

Energy Efficient

Environment Friendly

Best insulation system possible

Pharma- sulation

Thermal Insulation Solution

BiQCS
Beyond the boundary

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Beyond the boundary



Founded in 2016 by the directors of board who have a long and varied engineering experiences of the Biopharmaceutical industry, BIOCS Co., Ltd. is a company focused on bringing the first class & targeted products and services to the customers in the Biopharmaceutical industry.

The product range includes thermal insulation specialized in the clean room and sanitary application and Alkaline & Acid Detergents.

Since providing pipe insulation of melamine foam, BASOTECT® G+ paired with PVC cover with major biological companies in Korea, no one doubts we will be the best global leader in thermal insulation. We feature a melamine foam; an open cell foam which is cost effective to install, user friendly, and environmentally safe.

We can custom cut to any shape or size to meet customers' specialty requirements. To achieve total customer satisfaction, we will do our best to understand our customer's requirements and meet those requirements at all times.

BiOCS

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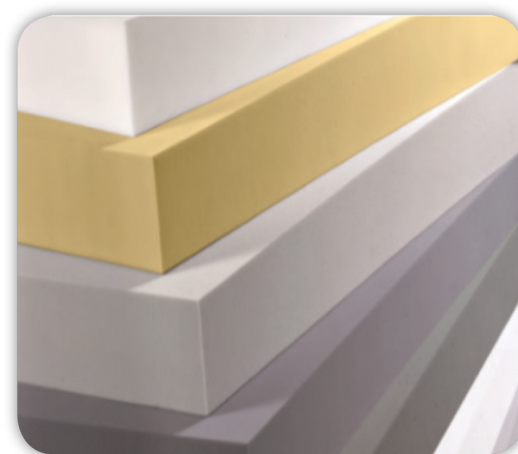
BASOTECT® is a flexible, open-cell foam made from melamine resin, a thermoset polymer. BASOTECT®'s characteristic feature is its three-dimensional network structure consisting of slender and thus easily flexed filaments.

Resulting from the basic melamine resin;

- Flame resistance
- High temperature resistance
- Constant physical properties over a wide temperature range
- Abrasiveness

Resulting from open cell foam structure:

- Low weight
- Good thermal insulation property
- Flexibility at very low temperature
- High sound absorption capacity



Insulation Specification

| Test Parameter | Requirement | Test method | Remark |
|----------------------|-------------------------------------|-----------------------|--------------------|
| Density | 9 +/- 1,5 [kg/m3] | EN ISO 845 | |
| Fire behavior | B1 | DIN 4102 | Low flammability |
| Thermal conductivity | $\lambda_{10} < 0,035 \text{ W/mK}$ | DIN EN 12667 | @50mm thickness |
| Color | Light gray | | |
| Harmful substances | Class I | Oeko-Tex Standard 100 | |
| Sound absorption | > 90 % | ISO 10534 | @50 mm thickness |
| | | | @2000 Hz frequency |



Various Processability

Be able to make various thickness for the requested insulation properties. Also produce insulation foam for Fittings like Elbow, Tee, Valve using by 3D CNC Machine.



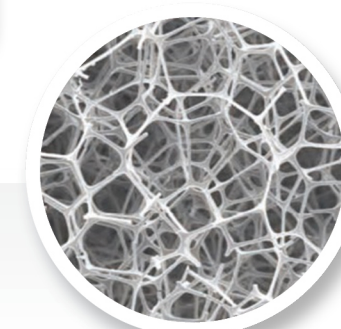
Fire-Resistance

The high nitrogen contents of the resin is responsible for the extremely flame-resistant property of the foam without the need to use fire retardants. BASOTECT® is a thermoset, and thus, in the even of a fire, the materials does not melt or produce burning droplets when it comes into contact with flames.



Thermal Insulation

BASOTECT® offers good thermal insulation that is reliable even at high temperatures over a prolonged period. It provides low thermal conductivity of less than $0.035 \text{ W/(m}\cdot\text{K)}$, so energy losses can be reduced in, for example, hot water tanks and solar water heaters.



Light Weight

BASOTECT®'s open-cell foam structure contributes to its low density of 9g/l. The light weight grade, BASOTECT® UL, weighs even 30% less fulfilling the rising demand of lower weight and emissions.



