

Cleaning Industriale s.a.s. Acoustic Solutions è Tier 1 dei principali OEM del settore automobilistico e fornitore dei principali Tier 1 del mondo.

Si occupa della lavorazione dei materiali espansi insonorizzanti attraverso il taglio a controllo numerico, l'incollaggio, la laminazione ed il mezzo taglio (kiss cutting) ad altissima precisione..

Certificata IATF 16949:2016, garantisce la massima qualità dei processi e dei relativi controlli.

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Cleaning Industriale s.a.s. Acoustic Solutions is Tier 1 of the leading Automotive OEMs and a supplier to the world's leading Tier 1s.

It is engaged in foam processing through cnc cutting, adhesive bonding, laminating, precision kiss cutting systems.

IATF 16949:2016 certified, it guarantees the highest quality processes and related controls.

# Feltro TIME 150 nero FR

CARATTERISTICHE TECNICHE (Technical Characteristics)		METODO D'ANALISI (Analysis Method)	UNITA' DI MISURA (Unit)	VALORI MEDI (Average)	TOLLERANZA (Tolerance)
Grammatura (weight)		ISO 9073.1	g/mq	165	±15
Spessore (feltro prima della trasformazione) (thickness) (felt before the working process)		ISO 9073.2	Mm	1,05	±0,10
Spessore (feltro con adesivo e carta) (thickness) (felt with liner and adhesive)			mm	1,10	±0,30
Densità (density)			g/dmc	157	
Carico di Rottura (tensile strenght)	Longitudinale (machine direction)	ISO 9073.3	N	345	±90
	Trasversale (cross direction)		N	260	±80
Allungamento a rottura (elongation)	Longitudinale (machine direction)	ISO 9073.3	%	56	±10
	Trasversale (cross direction)		%	100	±20
Lacerazione (tearing strenght)	Longitudinale (machine direction)	ISO 13937-2	N	45	±10
	Trasversale (cross direction)		N	42	±10
Modulo 10% (modulus at 10%)	Longitudinale (machine direction)	ISO 9073.3	N	n.d	-
	Trasversale (cross direction)		N	n.d	-
Composizione: (composition)		91% PET + 9% FR			

Compiled by: M.Pellegrino

Approved by: R.Peldussia

Date: 12/02/2018

Rev. B



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**Product Material :****POL 320/RO/S****Technical Sheet**

<i>Materiale</i>		<i>Colore</i>	
Poliuretano espanso very soft		Nero	

<i>PROPRIETA'</i>		<i>Dati</i>	<i>Norme</i>
<i>Densità (kg/m³)</i>		320	ASTM D 3574-95 Test A
<i>Compression Force Deflection (kPa)</i>	25% deflection	35 (21-55)	-
<i>Durezza</i>	<i>Shore 0</i>	8	ASTM D 2240-97
	<i>Shore A</i>	5	
<i>Compression set a 23°C (%)</i>		max. 2	ASTM D 1667-90 Test D
<i>Compression set a 70°C (%)</i>		max. 10	ASTM D 3574-95 Test D
<i>Compression set (%)</i>		max. 5	ASTM D 3574-95 Test J/Test D dopo 5h in autoclave a 121°C
<i>Stabilità Dimensionale (%)</i>		max. ± 1 %	Dopo 22h a 80°C in forno
<i>Typical Tensile Strength (kPa)</i>		346	ASTM D 3574-75 Test E
<i>Typical Tensile Elongation (%)</i>		155	ASTM D 3574-75 Test E
<i>Typical Tear Strength (kN/m)</i>		1,2	ASTM D 264-91 Die C
<i>Resistenza alla Temperatura (°C)</i>	<i>uso costante</i>	max + 90	SAE J - 2236
	<i>raccomandato</i>		
	<i>intermittente</i>	+ 121	ASTM D 746-98
	<i>infragilimento</i>	- 51	ASTM D 746-98
<i>Resistenza alla fiamma</i>		Passa UL HBF per sp. ≥ 2,36 mm Passa FMVSS 302 per sp. ≥ 1,57 mm	
Buona resistenza agli UV, all'ozono e alla corrosione			

