

## Plastic Disposable GXP Static Mixing Elements



Plastic disposable GXP mixing elements are used for mixing/dispersing adhesives, sealing compounds, varnishes and other viscous materials requiring a high degree of mixing, short mixing length and small volume.

GXP mixing elements are available in nominal 9.4 mm diameter in Polypropylene (PP) plastic construction (white colored units in photo) and in 50% glass-filled Polyamide (Nylon) 66 (PA66) plastic construction (black color units in photo).

For more than 30 years, GXP<sup>1</sup> static mixing elements with a structure of inclined crossing bars have been available only in expensive metal construction which did not allow for their economic use as a disposable static mixer. The GXP has been used successfully for the homogenization, mixing and/or dispersion of viscous liquids. The design has proven to be especially useful for difficult mixing tasks such as the mixing/dispersing of liquids with large differences in viscosity and/or extreme flow-rate ratios. Such difficult mixing tasks can only be partially satisfied using traditional disposable plastic static mixers with helical or square Multiflux configurations.

The GXP static mixer is now available as a modestly priced plastic injection molded design where each mixing element is a nominal 9.4 mm diameter and length. It is available in both 50% glass-filled Polyamide (Nylon) 66 and polypropylene (PP) construction. The PA66 version has very high mechanical strength and can be used in applications with a resulting pressure drop at room temperature of up to 300 bar (4,350 psi) while the PP version can handle more modest pressure drops of 50 to 80 bar (725-1,160 psi).

Plastic GXP mixing elements are used as disposable mixers for the mixing of two-part adhesives, sealing compounds, varnishes etc.; in applications such as spraying, casting, joining, and surface treatment; and in industries such as construction, appliances, woodworking, etc.

For applications demanding difficult to mix/disperse materials, the Plastic GXP static mixer will accomplish what is not possible with conventional round helical and square Multiflux type static mixers. The GXP static mixer design provides a very high degree of mixing in a short length. For example, in simple applications such as the mixing of similar viscosity materials of equal volumetric ratio, the mixing performance of one GXP mixing element equals that of three helical or square Multiflux mixing elements resulting in a very short GXP mixer length with a corresponding small mixer volume. For difficult applications such as gas-liquid foaming or the mixing of materials with larger differences in viscosity or volumetric ratio, one GXP mixing element often equals the performance of six-to-ten helical or square Multiflux mixing elements and often accomplishes what is not possible with these conventional designs.

GXP mixing elements are currently available in nominal 9.4 mm diameter and length, are offered at attractive prices and are available from stock. Sizes starting from 4 mm in diameter will become available in the near future.

<sup>1</sup>GXP is the Trade Mark for a static mixer structure with crossing inclined bars. This mixer geometry, which originally was invented by Bayer AG (BKM Mixer), has successfully been used for the past 30 years to solve difficult mixing/dispersing tasks in the laminar flow regime and was available only in expensive metal construction.