



Technical Data Sheet

220 New Road, Sutton Bridge, PE12 9QE - TEL 0845 658 6677 www.tomps.com

TOMPS Flexi Foam PU 3580 A/B

*Two Component, Variable Hardness PU Elastomeric Foam System
250 – 500 kgm⁻³ Moulded Density*

TOMPS Flexi Foam is a two component polyurethane foam system, that when mixed gives a variable density soft, elastomeric foam. The foam is self skinning, durable and has excellent physical properties. Typical free rise density is between 140 – 160 kgm⁻³, however the foam can be over packed in the mould to give higher densities of up to 500 kgm⁻³. The final hardness of the foam can be adjusted by small adjustments to the mixing ratio.

Mix Ratio

	PU 3580A :	PU 3580B	Relative Hardness
By Weight	100 :	33	Soft
	100 :	36	Medium*
	100 :	40	Hard*

* For bulk castings using Medium and Hard, shrinkage of the cured product may be observed.

Product Data

Property	Units	PU 3580A	PU 3580B	Mix
Material	-	Formulated polyol blend.	Isocyanate	polyurethane
Appearance	-	Clear, yellow liquid	Brown liquid	Flexible yellow foam
Viscosity (25°C)	mPa.s	600 – 800	150 – 250	-
Density (25°C)	g/cm ³	1.00 – 1.05	1.20 – 1.25	-
Cream Time (133g, 25°C)	seconds	-	-	30 – 40
Tack Free Time (133g, 25°C)	seconds	-	-	100 – 140
Rise Time (133g, 25°C)	seconds	-	-	135 – 165
Exotherm (133g, 25°C)	°C	-	-	85 – 95
Free Rise Density	kgm ⁻³	-	-	140 – 160
Moulded Density Range	kgm ⁻³	-	-	250 – 500



Technical Data Sheet

220 New Road, Sutton Bridge, PE12 9QE - TEL 0845 658 6677 www.tomps.com

Method of Use

Calculating Shot size

To calculate how much TOMPS Flexi Foam is required to fill the mould, known as the “shot size”, first calculate the volume of the mould (in m³). The amount of foam required is then calculated as follows:

Amount of PU foam (kg) = Desired Density (kgm⁻³) × Mould Volume (m³)

TOMPS Flexi Foam has a free rise density of approximately 160 kgm⁻³, but minimum moulded density is approximately 250 kgm⁻³. Increasing the density will give a harder, less flexible foam.

Mould Preparation

TOMPS Flexi Foam should be cast into a strong, rigid mould with a silicone rubber coating. The mould should be warmed to 25°C. It is important to allow some small bleed holes to allow any gas generated to escape.

Mixing and Pouring

Once the mould has been prepared, accurately weigh out the required quantity of TOMPS Flexi Foam Part A into a clean mixing vessel. Weigh the required amount of part B into the mix vessel and immediately mix the two components until they are homogenized. The mixed material should be cream/ brown in colour and should be streak free. Poor mixing will result in poor quality foam. Immediately pour the mixed material into the mould. It is important that the mixing/ pouring operation is completed before the cream time of the foam (30 seconds).

Demould

TOMPS Flexi Foam is a fast curing system. Depending on mould volume and shape, the product can be demoulded after as little as 10 minutes. Full cure can take up to 72 hours.

Trials

When using Flexi Foam for the first time, or when using new mould shapes or volumes, trials must be carried out to determine the appropriate shot size. TOMPS Flexi Foam can be pigmented, however some pigments may increase the reaction speed so small scale trials should be carried out when using for the first time. We recommend a pigment loading of 1 – 3%



Technical Data Sheet

220 New Road, Sutton Bridge, PE12 9QE - TEL 0845 658 6677 www.tomps.com

Storage

TOMPS Flexi Foam A and B should be stored in original, unopened containers between 20 and 25°C. TOMPS Flexi Foam Part B may crystallise partially or completely if not stored at above 20°C. Like all polyurethanes, both components are moisture sensitive. Moisture absorption will cause excessive aeration in cast parts. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, TOMPS Flexi Foam A and B will have a shelf life of 6 months, from the date of production.

Further Information

Please contact our Technical Department for any further advice on the use of this product.

All data listed relates to typical values. This data should not be considered a product specification.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty – this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended process and use.

Before using this product users should familiarize themselves with the relevant MSDS provided by TOMPS Ltd.