Information on the above characteristics is based upon tests we believe to be reliable. The values given are typical values that vary according to application conditions. The values are intended only as a source of information and are given without guarantee and not constitute a warranty

Compiled by: M.Pellegrino

Approved by: R.Pedussia

Date: 15/05/2017

Rev.02 BN

**Product Material :****SIL RO 320 CC****Technical Sheet**

<i>Materiale</i>	<i>Colore</i>
Silicone a cellule chiuse	Nero/ Rosso/ Grigio

<i>PROPRIETA'</i>		<i>Dati</i>	<i>Norme</i>
<i>Densità (kg/m³)</i>		320	ASTM F 1315
<i>Compression Force Deflection (kPa)</i>	25% deflection	41 – 97	ASTM D 1056
<i>Compression set a 70°C (%)</i>		< 1	ASTM D 1056
<i>Compression set a 100°C (%)</i>		< 5	ASTM D 1056
<i>Tensile Strength (kPa)</i>		310	ASTM D 412
<i>Elongation (%)</i>		80	ASTM D 412
<i>Resistenza alla fiamma</i>		HF-1 & V0	UL 94
<i>Flame spread index (I<sub>s</sub>)</i>		< 25	ASTM E 162
<i>Limiting oxygen index (LOI) (%)</i>		40	ASTM 2863
<i>Smoke density (D<sub>x</sub>) 4 min</i>		< 50	ASTM E 662
<i>Smoke density (D<sub>x</sub>) 1,5 min</i>		< 20	ASTM E 662
<i>Toxic gas emission rating</i>		pass	SMP 800 C & BSS 7239
<i>Weight loss after 168 h at 135°C (%)</i>		1,05	ASTM D 573
<i>Resistenza alla Temperatura (°C)</i>	<i>continuo</i>	-55/+200	SAE J 2236
	<i>intermittente</i>	+ 250	-
<i>Lower temperature embrittlement (°C)</i>		-55	ASTM D 746 (B)
<i>Hot flex (230°C)</i>		pass	ASTM D 573
<i>Dielectric constant</i>		1,42	ASTM D 149
<i>Dielectric Strenght (V/mil)</i>		91	ASTM D 150
<i>Dry Arc Resistance (s)</i>		92	ASTM D 495
<i>Volume resistivity (ohm cm)</i>		10 <sup>14</sup>	ASTM D 257
<i>Thermal conductivity (W/m K)</i>		0,09	ASTM C 518
<i>Gasketing and sealing rating</i>		pass	UL 157
<i>Water absorption (%)</i>		1,4	ASTM D 471
<i>UV resistance</i>		No degradation	SAE J 1960
<i>Ozone effect rating</i>		0 (no cracks)	ASTM D 1171
<i>Stain resistance</i>		No stain	ASTM D 925 (A)
<i>Corrosion resistance</i>		pass	AMS-3568

