Acoustical Properties of KYDEX® Thermoplastic Sheet

TB - 123

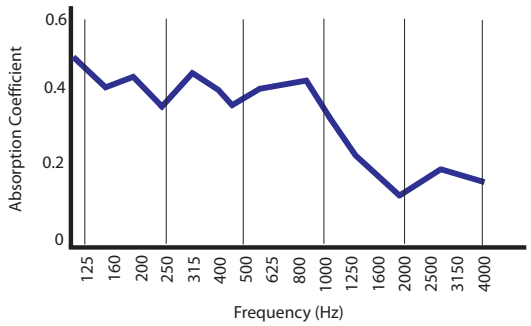
Introduction

RPG has incorporated KYDEX® sheet, which carries a Class 1/A fire rating into the Formedffusor to create an exceptional acoustical product.

The following are performance specifications for the RPG Formedffusor product, which was designed and tested by RPG:

Absorption Coefficient

The Formedffusor is designed to offer wide angle, broad bandwidth sound diffusion as well as useful low frequency absorption. These features control excessive boominess and balance the room's reverberation response. The Formedffusor can be used to offset the usually predominate high frequency absorption of people, drapery, rugs and porous materials.

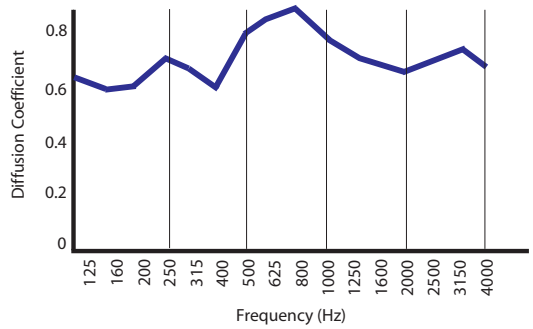


Absorption Coefficients and Noise Reduction Coefficient for the product were measured by an independent, accredited NVLAP facility according to the test methods as defined by ASTM C 423 and ASTM E 795. Random incidence Absorption Coefficients for the product in an E-400 mounting shall be as follows:

125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
0.53	0.37	0.38	0.32	0.15	0.18	0.30

Diffusion

The Formedffusor is based on the QRD reflection phase grating introduced by RPG in 1983. It offers broad bandwidth wide angle diffusion. The graph illustrates the average diffusion coefficient (1 is ideal) for all angles of incidence. Compared to a flat reflecting panel, the QRD maintains uniform diffusivity as a function of frequency above the diffraction limit.



KYDEX, LLC
ISO 9001 and 14001 Certified

Customer Service
6685 Low St, Bloomsburg, PA 17815 USA
Phone: 800.325.3133, +1.570.389.5810
Outside the US: +1.570.389.5814
Fax: 800.452.0155, +1.570.387.7786
Email: info@kydex.com

Technical Service
Phone: 800.682.8758
Fax: +1.570.387.8722
Outside the US: +1.570.387.6997
Email: techservice@kydex.com

www.kydex.com

Acoustical Properties of KYDEX® Thermoplastic Sheet

TB - 123

Adhesive and Assembly

Diffusion Coefficients for the product were measured in accordance with the recommendations of the Audio Engineering Society Working Group SC-04-02 boundary measurement technique. The directional diffusion coefficient is given by the standard deviation of the 1/3-octave polar response, for a given angle of incidence, and normalized by the response of a flat panel of similar size.

The average incidence diffusion coefficients determined at 5° intervals between ± 85° are listed below at octave-band centers. The mean and standard deviation (SD) of the 1/3-octave-band coefficients are also tabulated.

125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	Mean	SD
0.71	0.73	0.88	0.8	0.69	0.56	0.72	0.1

*NOTE: All design concepts and testing was completed by RPG. These results are specific to the Formedffusor product and should not be used for specification work. All testing is the responsibility of the end user.

For further information on Formedffusor contact RPG at:

651-C Commerce Drive
Upper Marlboro, MD 20774
Phone: 301-249-3912
Fax: 301-249-0044
Email: info@rpginc.com
Internet: www.rpginc.com

KYDEX, LLC
ISO 9001 and 14001 Certified

Customer Service
6685 Low St, Bloomsburg, PA 17815 USA
Phone: 800.325.3133, +1.570.389.5810
Outside the US: +1.570.389.5814
Fax: 800.452.0155, +1.570.387.7786
Email: info@kydex.com

Technical Service
Phone: 800.682.8758
Fax: +1.570.387.8722
Outside the US: +1.570.387.6997
Email: techservice@kydex.com

www.kydex.com