Tube (Straight Pipe)

Material info

Available with Cover : PVC, thick.:0.5mm
 Insulation : Melamine foam(BASOTECT® G+)

Specification of Tube

| NO | Melamine I.D | | I.D Tolerance | Length Tolerance |
|----|--------------|-------|---------------|------------------|
| | in | mm | mm | mm |
| 1 | 1/4 | 6.35 | +1 | +/- 1 |
| 2 | 3/8 | 9.53 | +1 | +/- 1 |
| 3 | 1/2 | 12.7 | +1 | +/- 1 |
| 4 | 3/4 | 19.05 | +1 | +/- 1 |
| 5 | 1 | 25.4 | +1 | +/- 1 |
| 6 | 1.1/2 | 38.1 | +1 | +/- 1 |
| 7 | 2 | 50.8 | +1 | +/- 1 |
| 8 | 2.1/2 | 63.5 | +1 | +/- 1 |
| 9 | 3 | 76.2 | +1 | +/- 1 |
| 10 | 4 | 101.6 | +1 | +/- 1 |
| 11 | 6 | 152.4 | +1 | +/- 1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.



Fitting 90° Elbows

Material info

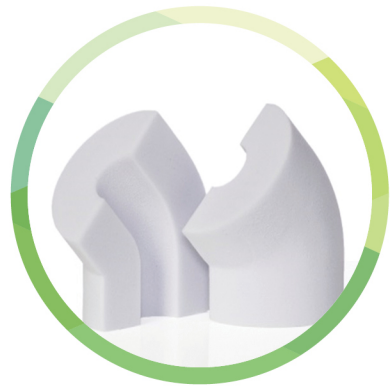
Available with Cover : PVC, thick.:0.5mm
 Insulation : Melamine foam(BASOTECT® G+)

Specification of 90° Elbows

| NO | Melamine I.D | | I.D Tolerance | Length Tolerance |
|----|--------------|-------|---------------|------------------|
| | in | mm | mm | mm |
| 1 | 1/4 | 6.35 | +1 | +/- 1 |
| 2 | 3/8 | 9.53 | +1 | +/- 1 |
| 3 | 1/2 | 12.7 | +1 | +/- 1 |
| 4 | 3/4 | 19.05 | +1 | +/- 1 |
| 5 | 1 | 25.4 | +1 | +/- 1 |
| 6 | 1.1/2 | 38.1 | +1 | +/- 1 |
| 7 | 2 | 50.8 | +1 | +/- 1 |
| 8 | 2.1/2 | 63.5 | +1 | +/- 1 |
| 9 | 3 | 76.2 | +1 | +/- 1 |
| 10 | 4 | 101.6 | +1 | +/- 1 |
| 11 | 6 | 152.4 | +1 | +/- 1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.



Fitting 45° Elbows

Material info

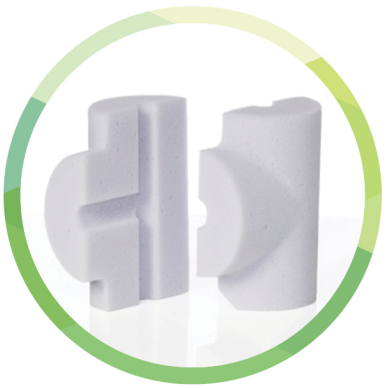
Available with Cover : PVC, thick.:0.5mm
 Insulation : Melamine foam(BASOTECT® G+)

Specification of 45° Elbows

| NO | Melamine I.D | | I.D Tolerance | Length Tolerance |
|----|--------------|-------|---------------|------------------|
| | in | mm | mm | mm |
| 1 | 1/4 | 6.35 | +1 | +/- 1 |
| 2 | 3/8 | 9.53 | +1 | +/- 1 |
| 3 | 1/2 | 12.7 | +1 | +/- 1 |
| 4 | 3/4 | 19.05 | +1 | +/- 1 |
| 5 | 1 | 25.4 | +1 | +/- 1 |
| 6 | 1.1/2 | 38.1 | +1 | +/- 1 |
| 7 | 2 | 50.8 | +1 | +/- 1 |
| 8 | 2.1/2 | 63.5 | +1 | +/- 1 |
| 9 | 3 | 76.2 | +1 | +/- 1 |
| 10 | 4 | 101.6 | +1 | +/- 1 |
| 11 | 6 | 152.4 | +1 | +/- 1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.