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Compiled by: M.Pellegrino

Approved by: R.Pedussia

Date: 04/04/2014

Rev.00 BN

# Cleansulate PF38

## Technical Sheet

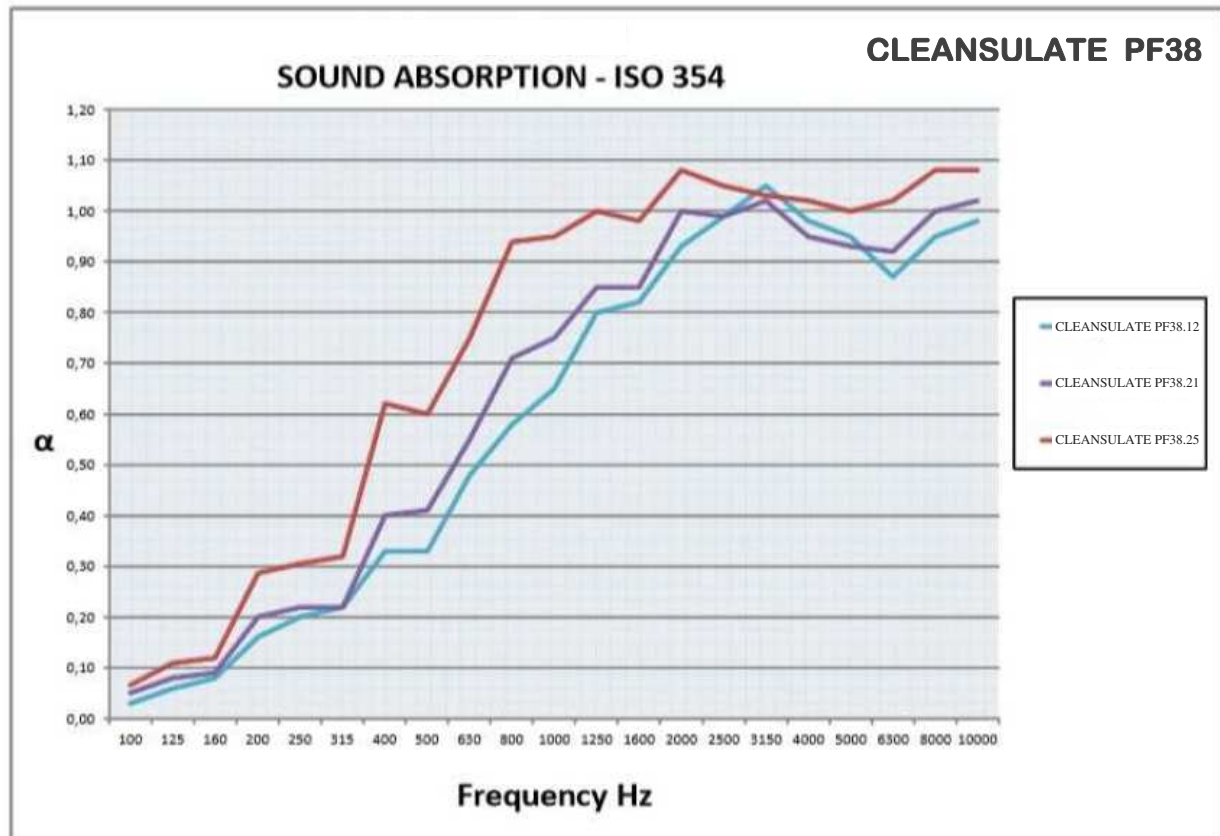


### CHARACTERISTICS:

<b>Description</b>	<p>CLEANSULATE is a nonwoven, microfibre high performing acoustic absorption material. These products can have adhesive backings and extra scrim layers added depending upon application.</p> <p>Composition: 55% polypropylene, 45% polyester (micro web), 100% polypropylene (scrim)</p>
<b>Application</b>	<p>Recommended as sound absorption material.</p> <p>Mainly used in Automotive market, Industrial vehicles, Motorcycles, Household and Air conditioned appliances.</p>
<b>Finishing</b>	<p>CLEANSULATE is always produced with a scrim, white and/or black, which is also a protective layer and thanks to this scrim it is also possible, with a special process, seal the edges of the material. Upon request, is available with technical flies, aluminum foil, self adhesive</p>
<b>Density</b>	12 Kg/m <sup>3</sup> ± 5 %
<b>Thickness</b>	12 ÷ 50 mm
<b>Working Temperature</b>	-40° ÷ +120°C - material without finishing
<b>Fire resistance</b>	< 80 mm/min – ISO 3795
<b>Available colors</b>	White, black, orange and blue.

