

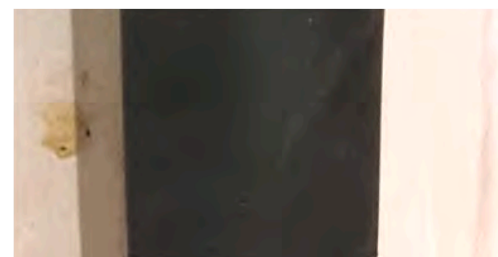


INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB

Highly flexible acoustic comfort

- // Specially designed to reduce noise of rainwater and waste pipes
- // Thin acoustic lagging with high performances
- // Flexible, easy to apply and maintain
- // Free of lead, fiber, unrefined aromatic oils and bitumen




ArmaComfort™

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NOISE CONTROL KEY TERMS

// **Sound** is a mechanical vibration which is perceived by the human ear in the frequency range 16 Hz to 16.000 Hz.

// **Frequency** is the number of vibrations per second. The pitch rises as frequency increases. The most important range for building acoustics lies between 100 Hz and 3150 Hz.

// **Sound Insertion loss** is the difference in sound levels measured between the bare pipe and the pipe with insulation. Such a measurement of sound reduction in dB(A) provides a direct indication of the improvement due to an acoustic solution.

// **Bel (B) and decibel (dB)** are relative units and represent the ratio between two acoustic quantities on a logarithmic scale.

// **Decibel (A), dB (A)** weights the volume according to frequencies. In this way it is possible to achieve a measurable representation of noise as it is perceived. Depending on the frequency, the human ear perceives tones of the same sound pressure as being of different loudness.



TECHNICAL DATA - ARMACOMFORT AB

Brief description	ArmaComfort AB combines the acoustic performance of an excellent and flexible acoustic barrier of 2 mm thickness and 4 kg/m ² of weight with a damping ArmaFlex flexible elastomeric foam of 9 mm.
Material type	Multi-layer acoustic insulation material consisting of an acoustic EPDM-EVA barrier and an elastomeric foam based on synthetic rubber.
Product colour range	Black
Applications	ArmaComfort AB is widely used as an acoustical insulation of waste water, rain water and sewage pipes in residential and non-residential buildings.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment	Standard / Test method		
Temperature range				
Service temperature ^{1,2}	Max. °C 110	EN 14304		
Thermal conductivity				
Declared thermal conductivity	<table border="0"> <tr> <td> ϑ_m $\lambda_d \leq [W/(m \cdot K)]$ Formula </td> <td> $0 \text{ }^\circ\text{C}$ 0,040 $\lambda = [40 + 0.1 \cdot \vartheta_m + 0.0009 \cdot \vartheta_m^2] / 1000$ </td> </tr> </table>	ϑ_m $\lambda_d \leq [W/(m \cdot K)]$ Formula	$0 \text{ }^\circ\text{C}$ 0,040 $\lambda = [40 + 0.1 \cdot \vartheta_m + 0.0009 \cdot \vartheta_m^2] / 1000$	EN ISO 13787, EN 12667, EN ISO 8497
ϑ_m $\lambda_d \leq [W/(m \cdot K)]$ Formula	$0 \text{ }^\circ\text{C}$ 0,040 $\lambda = [40 + 0.1 \cdot \vartheta_m + 0.0009 \cdot \vartheta_m^2] / 1000$			
Fire Performance and Approvals				
Reaction to fire	D-s2,d0	EN 13501-1, EN 13823, EN ISO 11925-2		
Physical attributes				
Mass per unit area	11mm thickness: 3.7 - 5.0 kg/m ²			
Dimensions and tolerances	Thickness: 11 mm ± 1.6 mm Width: 1000 mm ± 1.5% Length: 2000 mm ± 1.5%	EN 13467, EN 823, EN 822		
Acoustic performance				
Weighted sound reduction index, R_w (C ; Ctr) [dB]	$R_w = 26 \text{ dB}$ (C;Ctr) = [-1;-3] dB	ISO 10140-2, ISO 10140-1, EN ISO 717-1		
System acoustic insertion loss	on plastic waste water pipes ≤ 14 dB(A) on Geberit PE HD ≤ 16 dB(A) on Geberit Silent db 20 ≤ 18 dB(A)	EN 14366		
Sound Reduction Index (graph)		ISO 10140-1, ISO 10140-2		

Property	Value / Assessment	Standard / Test method
Other technical features		
Shelf life ³	Self-adhesive sheets: 1 year	
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).	

