 140°F
Initial Primary Heater B-Side Resin Temperature	105° – 140°F
Initial Hose Heat Setpoint Temperature	110° – 140°F
Initial Processing Setpoint Pressure	1,000 psi
Ground Temperature	>50°F

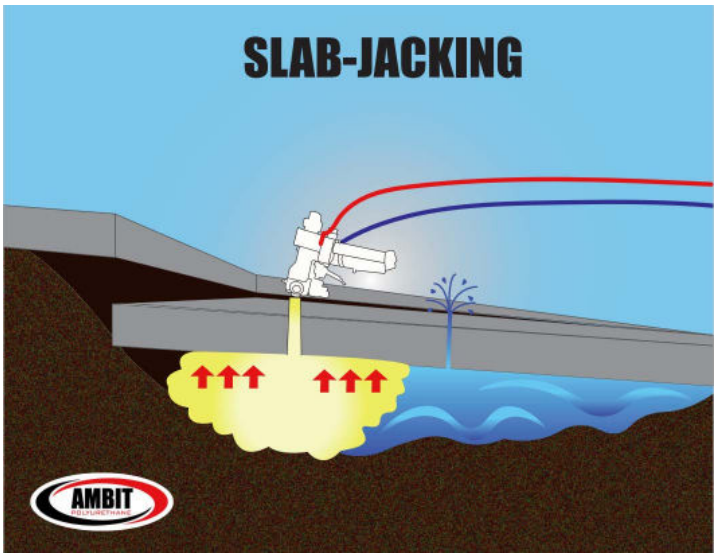
Slab jacking and soil stabilization can vary greatly depending on ground temperature, moisture content of the soil, equipment and other factors. The applicator must continuously observe and monitor the movement of the slab while processing to obtain the desired lift height. It is the applicators sole responsibility to process and apply **AMBI-JACK 4.0** *within the specifications listed.*

GENERAL REQUIREMENTS

Equipment must be capable of delivering the proper (1:1) ratio by volume of polyumeric isocyanate (PMDI-ISO) and resin at adequate temperatures and injection pressures.

AMBI-JACK 4.0 has a maximum thickness per lift of 3 inches.

AMBI-JACK 4.0 should not be used when the continuous service temperature of the substrate or foam is below - 40°F or above 180°F.



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