## Weights and thicknesses available

Reference	Weight [ gr/m <sup>2</sup> ]	Thickness [mm]
CLEANSULATE PF38.12	150 ± 10 %	12 ± 2
CLEANSULATE PF38.21	200 ± 10 %	21 ± 2
CLEANSULATE PF38.25	300 ± 10 %	25 ± 2



## STORAGE CONDITIONS

Product should be stored in its original packaging until the time use, away from heat and direct sun light at  $23 \pm 3 \text{ }^{\circ}\text{C}$  temperature and  $50 \pm 5\%$  relative humidity.

*This Product Data Sheet supersedes and replaces all prior versions.*

**DISCLAIMER** - The information contained in this leaflet is based on our present technical knowledge and experience. In view of the large number of factors that may influence the processing and use of our products, the information does not relieve the processors and manufacturers of the need to carry out their own tests and experiments. However, taking on all responsibility for their choices. Our information does not constitute a legally binding assurance of product availability, of particular properties or of a suitability for a particular use.

Compiled by: R.Spitaleri

Approved by: R.Pedussia

Date: 08/03/2016

Rev.01



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## POR 304/CM

BASIS	EPDM (no sulphur)
REFERRING STANDARD NORM ASTM D-1056	RE 42 / 2A2
CELLULAR STRUCTURE	CLOSED
COLOUR	BLACK
DENSITY (ISO 845-88 - ASTM D 3575)	120 KG/m <sup>3</sup> +/-20
WATER ABSORPTION (ASTM D 1056 - 3 min.)	0,13%
TEMPERATURE RANGE (ASTM D 1056-07)	- 40° C + 95° C
TEMPERATURE RANGE INTERMITTENT	+ 130° C
LINEAR SHRINKAGE AFTER 8h at 70°C (ASTM D 1204-08)	< 5%
ULTIMATE ELONGATION - (ASTM D 412)	> 150%
TENSILE STRENGTH - (ASTM D 412)	4,5 KG/cm <sup>2</sup> (450 kPa)
TEAR RESISTANCE - (ASTM D 624)	2,8 KG/cm (0,28 kN/m)
RESISTENCE (ASTM D1149-99)	AIR+ U.V. VERY GOOD OZONE 48H/ 200 pphm
COMPRESSION STRENGTH - (ASTM 1056/2000)	AL 25% - 35 kPa (20 to 50 kPa)
COMPRESSION STRENGTH - (ASTM 1056/2000)	AL 50% - 80 kPa (80 to 160 kPa)
COMPRESSION SET 25% (thick.mm.30 a temp. 21°C for 22 h.)	20%
COMPRESSION SET 25% / 22h - (ASTM D 395)	40%
SHORE HARDNESS 00 - (ASTM D 2240)	40/55
THERMAL CONDUCTIVITY (ASTM C 518-04)	W/m-K 0,0501
FIRE RESISTANT - (FMVSS 302 - FIAT 50433)	PASS (FR)
FOGGING - Norm UNI 4818/93 PART 23 METHOD B	mg 23,7
TEST AT 90°C WITH 0,02% OF ACID HCL X 15 MINUTES	SHRINKAGE 3% MAX
FORD WSK-M2D419-A	PASS
PEROXIDE CURE	NO SULPHUR

The above given information should be considered as a guide but cannot regarded as an engagement from our side.