¹Minimum service temperature: as usual in heating and plumbing systems.

²For rainwater pipes with the requirement of condensation prevention, please contact our Customer Service Centre.

³Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - standard. Black

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
AO-11-99/E-AB	11	1	2	7612207393736	2 m ²

Other information

Remarks

Primary content available as a roll, packed in carton.
ArmaComfort AB must be applied with ArmaFlex 520 and ArmaComfort TAPE-PE-FE904 (IESIA00900923)



INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB Alu

Perfect thin sound lagging solution

- // Excellent fire performance
- // B-s1,d0
- // $R_w [C;Ctr] = 28 \text{ dB} (-1; -4) \text{ dB}$
- // Halogen-free
- // Nice aluminium silver colour foil covering



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TECHNICAL DATA - ARMACOMFORT AB ALU

Brief description	ArmaComfort AB Alu combines excellent acoustic performance and excellent fire performance B-s1,d0 to increase people safety.
Material type	Multi-layer acoustic insulation material consisting of an aluminium covered EPDM-EVA barrier of 2mm thickness and 4kg/m ² of weight and a decoupling polyurethane foam of 10mm thickness.
Product colour range	Black Silver (Covering)
Special features	Halogen-free (chloride, bromide) acc. to DIN / VDE 0472, part 815. ArmaComfort AB Alu offers outstanding durability.
Applications	ArmaComfort AB Alu is widely used as an acoustical insulation of waste water, rain water and sewage pipes. It has been specially designed for non-residential buildings such as office buildings, hotels, hospitals, school buildings, retirement residences, shopping centres and conference centres.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.

Property	Value / Assessment	Standard / Test method																																				
Temperature range																																						
Service temperature	Max. °C 100 Remarks: Minimum service temperature: As is usual in plumbing and heating installations.	EN 14304 ¹																																				
Fire Performance and Approvals																																						
Reaction to fire	B-s1,d0	EN 13823, EN ISO 11925-2																																				
Physical attributes																																						
Mass per unit area	12 mm thickness: 4.5 to 6.9 kg/m ²																																					
Dimensions and tolerances	Thickness: 12 mm ± 1.5 mm Width: 1000 mm ± 1.5% Length: 2000 mm ± 1.5%	EN 822, EN 823, EN 13467																																				
Acoustic performance																																						
Weighted sound reduction index, R _w (C ; C _{tr}) (dB)	R _w = 28 dB (C;C _{tr}) = [-1;-4] dB	ISO 10140-2, ISO 10140-1, EN ISO 717-1																																				
Sound Reduction Index (graph)	<table border="1"> <caption>Sound Reduction Index (R) [dB] vs Frequency [Hz]</caption> <thead> <tr> <th>Frequency [Hz]</th> <th>R [dB]</th> </tr> </thead> <tbody> <tr><td>100</td><td>22</td></tr> <tr><td>125</td><td>16</td></tr> <tr><td>160</td><td>17</td></tr> <tr><td>200</td><td>18</td></tr> <tr><td>250</td><td>19</td></tr> <tr><td>315</td><td>20</td></tr> <tr><td>400</td><td>22</td></tr> <tr><td>500</td><td>24</td></tr> <tr><td>630</td><td>27</td></tr> <tr><td>800</td><td>30</td></tr> <tr><td>1000</td><td>33</td></tr> <tr><td>1250</td><td>36</td></tr> <tr><td>1600</td><td>38</td></tr> <tr><td>2000</td><td>40</td></tr> <tr><td>2500</td><td>41</td></tr> <tr><td>3150</td><td>40</td></tr> <tr><td>4000</td><td>38</td></tr> </tbody> </table>	Frequency [Hz]	R [dB]	100	22	125	16	160	17	200	18	250	19	315	20	400	22	500	24	630	27	800	30	1000	33	1250	36	1600	38	2000	40	2500	41	3150	40	4000	38	ISO 10140-2, ISO 10140-1
Frequency [Hz]	R [dB]																																					
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2000	40																																					
2500	41																																					
3150	40																																					
4000	38																																					
Health and environment																																						
Health aspects	Halogen-free	VDE 0472-815																																				
Other technical features																																						
Shelf life ²	Self-adhesive sheets: 1 year																																					

