Polystone® CubX®

True strength comes from within.

Chemical processing industry
Finally, some good news for tank builders.

The tank construction sheet Polystone® CubX® featuring a unique inner cube structure for outstanding stiffness properties. Potential steel reinforcement reductions of up to 100%. The time saving in tank construction is enormous.

"We were able to dispense with steel reinforcement and the associated welding work completely and as a result complete both tanks earlier than originally planned.

Pascal Adam, Production Manager at G&H Kunststofftechnik GmbH & Co. KG, Sprockhövel | Germany.

Project: Production of two rinsing water tanks for an anodising plant. Polystone® P CubX® provided the opportunity to produce the tanks faster than rectangular tanks of comparable dimensions made of solid plastic sheets.

Fast production: Rectangular tanks made from Polystone® P CubX®

Polystone® CubX® can be very easily processed using common welding methods, heating element stump, hot gas drawing and extrusion welding as well as all machining methods.

Standard equipment: Recess for leakage monitoring

Developed especially for chemical tank and plant construction: Polystone® CubX®, the innovative sheet with the inner cube structure

Fast, safe and efficient rectangular tank construction

As an expert in tank construction, you know even quite small rectangular tanks for storing chemical media normally require elaborate steel reinforcement. Cladding with plastic profiles, which have to be elaborately cut to size and welded, is required to protect the steel reinforcement against corrosion.

With Polystone® CubX®, Röchling has now developed a completely new tank construction sheet with an inner cube structure that allows for quicker and easier rectangular tank construction.

The special feature is the sheet design, which combines very high longitudinal and transverse stiffness in the sheet itself. Polystone® CubX® consists internally of a homogeneous, rectangular (orthogonal) grid pattern, welded to two sheets on its outsides, which form the sheet surface. The result is an innovative construction sheet that combines light weight and ease of handling with very high longitudinal and transverse rigidity.

The sheet, which was specially developed for tank construction, is also suitable for permanent contact with a large number of chemical media thanks to the proven chemical resistance of Röchling materials. The considerable reduction (up to 100%) of steel reinforcements that would otherwise be required for thermoplastic rectangular tanks also results in significant time savings in tank manufacturing.

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Developed for chemical tank and plant construction

Polystone® CubX® offers several advantages for the construction of your rectangular tank:

- **Reduction of steel reinforcements**
  Depending on the size of the tank, rectangular tanks made of Polystone® CubX® require less or even no plastic-coated steel reinforcements due to the high rigidity of the sheet. This significantly reduces the number of necessary welds and saves time and resources.

- **Easy handling**
  Tests in our in-house material laboratory show: A Polystone® CubX® sheet with a thickness of 57 mm has the same stiffness as a solid plastic sheet made of PP with a thickness of 35 mm, but weighs only half as much. This simplifies the handling of the sheets. Also ideal for tank repairs and retrofits.

- **High level of process safety**
  Polystone® CubX® increases the process reliability of your rectangular tank when compared to solid plastic sheets. If leakage occurs, the leaking fluid accumulates locally and is limited in the interior of the sheet. The operator thus has more time to take appropriate measures. For leakage monitoring, Polystone® CubX® sheets are already equipped with a recess as standard, which forms a cavity in the finished tank for interior monitoring, for example, by wire for external optical monitoring.

- **Thermal insulation**
  Polystone® CubX® offers good thermal insulation thanks to the air trapped in the hollow chambers. Elaborate and costly insulation work can be reduced or saved.

- **Flame retardant**
  The flame retardant version (B1) Polystone® PPs CubX® is especially suitable for sensitive applications with high fire protection requirements.

Plastics for chemical tank construction

Röchling thermoplastics and composites have been in use for decades in the chemical processing industry as material for plants and tanks. Röchling provides a complete system consisting of sheet material, square tubes, U-Profiles and different welding rods and expert advice in selecting the correct material.

Furthermore, Röchling has a comprehensive database and many years of experience with chemical resistance and the successful use of plastics. The most important areas of use are tanks for the storage of liquids, galvanic plants, steel-pickling plants, wastewater treatment systems, exhaust air cleaning plants and ventilation plants.

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