



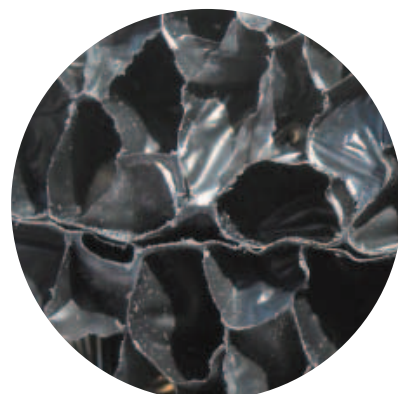
Specialty Foams

Ramsound

A highly efficient sound absorbent polyethylene foam that is resilient to water and humidity.

A key feature of Ramsound is the ability to remain almost unaltered when exposed to water or humidity, the product's acoustic performance remains consistent.

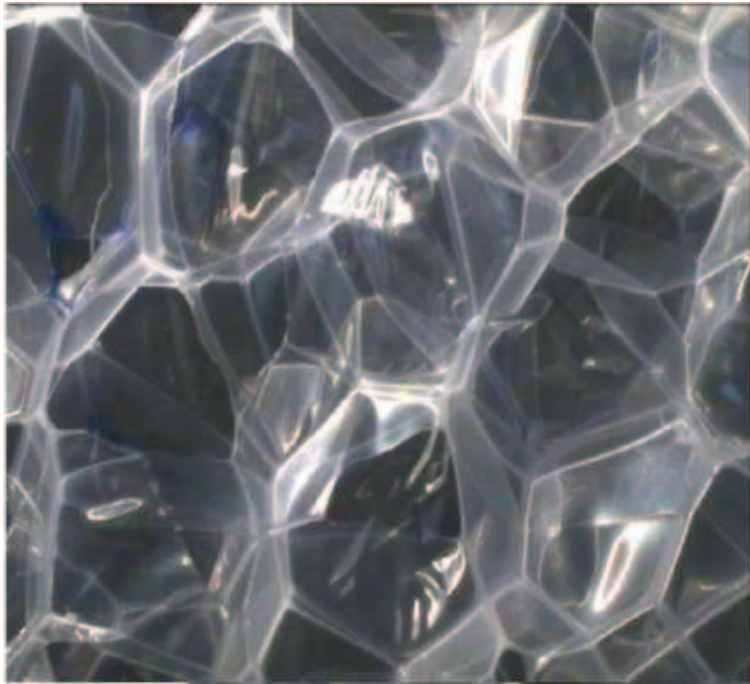
- ◆ Structurally free standing and lightweight.
- ◆ Provides sustained performance in wet and humid conditions
- ◆ Low water absorption
- ◆ Non corrosive and non degradable
- ◆ Absorption peak lower than conventional foams
- ◆ Available black and white.
- ◆ Flame retardant
- ◆ No PPE required and easily transformable.



Ramsound is a product of Sealed Air.

Sound Absorbing Polyethylene Foam

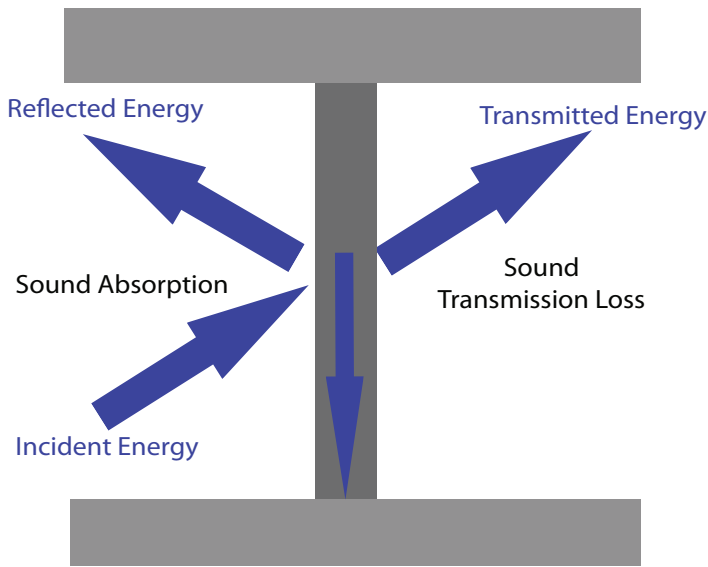
What is Ramsound Foam?