Property	Value / Assessment	Standard / Test method
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).	

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - standard. Silver (Covering). Roll packed in carton

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
AO-12-99/E-AB-AL	12	1	2	7612207393743	2 m ²

Other information

Remarks	Primary content available as a roll, packed in carton. ArmaComfort AB Alu must be applied with ArmaFlex 520 and ArmaComfort Tape AO-TAPE/50-AL-S-25M (ISATS50900600)
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ArmaComfort Tape Alu

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AO-TAPE/50-AL-S-25	0,02	50	25	18 roll

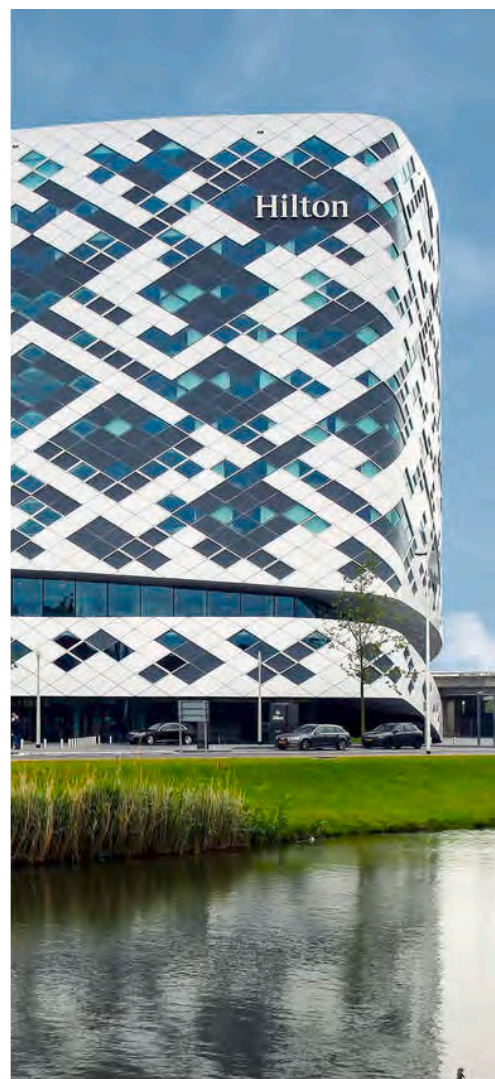
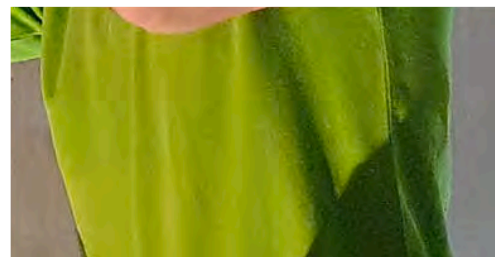


INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB Alu Plus

Excellent acoustic performance for drainage. Very good fire performance. Increases people's safety and prevents corrosion.

