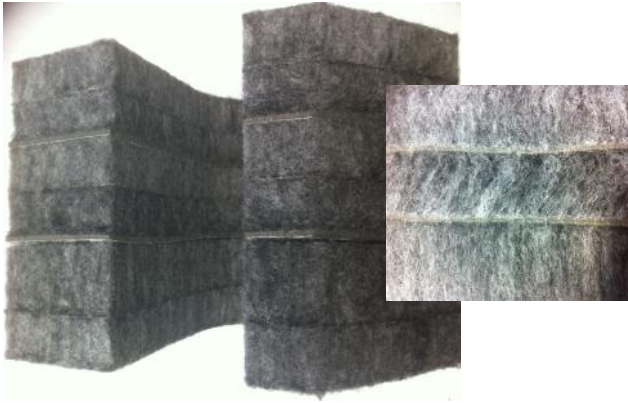




2951P  
08/12

## High Performance Acoustic Barrier- Polyester Composite



**Sorberpoly™ Duo** is a multi-layered specialised acoustic insulation combining the superior performance of two layers of flexible mass barrier, **Wavebar® Quadzero**, together with the excellent sound absorbing and thermal insulation properties of an ultra-fine fibre, non-woven polyester. Being fuel, oil and grease resistant, the material is used in high humidity applications.

The mass barrier layer is a dense, thin, strong, tear-resistant and highly flexible material. These properties give the product high transmission loss throughout the various weight ranges. **Wavebar® Quadzero**, complies with British and International fire and building codes for low spread of flame.

**Sorberpoly™** is made from ultrafine polyester fibres to deliver excellent sound absorbing and thermal properties. When compared to 2D horizontal lapping of the outermost layers, the sandwich polyester layer uses a 3D vertical lapping system providing resiliency to maintain high loft to the mass barrier layers, important to maximising sound absorption.

Manufactured from 100% recyclable polyester fibre, **Sorberpoly Duo** is sensitive to the environment and is lightweight, hydrophobic (non-wicking) and easily cut, using scissors or a sharp knife.

When compared to insulation of comparable acoustic performance, **Sorberpoly Duo** is nearly half the weight of other absorbing mediums like foam, rockwool and fibreglass and meets the needs of a variety of manufacturing and installation approaches.

### FEATURES

- Lightweight, with high sound absorption properties.
- Will not degrade, crumble or smell over time
- Non toxic, will not irritate the skin when handled
- Easy to cut, heat seal, thermally or sonically weld and install
- Non-wicking and hydrophobic (self-draining – does not hold water)
- Compressible, thermally mouldable
- Available with various surface coverings such as plain, reinforced or perforated aluminium foil, metallised film, black non-woven polyester and other available on request
- Available in thicknesses from 6 to 100mm
- Multiple assembly approaches possible
- Choice of three high performance self adhesives for ease of installation. (Please consult your local Pyrotek representative)
- Efficient thermal insulation along with sound absorption – Saves energy and money
- Can be used as a replacement to fibreglass/rockwool, in areas subject to high humidity and condensing moisture.
- Contains no resin binders to create an unpleasant odour or mildew

### APPLICATIONS

- Fill voids behind panels, and in cavities, e.g. wall cavities, ceiling voids.
- Underfloors in Rail cars, around the dynamic brakes and bogies.
- Heavy duty truck, bus, earthmoving & mining equipment, wall, roof and firewalls.
- Marine, engine compartments, bulkheads and deckheads.
- Noise control and thermal insulation for HVAC equipment
- Compressor and generator set enclosures
- Acoustic panels
- Hydraulic pump enclosures

### TOXICOLOGY/HEALTH AND SAFETY

**Sorberpoly 3D** is completely non-toxic and safe to handle without protective clothing or respiration apparatus.

Refer to our website [www.pyroteknc.com](http://www.pyroteknc.com) to check you have the latest information page

## PRODUCT SPECIFICATIONS

PRODUCT NAME	TOTAL THICKNESS (mm)	CONSTRUCTION Absorptive layer(mm)/Mass barrier(Kg)/3D Polyester/ Mass Barrier/Absorptive Layer(mm)	SHEET SIZES (mm) X (mm)
Sorberpoly Duo 125	125	50/4/25/4/50	1400 x 2200
Sorberpoly Duo 150	150	50/4/50/4/50	1400 x 2200

Tolerance: Thickness +/- 5mm; \*Useable width: Some surface coverings may overhang the useable width.

