

# Ultrasonic Materials

*Ideal for today's highest-performance transducers*

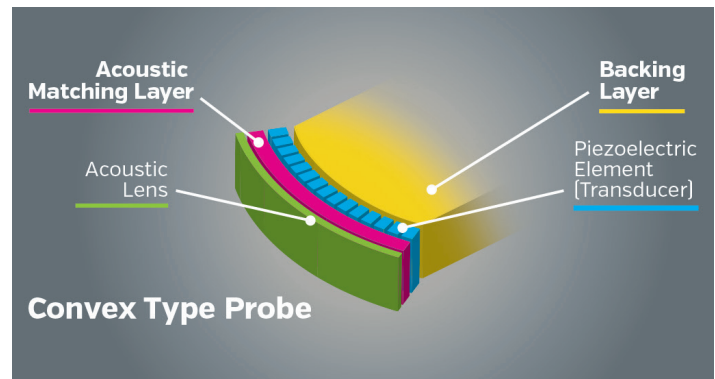
## OVERVIEW

Entegris' premium graphite components are ideal for several high-technology industries. For ultrasound, we have developed several graphite grades that are ideal for use as matching layers for today's highest-performance transducers and backing blocks.

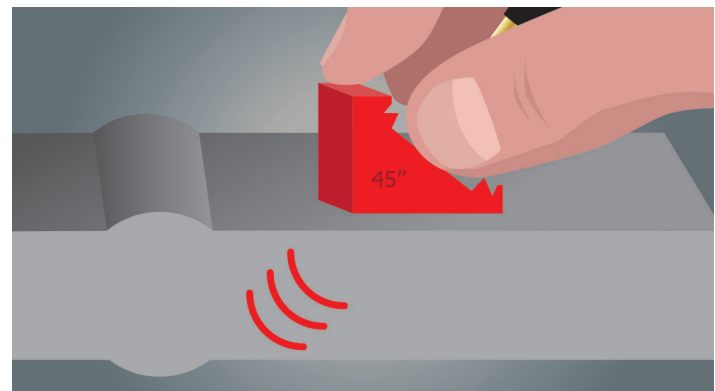
## MATCHING LAYERS

Matching impedance between the piezoelectric generator and the human body is critical to delivering the highest power ultrasound waveforms with the lowest interference. By impregnating different materials into the inherent porosity of graphite, we have been able to create a family of materials with impedances that step down from 30 Mrayls to 3 Mrayls, allowing for minimal internal reflection and interference, and maximum delivery of energy to the test subject. This in turn enables increased resolution of internal features. Images that were once fuzzy and nondescript become crisp and detailed, providing greater diagnostic value.

Where some suppliers have offered matching materials with impregnations and unknown properties, we have focused on supplying materials with tightly controlled ultrasonic transmission. By offering a narrower band of impedance, Our materials provide manufacturers certainty in the yields they will achieve as test heads make their way through value adding assembly processes. Higher yields ensure minimum manufacturing disruption and optimal product flow.



*Medical ultrasound transducer with a single matching layer and backing block*



*Ultrasound transducer for flaw detection uses graphite for matching and wear resistance*

## BACKING BLOCKS

In addition to matching layers, our graphite enables unique, lightweight, thermally conductive, sonic dampening backing blocks. Transducer manufacturers are using our HTC™ materials to dissipate heat from the head, protecting sensitive embedded electronics and extending the life of the head. The low density of the material keeps the weight of the transducer down, making procedures more comfortable for operators and patients.

Our portfolio of ultrasound materials is providing a material advantage to manufacturers and operators of ultrasound transducers.

#### FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](http://entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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