- // Thin and excellent acoustic insertion loss solution
- // B-s1,d0
- // Prevent condensation
- // Easy to apply and maintain
- // Nice health and environmental features



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TECHNICAL DATA - ARMACOMFORT AB ALU PLUS

Brief description	ArmaComfort AB Alu Plus combines excellent acoustic performance, fire performance B-s1,d0 to increase people safety and prevents corrosion.
Material type	Multi-layer acoustic insulation material consisting of an acoustic EPDM-EVA barrier of 2mm thickness with an aluminium foil and a 9mm thick decoupling elastomeric foam based on synthetic rubber.
Product colour range	Black Silver (Covering)
Special features	ArmaComfort AB Alu Plus offers outstanding durability.
Applications	ArmaComfort AB Alu Plus is used as an acoustical insulation of wastewater, rainwater and sewage pipes in residential and non-residential buildings
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the ArmaFlex application manual for advice.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Max. °C 110	EN 14304
Thermal conductivity		
Declared thermal conductivity	θ_m $\lambda d \leq [W/(m \cdot K)]$ Formula $\lambda = [42 + 0.1 \cdot \theta_m + 0.0009 \cdot \theta_m^2]/1000$	EN 12667, EN ISO 13787
Fire Performance and Approvals		
Reaction to fire	B-s1,d0	EN 13501-1, EN 13823, EN ISO 11925-2
Resistance to water vapour		
Water vapour diffusion resistance factor	$\mu \geq 10.000$	EN 13469, EN 12086
Physical attributes		
Mass per unit area	11 mm thickness: 3.7 - 5.0 kg/m ²	
Dimensions and tolerances	Thickness: 11 mm \pm 1.5 mm Width: 1000 mm \pm 1.5% Length: 2000 mm \pm 1.5%	EN 13467, EN 822, EN 823
Acoustic performance		
System acoustic insertion loss	on Geberit Silent db 20 \leq 18 dB(A) on NF PVC Diameter 110 mm \leq 24.5 dB(A)	EN 14366
Health and environment		
Volatile organic compounds (VOC) content	Determination of emissions of VOC from the product in the climate chamber. Complies with the requirement: German Scheme AgBB French Class A+ US (California)	ISO 16000 Parts 3, 6 & 9
Environmental aspects	WELL compliance card	WELL Requirements
Other technical features		
Shelf life ¹	Self-adhesive sheets: 1 year	
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).	

¹Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - standard. Black foam with silver facing. Roll packed in carton

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
AO-11-99/E-AB-AL+	11	1	2	7612207410518	2 m ²

Other information

Remarks	Primary content available as a roll, packed in carton. ArmaComfort AB Alu Plus must be applied with ArmaFlex 520 adhesive and ArmaComfort AB Alu tape AO-TAPE/50-AL-S-25M (ISATS50900600).
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Roll - jumbo. Black foam with silver facing

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
AO-11-99/E25-ABAL+	11	1	25	7612207410471	75 m ²

Other information

Remarks	ArmaComfort AB Alu Plus must be applied with ArmaFlex 520 adhesive and ArmaComfort AB Alu tape AO-TAPE/50-AL-S-25M (ISATS50900600). The bobbins (25 m ² each bobbin) are sold by 3 bobbins which are inseparable on one pallet. This means that the minimum order quantity is 75 m ² .
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ArmaComfort Tape Alu

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AO-TAPE/50-AL-S-25	0,02	50	25	18 roll

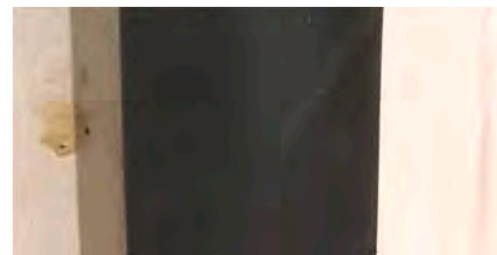


INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB Plus

Highly flexible acoustic comfort

- // Specially designed to reduce noise for rainwater and waste pipes
- // Thin acoustic lagging with high performance
- // Pre-cut self-adhesive sheets available
- // Easy to apply and maintain



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TECHNICAL DATA - ARMACOMFORT AB PLUS