Data Emissione/Issue Date 01/01/2018  
Revisione/Revision 00 Del/Of 01/01/2018

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## DATA SHEET

### EVA 100

COMPOSIZIONE	E.V.A. + P.E. ESPANSO
STRUTTURA CELLULARE	CHIUSE
COLORE	"VEDI CARTELLA COLORI"
DENSITA' (ISO 845-88 - ASTM D 3575)	85/90 KG/m <sup>3</sup>
ASSORBIMENTO ACQUA (ASTM D 1056)	2 % < 3%
CAMPO DI TEMPERATURA COSTANTE	- 10° C + 70° C
RESTRINGIMENTO LINEARE DOPO 7 gg. a 70 °C	< 1,6% max < 3%
ALLUNGAMENTO A ROTTURA - (ASTM D 412)	> 130%
RESISTENZA A ROTTURA - (ASTM D 624)	13 KG/cm <sup>2</sup> (1300 kPa)
RESISTENZA A LACERAZIONE - (ASTM D 624)	3,3 KG/cm (0,33 kN/m)
RESISTENZE	AIR+ U.V. OTTIME OZONE 168 H/ 200 pphm
RESISTENZA ALLA COMPRESSIONE - (ASTM 1056/85)	AL 25% - 0,90 KG/cm <sup>2</sup> (90 kPa)
COMPRESSION SET 25%	10%
DUREZZA SHORE 00	75 +/-5
NORME	EN 71 PARTE 1 1998 EN 71 PARTE 2 2003 EN 71 PARTE 3 metalli pesanti ASTM F.963

Le informazioni sopra citate devono essere considerate come una guida, ma non possono essere citate come un obbligo da parte nostra.

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# DATA SHEET

## POR 302/T-E

COMPOSIZIONE	NBR/PVC
NORMA RIFERIMENTO ASTM D-1056	SBE 42-43 / 2B2-2B3
STRUTTURA CELLULARE	CHIUSE
COLORE	NERO
DENSITA' (ISO 845-88 - ASTM D 3575)	150 +/-30 kg/m3
ASSORBIMENTO ACQUA (ASTM D 1056)	2% < 5%
CAMPO DI TEMPERATURA DI UTILIZZO	- 40° C + 100° C
RESTRING.LINEARE DOPO 7gg.a 70°C (ASTM D 1204)	max 5%
ALLUNGAMENTO A ROTTURA - (ASTM D 412)	> 180 %
RESISTENZA A ROTTURA - (ASTM D 412)	10 KG/cm <sup>2</sup> (1000 kPa)
RESISTENZA A LACERAZIONE - (ASTM D 624)	3,8 KG/cm (0,38 kN/m)
RESISTENZE	AIR+ U.V. - OTTIMO
COMPRESSION SET al 25% - (ASTM 1056)	0,51kg/cm <sup>2</sup> (51 kPa)
COMPRESSION SET al 50% - (ASTM 1056)	0,95 kg/cm <sup>2</sup> (95 kPa)
COMPRESSION SET at 25% - sp.mm.30 a 21°C per 22h.	12%
DUREZZA SHORE 00 - (ASTM D 2240)	50 +/-5
RESISTENZA AL FUOCO	UL 94 - HF1
VULCANIZZATO PEROSSIDICO	NO ZOLFO

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## DATA SHEET

### PE 30

COMPOSIZIONE	POLIETILENE ESPANSO
STRUTTURA CELLULARE	CHIUSE
COLORE	GRIGIO/BIANCO
DENSITA' (ISO 845-88 - ASTM D 3575)	30 +/- 10 KG/m <sup>3</sup>
ASSORBIMENTO ACQUA (ASTM D 1056)	2 % < 5%
CAMPO DI TEMPERATURA COSTANTE (ASTM D 1056-07)	- 30° C + 70° C
RESTRING.LINEARE DOPO 7gg.a 70°C (ASTM D 1204)	< 5%
ALLUNGAMENTO A ROTTURA - (ASTM D 412)	> 200 %
RESISTENZA A ROTTURA - (ASTM D 412)	2 KG/cm <sup>2</sup> (200 kPa)
RESISTENZA A LACERAZIONE - (ASTM D 624)	1,2 KG/cm (0,12 kN/m)
RESISTENZE	AIR+ U.V. - BUONO
RESISTENZA ALLA COMPRESSIONE - (ASTM 1056/85)	AL 25% - 0,30 KG/cm <sup>2</sup> (30 kPa)
COMPRESSION SET - (ASTM D 395)	15%
DUREZZA SHORE 00 - (ASTM D 2240)	50 +/-5
CONDUCIBILITA' TERMICA (ASTM C-518-04)	0,0395 W/m.K
NORMA F.D.A.	PASSA

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