

waterloo



# Plenum Insulation Thermal and Acoustic Specification



## Product Reference: 6 mm 3.30.73.ND Polyester-Urethane Foam

**Application:** To provide acoustic or thermal insulation to ducts and components within HVAC systems

**Properties:**

### Thermal Conductivity

Temperature Deg C	Thermal Conductivity W/mK
0	0.0330
10	0.0345
20	0.0360
70	0.0400

### Acoustic Absorption

Frequency (Hz)	125	250	500	1000	2000	4000
Absorption Coefficient	0.04	0.05	0.10	0.19	0.33	0.63

### Material Specification

Property	Unit	Test	Min	Max
Density	Kg/m <sup>3</sup>	ISO 845	26	31
Compression load deflection	kPa	ISO 3386/1	3.9	5.9
Tensile strength	kPa	ISO 1798	95	
Elongation at Break	%	ISO 1798	115	
Flammability	mm/min	FMVSS-302		38
Flammability		UL-94	HF-1	

Reaction to Fire Classification in accordance with EN 13501-1: 2007 is C-s3-d0



## Product Reference: 12 mm 3.30.73.ND Polyester-Urethane Foam

**Application:** To provide acoustic or thermal insulation to ducts and components within HVAC systems

**Properties:**

### Thermal Conductivity

Temperature Deg C	Thermal Conductivity W/mK
0	0.0330
10	0.0345
20	0.0360
70	0.0400

### Acoustic Absorption

Frequency (Hz)	125	250	500	1000	2000	4000
Absorption Coefficient	0.06	0.09	0.13	0.24	0.50	0.83

### Material Specification

Property	Unit	Test	Min	Max
Density	Kg/m <sup>3</sup>	ISO 845	26	31
Compression load deflection	kPa	ISO 3386/1	3.9	5.9
Tensile strength	kPa	ISO 1798	95	
Elongation at Break	%	ISO 1798	115	
Flammability	mm/min	FMVSS-302		38
Flammability		UL-94	HF-1	

Reaction to Fire Classification in accordance with EN 13501-1: 2007 is C-s3-d0



## Product Reference: 25 mm 3.30.73.ND Polyester-Urethane Foam

**Application:** To provide acoustic or thermal insulation to ducts and components within HVAC systems

**Properties:**

### Thermal Conductivity

Temperature Deg C	Thermal Conductivity W/mK
0	0.0330
10	0.0345
20	0.0360
70	0.0400

### Acoustic Absorption

Frequency (Hz)	125	250	500	1000	2000	4000
Absorption Coefficient	0.07	0.17	0.45	0.75	0.77	0.82

### Material Specification

Property	Unit	Test	Min	Max
Density	Kg/m <sup>3</sup>	ISO 845	26	31
Compression load deflection	kPa	ISO 3386/1	3.9	5.9
Tensile strength	kPa	ISO 1798	95	
Elongation at Break	%	ISO 1798	115	
Flammability	mm/min	FMVSS-302		38
Flammability		UL-94	HF-1	

Reaction to Fire Classification in accordance with EN 13501-1: 2007 is C-s3-d0



## Waterloo Product Range

### GRILLES

A complete range of products suitable for all wall, ceiling and floor applications. Most grilles are made from aluminium and have a range of fixed or moveable blades designed to give performance whilst remaining aesthetically pleasing to the eye. Grilles are made to customer specified sizes and colours (PPM/G); standard colour PPM9010 (20% Gloss White). The range is complemented by the Aircell range of polymer Grilles.



### DIFFUSERS

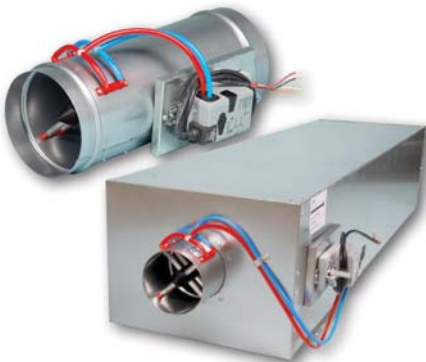
Designed to be installed in various ceiling systems, we have a complete range to suit both performance and aesthetic requirements. Most diffusers are made from aluminium and can be ordered with or without plenum boxes for easy duct work. Diffusers can be ordered in customer specified colours (PPM/G); standard colour is PPM 9010 (20% Gloss White). This range is complemented by the Aircell range of polymer Diffusers.



### ACTIVE AND PASSIVE CHILLED BEAMS

The finest quality range of high output active beams, used for ventilated heating and cooling applications. These units have 4 pipe coils to allow heating and cooling circuits to run simultaneously, giving constant and responsive control. The design allows a large optimum capacity and also allows the customer to specify the nozzle type and pitch for individual circumstances.

Active beams are made from steel to a large range of customer specified sizes and as such are suitable for various different ceiling systems. Standard finish is PPM 9010, however other (PPM/G) colours are available on request.



### AIR VOLUME CONTROL DAMPERS

Pressure independent Variable Air Volume and Constant Air Volume dampers made from zintec plate. Most volume dampers are regulated with an electronic motor and sensors and are calibrated to customer specifications before delivery.

The Constant Air Volume damper requires no power source as it is controlled via a mechanical device and calibrated before delivery. All volume dampers can be ordered with a single or double (insulation) skin.

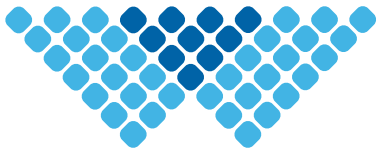
### EXTERNAL LOUVRES

A quality range of products for external wall applications. Made from aluminium, with birdscreen or insect screen options. All louvres are made to customer specified sizes and (PPM/G) colours; standard colour is PPM 9006.



### DISPLACEMENT

A full range of recessed, semi-recessed, floor, wall and corner units providing high ventilation efficiency and excellent comfort. The very low pressure involved also offer quiet installations. Displacement units are available as wall or floor mounted, or indeed integrated within the architectural design.



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