## MATERIAL PROPERTIES OF POLYESTER

RECOMMENDED SERVICE TEMPERATURE	DENSITY (kg/m <sup>3</sup> )	THERMAL CONDUCTIVITY ISO 8302-1991	MOISTURE ABSORPTION WSS-M99P32-B
80°C Continuous 110°C Intermittent	32	0.026 W/mK (Report No. 7-554696-NV)	0.04% by vol. At 50°C, 90% RH (for 4 days or more) (Report No. 10187-MM)

## FLAMMABILITY PROPERTIES - SORBERPOLY 2D

TEST METHOD	INDEX	RESULTS	DESCRIPTION
AS 1530.3 1999 (Report No. 7-574373-CN)	Ignitability, Spread of Flame Heat evolved, Smoke developed	0,0,0,0-1	Method for fire tests on building materials, components and structures.
DIN 54837: 2007-12 DIN 5510-2 DIN EN ISO5659-2:2007 (Report No. 2011-1955)	-	S3, SR2, ST2	German standard of product burning behaviour for railway vehicles.
DIN 54837: 2007-12 DIN 5510-2 DIN EN ISO5659-2:2007 (Report No. 2010-2199)	-	S4, SR2, ST2	German standard of product burning behaviour for railway vehicles.
BS 6853:1999 (Report No. 2974/R1)	Summation of toxic fumes	R= 0.037	Toxicity testing.
UL94	After flame time ≤ 2 seconds	HF - 2 (Results for 12mm material)	Horizontal burn test for foam materials.
FMVSS-302	Burn Rate - mm/min	Self Extinguishing	Automotive burn rate test.

## FLAMMABILITY PROPERTIES - SORBERPOLY 3D

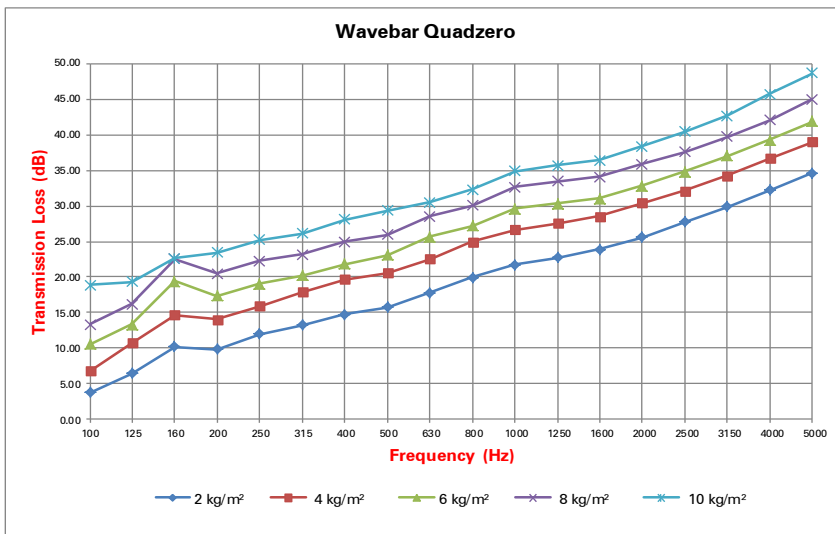
TEST METHOD	INDEX	RESULTS	DESCRIPTION
AS 1530.3 1999 (Report No. 7-560990-BV)	Ignitability Spread of Flame Heat evolved Smoke Developed	8 0 1 4	Method for fire tests on building materials, components and structures.
DIN 5510-2:2009-05 DIN 54 837:2007-12 DIN EN ISO 5659-2:2007 (Report No. 2011-1273)	-	S4, SR2, ST2	German standard of product burning behaviour for railway vehicles.
AS/NZS 3837:1998 (Report No. 7-565533-CV)	Group Certification	Group 2	Test for heat & smoke release rates for materials & products using an oxygen consumption calorimeter.
FMVSS-302	Burn Rate - mm/min	Self Extinguishing	Automotive Burn Rate.

## FLAMMABILITY PROPERTIES - WAVEBAR QUADZERO

TEST METHOD	INDEX	RESULTS	DESCRIPTION
AS 1530.3 1999 (Test Report No. 7-530659-CN)	Ignitability Spread of Flame Heat evolved Smoke Developed	0 0 0 0-1	Method for fire tests on building materials, components and structures.
IMO Res A 653(16) IMO Res MSC 61(67) Annex 1 Part 5 & Annex 2 (Report No. 184689) IMO Res MSC 61(67) Annex 1 Part 2 & Annex 2 (Report No. 185381)	-	Complies for floor coverings	Surface Flammability.
EC Certificate (Certificate No:164.117/1121/WCL MED 0262TE)	-	Complies	EC Certificate of Type Examination - 96/98/ EC Module B
BS 6853 Annex B2 (Report No. 2974/R1)	"R" value	R 0.050	Fume measurement test.
BS 6853 Annex D 8.6 (Doc No 195349 Issue: 2)	Ao(max)	Cat 1b	Smoke density test.
BS476 part 7 (Report No. 184498 Issue: 2)	Class1 Class2 Class3	Class 1	Classification of the surface spread of flame.