Fitting Tee Equal

Material info

Available with Cover : PVC, thick.:0.5mm
 Insulation : Melamine foam(BASOTECT® G+)

Specification of Tee Equal

| NO | Melamine I.D | | I.D Tolerance | Length Tolerance |
|----|--------------|-------|---------------|------------------|
| | in | mm | mm | mm |
| 1 | 1/4 | 6.35 | +1 | +/- 1 |
| 2 | 3/8 | 9.53 | +1 | +/- 1 |
| 3 | 1/2 | 12.7 | +1 | +/- 1 |
| 4 | 3/4 | 19.05 | +1 | +/- 1 |
| 5 | 1 | 25.4 | +1 | +/- 1 |
| 6 | 1.1/2 | 38.1 | +1 | +/- 1 |
| 7 | 2 | 50.8 | +1 | +/- 1 |
| 8 | 2.1/2 | 63.5 | +1 | +/- 1 |
| 9 | 3 | 76.2 | +1 | +/- 1 |
| 10 | 4 | 101.6 | +1 | +/- 1 |
| 11 | 6 | 152.4 | +1 | +/- 1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.



Fitting Tee Reducer

Material info

Available with Cover : PVC, thick.:0.5mm
 Insulation : Melamine foam(BASOTECT® G+)

Specification of Tee Reducer

* More size is available

| NO | Melamine I.D | | I.D Tolerance mm | Length Tolerance mm |
|----|--------------|--------------|---------------------|------------------------|
| | in | mm | | |
| 1 | 3/8 x 1/4 | 9.53 / 6.35 | +1 | +/- 1 |
| 2 | 1/2 x 1/4 | 12.7 / 6.35 | +1 | +/- 1 |
| 3 | 1/2 x 3/8 | 12.7 / 9.53 | +1 | +/- 1 |
| 4 | 3/4 x 1/4 | 19.05 / 6.35 | +1 | +/- 1 |
| 5 | 3/4 x 3/8 | 19.05 / 9.53 | +1 | +/- 1 |
| 6 | 3/4 x 1/2 | 19.05 / 12.7 | +1 | +/- 1 |
| 7 | 1 x 1/4 | 25.4 / 6.35 | +1 | +/- 1 |
| 8 | 1 x 3/8 | 25.4 / 9.53 | +1 | +/- 1 |
| 9 | 1 x 1/2 | 25.4 / 12.7 | +1 | +/- 1 |
| 10 | 1 x 3/4 | 25.4 / 19.05 | +1 | +/- 1 |
| 11 | 1.1/2 x 1/2 | 38.1 / 12.7 | +1 | +/- 1 |
| 12 | 1.1/2 x 3/4 | 38.1 / 19.05 | +1 | +/- 1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.



Fitting Concentric Reducer

Material info

Available with Cover : PVC, thick.:0.5mm
 Insulation : Melamine foam(BASOTECT® G+)

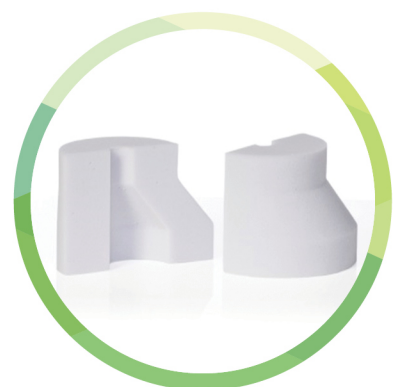
Specification of Concentric Reducer

* More size is available

| NO | Melamine I.D | | I.D Tolerance mm | Length Tolerance mm |
|----|---------------|--------------|---------------------|------------------------|
| | in | mm | | |
| 1 | 3/8 x 1/4 | 9.53 / 6.35 | +1 | +/- 1 |
| 2 | 1/2 x 1/4 | 12.7 / 6.35 | +1 | +/- 1 |
| 3 | 1/2 x 3/8 | 12.7 / 9.53 | +1 | +/- 1 |
| 4 | 3/4 x 3/8 | 19.05 / 9.53 | +1 | +/- 1 |
| 5 | 3/4 x 1/2 | 19.05 / 12.7 | +1 | +/- 1 |
| 6 | 1 x 1/2 | 25.4 / 12.7 | +1 | +/- 1 |
| 7 | 1 x 3/4 | 25.4 / 19.05 | +1 | +/- 1 |
| 8 | 1.1/2 x 3/4 | 38.1 / 19.05 | +1 | +/- 1 |
| 9 | 1.1/2 x 1 | 38.1 / 25.4 | +1 | +/- 1 |
| 10 | 2 x 1 | 50.8 / 25.4 | +1 | +/- 1 |
| 11 | 2 x 1.1/2 | 50.8 / 38.1 | +1 | +/- 1 |
| 12 | 2.1/2 x 1.1/2 | 63.5 / 38.1 | +1 | +/- 1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.