Brief description	ArmaComfort AB plus combines the acoustic performance of an excellent and flexible acoustic barrier of 2 mm thickness and 4 kg/m ² of weight with a damping ArmaFlex flexible elastomeric foam of 9 mm.
Material type	Multi-layer acoustic insulation material consisting of an acoustic EPDM-EVA barrier and an elastomeric foam based on synthetic rubber.
Product colour range	Black
Special features	ArmaComfort AB Plus offers outstanding durability.
Applications	ArmaComfort AB Plus is widely used as an acoustical insulation of wastewater, rainwater and sewage pipes in residential and non-residential buildings.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature ^{1,2,3}	Max. °C 110	EN 14304
Thermal conductivity		
Declared thermal conductivity	ϑ_m 0 °C $\lambda d \leq [W/(m \cdot K)]$ 0,042 Formula $\lambda = [42 + 0.1 \cdot \vartheta_m + 0,0009 \cdot \vartheta_m^2]/1000$	EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals		
Reaction to fire	C-s2,d0	EN 13501-1, EN 13823, EN ISO 11925-2
Resistance to water vapour		
Water vapour diffusion resistance factor	$\mu \geq 7.000$	EN 13469, EN 12086
Physical attributes		
Mass per unit area	11mm thickness: 3.7 - 5.0 kg/m ²	
Dimensions and tolerances	Thickness: 11 mm ± 1.6 mm Width: 1000 mm ± 1.5% Length: 2000 mm ± 1.5%	EN 822, EN 823, EN 13467
Acoustic performance		
Weighted sound reduction index, R_w (C ; Ctr) [dB]	$R_w = 26$ dB (C;Ctr) = [-1;-3] dB	EN ISO 717-1, ISO 10140-1, ISO 10140-2
System acoustic insertion loss	on plastic waste water pipes ≤ 14 dB(A) on Geberit PE HD ≤ 16 dB(A) on Geberit Silent db 20 ≤ 18 dB(A)	EN 14366

Property	Value / Assessment	Standard / Test method																																				
Sound Reduction Index (graph)	<table border="1"> <caption>Approximate data points from the Sound Reduction Index graph</caption> <thead> <tr> <th>Frequency [Hz]</th> <th>R [dB]</th> </tr> </thead> <tbody> <tr><td>100</td><td>14</td></tr> <tr><td>125</td><td>18</td></tr> <tr><td>160</td><td>16</td></tr> <tr><td>200</td><td>17</td></tr> <tr><td>250</td><td>19</td></tr> <tr><td>315</td><td>21</td></tr> <tr><td>400</td><td>22</td></tr> <tr><td>500</td><td>23</td></tr> <tr><td>630</td><td>24</td></tr> <tr><td>800</td><td>25</td></tr> <tr><td>1000</td><td>27</td></tr> <tr><td>1250</td><td>28</td></tr> <tr><td>1600</td><td>28</td></tr> <tr><td>2000</td><td>29</td></tr> <tr><td>2500</td><td>30</td></tr> <tr><td>3150</td><td>32</td></tr> <tr><td>4000</td><td>40</td></tr> </tbody> </table>	Frequency [Hz]	R [dB]	100	14	125	18	160	16	200	17	250	19	315	21	400	22	500	23	630	24	800	25	1000	27	1250	28	1600	28	2000	29	2500	30	3150	32	4000	40	ISO 10140-1, ISO 10140-2
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Other technical features																																						
Shelf life ⁴	Self-adhesive sheets: 1 year																																					
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).																																					

¹For use in temperatures below 0 °C, please contact our Customer Service Centre.

²For rainwater pipes with the requirement of condensation prevention, please contact our Customer Service Centre.

³Minimum service temperature: as usual in heating and plumbing systems.

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Roll - standard. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AO-11-99/E-AB+	11	1	2	7612207410525	2 m ²

Other information

Remarks ArmaComfort AB Plus must be applied with ArmaFlex 520 and ArmaComfort Tape TAPE-PE-FE904 (IESIA00900923).
Primary content: roll in carton

Roll - standard self-adhesive. Black. Roll packed in carton

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AO-11-99/EA-AB+	11	1	2	7612207410532	2 m ²

Other information

Remarks ArmaComfort AB Plus self-adhesive must be applied with ArmaComfort Tape TAPE PE-FE904 (IESIA00900923).
Primary content: roll in carton

Accessories

Item	Description	Content [quantity]
TAPE-PE-FE904	HT/ArmaFlex S tape. Polyolefin UV-resistant carrier with adhesive on one side, self-seal.	30 roll