- Polyethylene Closed Cell Foam
- Cell Size 6mm – 12mm
- Density 32 Kg/m³
- Perforated
- Low water absorption

Sound Absorption v's Sound Reflection

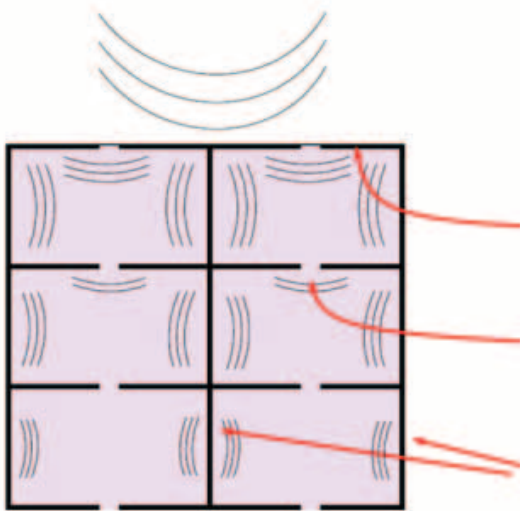
A sound absorber is designed to soften and deaden sound (within a room, to eliminate the reverberation of sound)



A sound barrier is designed to stop sound from travelling through the barrier (from one room to another)

Ramsound

Acoustic Energy Loss in Ramsound



Sound energy loss from three modes:

- Energy dissipation by membrane mode (when sound hits the whisper surface)
- Viscous loss through perforation. (important to have right amount of perforation)
- Air cavity effect reflection of sound wave inside. (when sound bounces between the cell walls who starts to vibrate)
- The sound transfers into energy (heat)

• Ramsound Foam Properties

- Acoustic Absorption Absorption peak is at lower frequencies than conventional material
- Effect of Humidity Ramsound is not significantly modified in humid atmosphere
- Fire Reaction Ramsound FR:(DIN 4102:B1, UL94 HF1, FMVSS 3021/ISO 3795, EN 13501-1, DIN 54837, NF F 16-101)
- Free standing structure

Ramsound Advantages

- Sound absorption rather than reflection
- Non-corrosive and non-degradable
- Lightweight with structural strength

Water resistant – provides unaltered and sustained performance in wet or humid conditions



Product Offering

Planks

Available in Natural and Black – Flame Retardant

30 x 1000 x 2500 mm

40 x 1000 x 2500 mm

50 x 1000 x 2500 mm

Laminated

Available in Black – Flame Retardant

50 x 1000 x 2500 mm

Technical Data Sheet

Ramsound

Sound Absorbing Polyethylene Foam

Typical Physical Properties - Preliminary draft

| Physical Properties | Test Method | Unit | Typical Physical Properties |
|--|---|---------------------|---|
| Density | ASTM D3575-08 Suffix W ISO 845:2006 | Kg/m ³ | 32 |
| Compressive Strength Vertical@ 25% Vertical @ 50% | ASTM D3575-08 Suffix D ISO 7214:2007 | KPa | 17 30 |
| Compressive Strength 25% (4th compression) 50% (4th compression) 70% (4th compression) (100mm/min compression speed) | ISO 3386 1986 part 1 DIN 53577 | KPa | 18 30 55 |
| Compression Set | ASTM D3575-08 Suffix B (50% Compression) ISO 1856:2000 (25% compression) | % | < 20 < 10 |
| Cell Size | BS 4443/1 Met.4 | Cells/25mm | < 10 |
| Fire-test-response Characteristics (1) Transportation Automotive | NF F 16-101 DIN 54837 EN ISO 5659-2/TS 45545-2 FMVSS 302/ISO 3795 | Class Class - | On going (F1) On going (S4, SR2, ST2) - |
| Appliances & Electronics | UL94 | Class | On going (Pass) |
| Building & Construction | DIN 4102 EN 13501-1 | Class Class | On going (HF1) On going (B1) |
| Water Pick Up by Diffusion (RH > 95% - after 28 days) | UNI EN 12088 | Kg/m ² | < 3 |
| Water Pick Up by Diffusion (RH > 95% - after 28 days) | UNI EN 12088 | Volume % | < 4 |
| Thermal Conductivity @ 23°C (73°F) @ -5°C (23 °F) | ASTM D3575-08 Suffix V ISO 8301 | W/mK | On going |
| Thermal stability (24hrs at 70°C) | ASTM D3575-08 Suffix S ISO 2796 | % | < 3 |
| Tensile Strength @ Peak | ASTM D3575 Suffix T ISO1798 | KPa | 140 |
| Tensile Elongation | ASTM D3575 Suffix T ISO1798 | % | 50 |

