



Angel Hair

TWARON® Angel Hair is a speaker cabinet filler for acoustic damping purpose which is produced by Thüringische Institut für Textil- und Kunststoff-Forschung (TITK), Germany, exclusively for MUNDORF company, Germany

For to make Mundorf Angel Hair, the TWARON® base fibres are processed several times: The TWARON® fibres with their immense number of hairs are first cut into 60 mm long sections, herafter karded, mixed and finally carefully pressed into a mass. In contrast to fibreglass and other plastic fibres, TWARON® conducts heat generated vibrations away very well and absorbs this type of acoustic motion energy in a fundamentally different manner than other known materials which are commonly used for this purpose.

The choice of the right fibre lengths and the right process for combing them into a workable mass leads to remarkable acoustic results which were first discovered by audio professionals. The improvement in the sound quality (fine dynamics in the midrange, "more airy" reproduction of voices and instruments, better 3D properties, etc.) is absolutely comparable with replacing cheaper standard connections with high-end cables. With the difference that Angel Hair is much less expensive.

Comparisons with the kg price for conventional fibres can make Angel Hair look expensive at first glance, but you only need approx. 10-20% of the weight of other materials. More importantly: the sound quality improves significantly; this can particularly be heard in the signal definition in the midrange and in bass reproduction. In comparison with the costs for high quality cables or equipment such as absorbers etc., Angel Hair is an extremely cost-effective way of improving the sound quality.

In contrast to other insulating materials, the insulating properties of Angel Hair are almost linear from 700 Hz. As shown in the diagrams, 3-10 grams/litre of volume in speaker systems is an appropriate quantity, depending on the damped frequency range and the size and design of the speaker cabinet. It is certainly never necessary to fill large speakers and bass reflex boxes completely! At best, this would have a negative effect on the acoustics of your speaker system. For such cases, we recommend just filling the space behind the woofer. And another tip: by exchanging the standard BAF filler for Angel Hair, you generally achieve a further increase in the precision of the bass reproduction for existing speakers.

The diagrams below show how absorption-specific room reflections in the midrange/ upper range can be achieved through filling of absorption boards or insulation backdrops with Angel Hair.

MSilence TWARON® Angel hair

Order number	Packing unit	weight [kg]
ANGEL-200G	1	0,2
ANGEL-200G	5	1
ANGEL-200G	60	12
ANGEL-200G	720	144