## ACOUSTIC PERFORMANCE

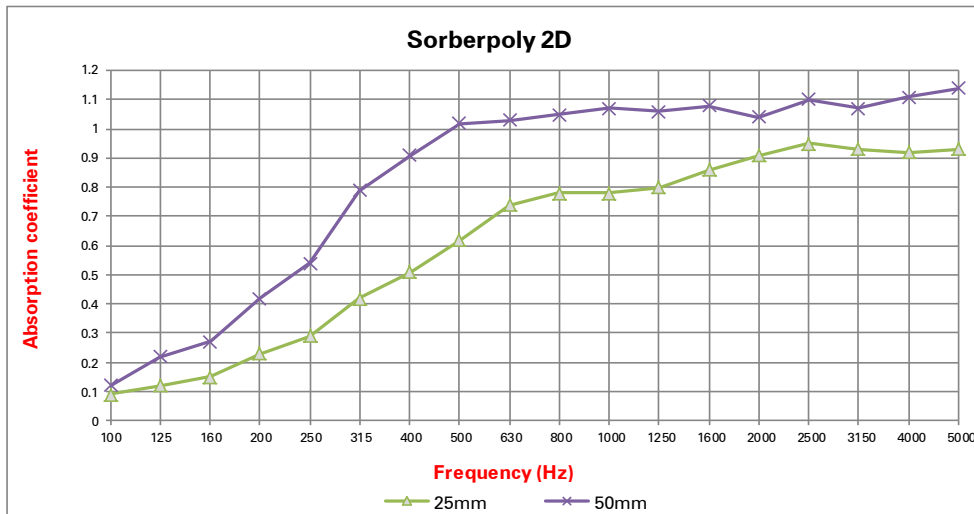
(Tested at University of Canterbury in accordance with ISO 15186-1 / ISO 10140-4)  
(Report No.189 Issue 1)



Frequency (Hz)	2 kg/m²	4 kg/m²	6 kg/m²	8 kg/m²	10 kg/m²
100	3.80	6.80	10.60	13.30	18.90
125	6.44	10.76	13.33	16.19	19.30
160	10.23	14.66	19.41	22.55	22.60
200	9.83	14.05	17.33	20.51	23.40
250	12.03	15.95	19.03	22.29	25.20
315	13.24	17.93	20.23	23.16	26.10
400	14.75	19.66	21.84	25.00	28.10
500	15.79	20.61	23.09	25.99	29.30
630	17.81	22.55	25.69	28.58	30.50
800	19.99	24.99	27.20	30.09	32.30
1000	21.70	26.61	29.63	32.66	34.90
1250	22.71	27.58	30.29	33.43	35.70
1600	23.92	28.50	31.08	34.09	36.40
2000	25.62	30.41	32.87	35.86	38.40
2500	27.70	32.11	34.80	37.56	40.40
3150	29.87	34.26	37.05	39.74	42.70
4000	32.19	36.67	39.28	42.06	45.70
5000	34.60	39.00	41.90	45.00	48.70
<b>Rw</b>	<b>21</b>	<b>25</b>	<b>28</b>	<b>31</b>	<b>34</b>
<b>STC</b>	<b>21</b>	<b>26</b>	<b>28</b>	<b>31</b>	<b>34</b>

## ACOUSTIC PERFORMANCE

AS ISO 354 RMIT



Frequency (Hz)	25 mm	50 mm
100	0.09	0.12
125	0.12	0.22
160	0.15	0.27
200	0.23	0.42
250	0.29	0.54
315	0.42	0.79
400	0.51	0.91
500	0.62	1.02
630	0.74	1.03
800	0.78	1.05
1000	0.78	1.07
1250	0.80	1.06
1600	0.86	1.08
2000	0.91	1.04
2500	0.95	1.10
3150	0.93	1.07
4000	0.92	1.11
5000	0.93	1.14
<b>NRC</b>	<b>0.65</b>	<b>0.90</b>

Caveats: Specifications are subject to change without notice. The data in this document are typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic or mechanical engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek NC is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. **DISCLAIMER:** This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See [www.pyroteknc.com/disclaimer](http://www.pyroteknc.com/disclaimer).

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Sorberpoly Duo

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**Pyrotek**  
noise control