(1) These numerical laboratory fire-test-response characteristics are not intended to reflect hazards presented by this material under actual fire conditions.

Applications

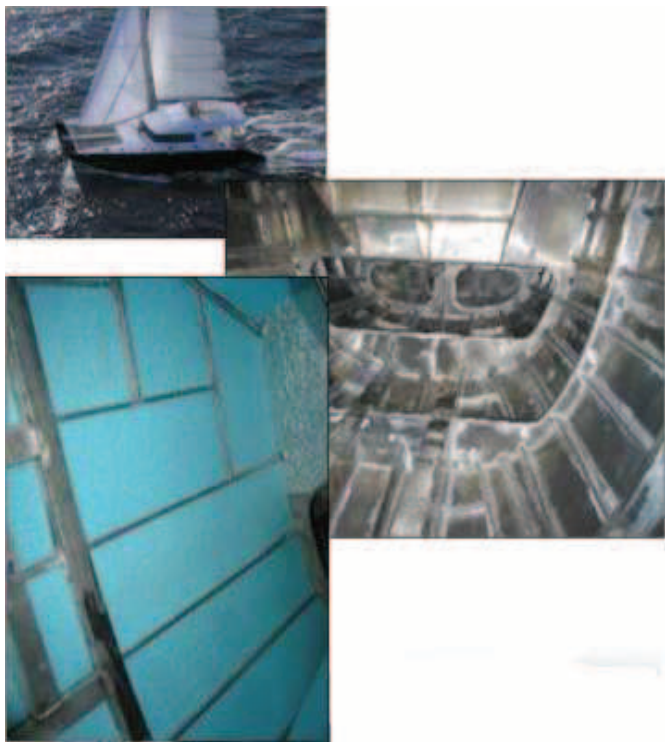


- Noise barrier for industrial plants, highways, train tracks, airports etc



- Hood liner, engine cover, door panel etc for all types of vehicles including domestic, commercial, industrial from coaches, trucks to lining cabs in earth moving equipment.

