



AP LIFT 430

TWO COMPONENT, STRUCTURAL POLYURETHANE FOAM



Description

AP LIFT 430 is a two component, high strength, high density, hydro insensitive structural polyurethane foam. Unconfined density is approximately 48 kg/cubic meter.

Advantages

- Traffic ready in 15 minutes
- High strength
- Works in wet environments – displaces water
- Bonds with soil and concrete
- Closed cell

Field of Application

- Filling abandoned pipes, mine shafts, etc.
- Lifting concrete slabs
- Stabilizing soil
- Filling abandoned pipes
- Filling voids

Application

Note : The following is a typical application description. In case of other jobsite parameters, please contact our technical department.

PRELIMINARY ANALYSES

For slab lifting, soil stabilization, consolidation grouting, and all other forms of geotechnical grouting, it is advised to review soil reports from the job site. Take note of all structural elements and considerations and consult with geotechnical or structural engineers as needed. Locate all utilities prior to drilling or driving pipes into the ground.

REQUIRED TOOLS

Proportioning pump with heated lines, drill bits, MixMaster Pro injection gun, ports, Alchemy-Spetec Flush, soil probes.

PREPARATION OF THE SUBSTRATE

Soil probe spacing is most commonly 120–150 cm on center and as needed across the surface of the substrate. Depths will vary from job to job but must be established before work is to begin. Injection Technician should always confirm clearances and paths to injection sites for large equipment and/or Alchemy-Spetec mobile injection rigs.

PREPARATION OF THE PRODUCT

Read the technical and safety data sheets prior to commencement of the injection work.

PREPARATION OF THE EQUIPMENT

Alchemy-Spetec proportioning equipment in Cart System or Rig configurations should be tested to confirm equal flow and pressures from both A and B lines. MixMaster Pro should always be thoroughly inspected for cross-contamination or foreign buildup of any kind prior to injection.



AP LIFT 430

APPLICATION

- Start the injection at the first probe and work way across grid pattern as needed taking note of travel of foam, connectivity to next hole location, and volumes used.
- Do not over pressurize while injecting; the correct injection pressure is the pressure that allows resin to penetrate the soils and/or fill the voids and keep the MixMaster Pro operating properly
- Take note of reaction time of material and be sure to purge injection gun regularly to prevent material curing in the gun.
- If lifting slabs, monitor lift with Alchemy-Spetec Dial Indicator Cranes to prevent over-lift.
- If stabilizing soil, pay attention to volume/vertical distance estimation and for material not penetrating and exiting around probe only.
- Clean the MixMaster gun thoroughly with Alchemy-Spetec pressure pot system, and cap supply lines.
- Run material through the pump as a maintenance step every 7-10 days.

CLEANING AND MAINTENANCE

After the injection, clean the pump with AP Flush 121. Conduct a full Alchemy-Spetec-recommended gun flush after every use. Material can remain in cleaned and capped lines. After injection, remove the packers from the concrete and fill the holes with a fast setting cement or any other appropriate filler material.

COMPLIMENTARY PRODUCTS

½" hydraulic tubing, flush pot, dial indicator cranes, airless flush pump, air compressor, ports, AP Flush 121.

ADVICE/FOCAL POINTS

Avoid injecting by temperatures below -20°C. In extreme cold conditions it is recommended to warm both components to 16°C–27°C).

Technical Data

APPEARANCE – COMPOSITION

Physical Properties – Cured

Compressive Strength	(ASTM D-1621)	50 p.s.i. or 7,200 p.s.f.	3,447 millibar
Tensile Strength	(ASTM D-638)	88 p.s.i.	6,067 millibar
Expansion	(Unconfined)	22-26 times	
Density	(ASTM-D 1622)	2.75 to 3.25 lb/ft ³	44.05 to 52.06 kg/m ³

Properties will vary depending on application conditions.

REACTION TIMES

Reaction Time @ 25°C

Initial Reaction Time	8 seconds
Tack Free	30 seconds
90% Full Strength	15 minutes



AP LIFT 430

CONSUMPTION

Consumption has to be assessed on site and is influenced by the specific AP Lift product used, soil type, load to be lifted, amount of water in the substrate, soil compaction, and possible presence of voids.

REFERENCE DOCUMENTS



Packaging

AP LIFT 430 is supplied in 378.5 Liter Units, 1892.7 Liter Units.

Storage and shelf life

Store between 10°C – 29°C.

Safety precautions

Avoid contact with eyes and skin, always use personal protective equipment in compliance with local regulations.

Read the relevant Material Safety Data Sheet before use. Material Safety Data Sheets are available on www.spetec.com

When in doubt contact SPETEC® Technical Service.

Warranties and Disclaimers

Hychem warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. Hychem has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of spray equipment and application of sol-gel materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Hychem and executed under seal by a company officer.

Field Support

Field support where provided, does not constitute supervisory responsibility. Suggestions made by HYCHEM either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they and not HYCHEM are responsible for carrying out procedures appropriate to a specific application.

Customer Responsibility

The technical information and application advice given in this publication is based on the best information available at the time of print. As the information herein is of a general nature, no assumption can be made as to the product suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.