Fitting Eccentric Reducer

Material info

Available with Cover : PVC, thick.:0.5mm
Insulation : Melamine foam(BASOTECT® G+)

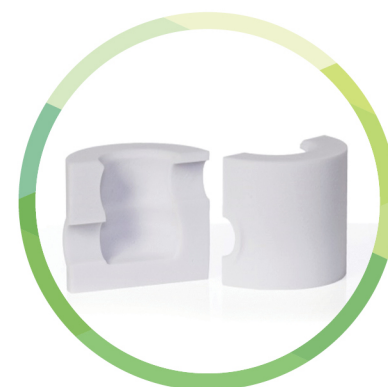
Specification of Eccentric Reducer

* More size is available

| NO | Melamine I.D | | I.D Tolerance mm | Length Tolerance mm |
|----|---------------|--------------|---------------------|------------------------|
| | in | mm | | |
| 1 | 3/8 x 1/4 | 9.53 / 6.35 | +1 | +/- 1 |
| 2 | 1/2 x 1/4 | 12.7 / 6.35 | +1 | +/- 1 |
| 3 | 1/2 x 3/8 | 12.7 / 9.53 | +1 | +/- 1 |
| 4 | 3/4 x 3/8 | 19.05 / 9.53 | +1 | +/- 1 |
| 5 | 3/4 x 1/2 | 19.05 / 12.7 | +1 | +/- 1 |
| 6 | 1 x 1/2 | 25.4 / 12.7 | +1 | +/- 1 |
| 7 | 1 x 3/4 | 25.4 / 19.05 | +1 | +/- 1 |
| 8 | 1.1/2 x 3/4 | 38.1 / 19.05 | +1 | +/- 1 |
| 9 | 1.1/2 x 1 | 38.1 / 25.4 | +1 | +/- 1 |
| 10 | 2 x 1 | 50.8 / 25.4 | +1 | +/- 1 |
| 11 | 2 x 1.1/2 | 50.8 / 38.1 | +1 | +/- 1 |
| 12 | 2.1/2 x 1.1/2 | 63.5 / 38.1 | +1 | +/- 1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.



Fitting Bellows Valve

Material info

Available with Cover : PVC, thick.:0.5mm
Insulation : Melamine foam(BASOTECT® G+)

Specification of Bellows Valve

* More size is available

| NO | Melamine I.D | | I.D Tolerance mm | Length Tolerance mm |
|----|--------------|-------|---------------------|------------------------|
| | in | mm | | |
| 1 | 3/4 | 19.05 | +1 | +1 |
| 2 | 1 | 25.4 | +1 | +1 |
| 3 | 1.1/2 | 38.1 | +1 | +1 |
| 4 | 2 | 50.8 | +1 | +1 |
| 5 | 3 | 76.2 | +1 | +1 |

Standard Thickness (mm) : 25, 40, 50, 75

The melamine foam inner diameter and wall thickness are adjustable according to customer request.

Pharma- sulation P

PVC fitting covers with melamine foam inserts and accessories, which include elbows, tee/valves, end caps, mechanical line couplings, specialty fittings, white and indoor color jacketing.

Applications

The PVC Fitting Cover System is used to insulate mechanical piping systems at fitting locations and provide a PVC jacketing for various pipe types.



Benefits

Easy To Clean. Due to the smooth, high gloss finish on PVC Fittings, the product cleans easily with soap and water. This makes the system ideal for food and drug facilities.

Low Cost Installation. Significant cost savings vs. conventional molded sections and mitered sections.

Fast and Easy.

At fitting locations, wrap the melamine insert around the pipe fitting, apply the PVC Fitting over the insert and tack or tape in place.

References of Pharma-sulation



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