Applications

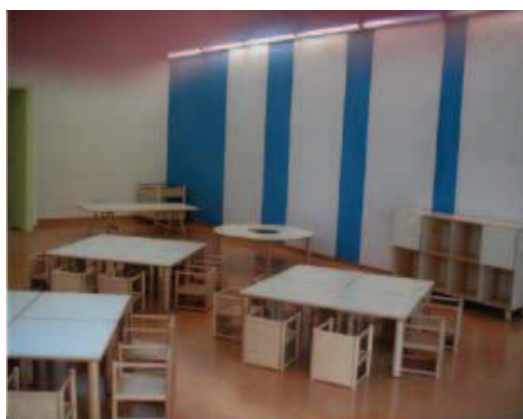


- Marine and Transportation Example

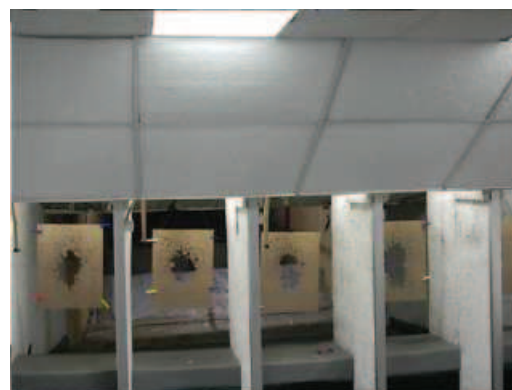


- Baffles Examples

Applications



- Canteens & Classrooms



- Shooting Gallery

Applications



- Skater Park



- Examples of Sound Barriers for Highways and Railways

IBS Ramfoam

Ramsound

Sound Absorbing Polyethylene Foam

Acoustic Foam Solutions

From IBS Ramfoam

Product Features

IBS Ramsound is a closed cell polyethylene foam which has cells that are subsequently opened through the manufacturing process resulting in a highly efficient sound absorbent material with unique advantages compared to other materials.

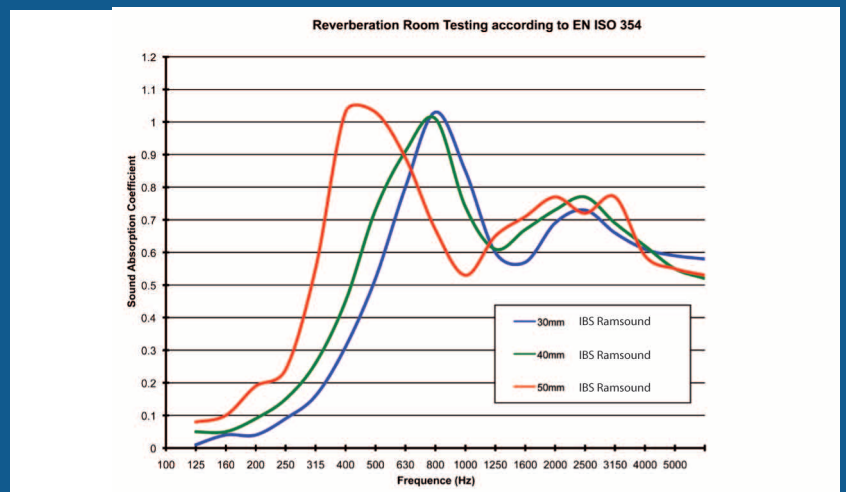
Resilient to Water and Humidity

One of the key features of IBS Ramsound foam is the ability to remain almost unaltered when exposed to water or humidity, the product's acoustic performance remains consistent.

Test Results

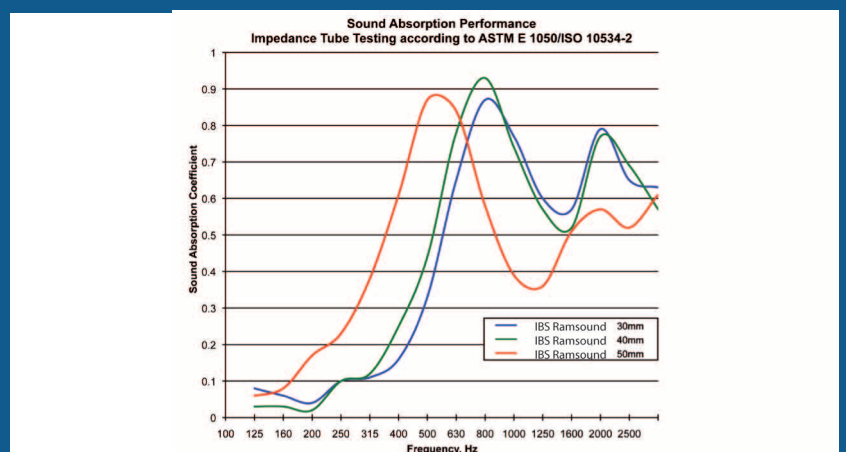
Testing of IBS Ramsound foam was carried out at Istituto Giardani, Italy under the EN ISO 354: 2003 Measurement of Sound Absorption in a Reverberation room. In-house testing using Sealed Air own Impedance Tube takes place on a regular basis to qualify the acoustic performance on IBS Ramsound foam.

30, 40, 50mm IBS Ramsound Product



Full test reports available upon request.

Impedance Tube Testing



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