

Determination of improvement in impact sound insulation of Atramex Ambienta Magic coating

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Assignment	Determination of improvement in impact sound insulation of Atramex Ambienta Magic coating.
Sample details	The customer supplied on 16 th March 2020 to the laboratory materials for the sample. The materials were marked with a code 235-2020-00155901. The additional information supplied by the customer for the measured sample is presented in Appendix 2
Date and place of testing	The samples were tested on 28 th April 2020 Eurofins Expert Services Oy research hall 1 (Tekniikantie 15 A, 02150 Espoo).
Installation and measuring	The tested sample consisted of primer, 2-component coating (base, hardener), color component and 2-component finish (resin and hardener). All the components were mixed and applied onto the 160 mm concrete test floor by the instructions provided by the customer. The impact sound pressure levels were measured in the reverberation room below the test floor using a moving microphone. After dismantling the sample, the impact sound pressure levels for the bare concrete test slab were measured at the same tapping machine positions (five positions). Tests were performed by the Eurofins Expert Services Oy Laboratory technician Ville Joensuu

Method and equipment

The normalized impact sound pressure level L_n and the reduction of sound pressure level (improvement of impact sound insulation) ΔL were measured determined according to the standard *SFS-EN ISO 10140-3:2010* [1]. The single-number quantity for the sample ΔL_w is calculated according to *SFS-EN ISO 717-2:3013* [2].

Reverberation room dimensions and measuring equipment are present in Appendix 3.

Result

The weighted reduction of impact sound pressure level ΔL_w of the floor are presented in Table 1. The improvement in the impact sound insulation (the reductions of impact sound pressure level) ΔL in one-third-octave bands for the floor are shown in Appendix 1. The results of the airborne sound insulation measurements are shown in Table 1 and in Appendix 1.

Table 1. The weighted reduction of impact sound pressure level ΔL_w , – SFS-EN ISO 10140-1&3 and SFS-EN ISO 717-2.

Sample	Average sample thickness / weight	ΔL_w [dB]
Atramex Ambienta Magic Base Primer / Ambienta Magic (cork) / Atramex Ambienta Magic Finish	2,9mm / 3,9kg/m ²	6

Espoo, 15.5.2020

Mika Lojander
Expert

The report is electronically signed

Eurofins Expert Services Oy is notified body No. NB 0809

FINAS Finnish Accreditation Service has accredited our laboratory (T001, Eurofins Expert Services Oy) to perform measurements according to standards listed below..

References

[1] *EN ISO 10140-3:2010 Laboratory measurements of sound insulation of building elements - Part 3 Measurement of impact sound insulation*

[2] *EN ISO 717: Acoustics - Rating of sound insulation in buildings and of building elements - Part 2:2013: Impact sound insulation*

[3] *ISO 10140-1:2010 Acoustics- Laboratory measurement of sound insulation of building elements. Part 1: Application rules for specific products.*

Appendices

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Distribution

Customer, electronically approved



The results are only valid for the tested sample(s).

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Client: Atramex Produktions GmbH

Sample, test 1:

Atramex Ambienta Magic Base Primer
Ambienta Magic (cork)
Ambienta Magic Finish

Measurement: EN ISO 10140-3-2010

Rating: EN ISO 717-2:2013

Sample installed by Client

Date of test: 16.4.2020

Test rooms: Rev.room 2 and 5

Sample area: 5 * 0,3 m²

Concrete test slab thickness is 160 mm (400 kg/m²)

No preloading

Sample and arrangements:

Mass per unit area: 3,9 kg/m²

Curing time: 5 days

Air temp. in the source room: 19 °C

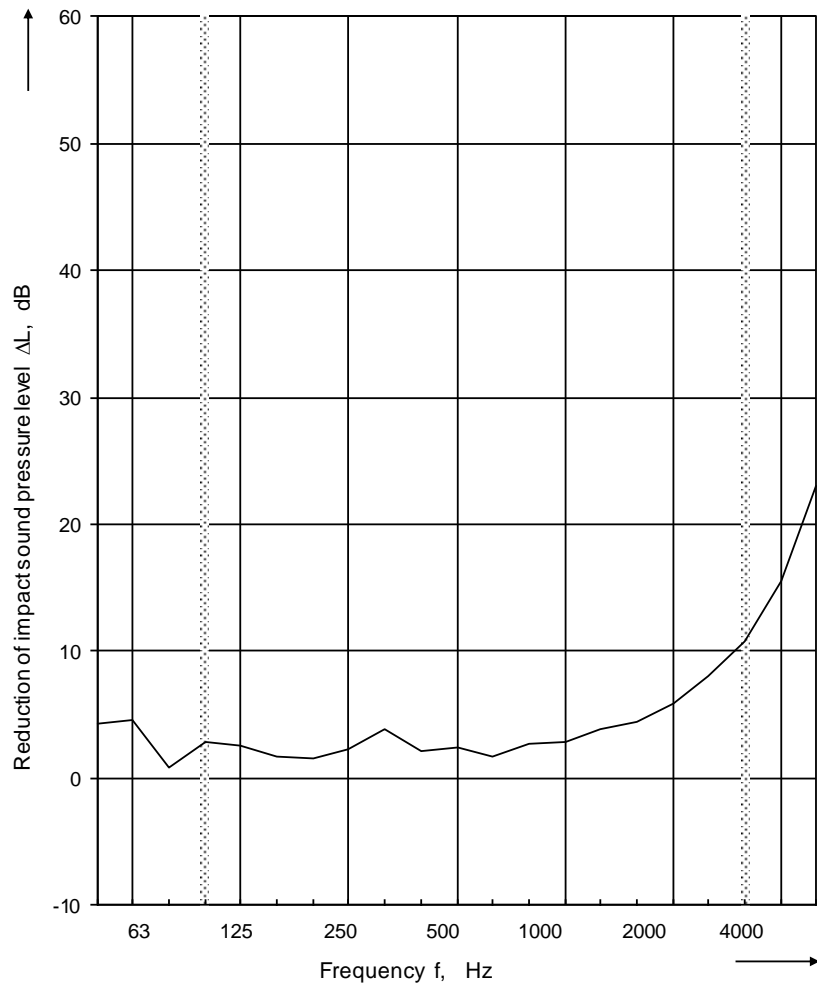
Air humidity in the source room: 29 %

Barometric pressure: 101 kPa

Receiving room volume: 56 m³

Frequency range for rating according to ISO 717-2

Frequency <i>f</i> Hz	<i>L</i> _{n,0} Test slab 160 mm dB	ΔL One-third octave dB	
50	52,9	4,3	(-0,8)
63	56,4	4,6	(-4,0)
80	54,4	0,8	(-6,2)
100	57,6	2,9	(-2,6)
125	63,2	2,6	
160	66,4	1,7	
200	66,0	1,6	
250	65,5	2,3	
315	73,7	3,8	
400	68,7	2,1	
500	74,0	2,4	
630	72,3	1,7	
800	73,9	2,7	
1000	72,4	2,9	
1250	71,7	3,9	
1600	72,4	4,5	
2000	72,2	5,9	
2500	71,7	8,1	
3150	71,4	10,8	
4000	70,8	15,5	
5000	69,1	23,1	



Rating according to ISO 717-2:

$\Delta L_w = 6$ dB; $C_{l,\Delta} = -3$ dB $C_{l,r} = -8$ dB $C_{l,r,50-2500} = -8$ dB

These results are based on test made with an artificial source under laboratory conditions (engineering method).



Ambienta Magic

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- Versiegelungen
- Fassadenprodukte
- Spezialprodukte
- Graffitienschutz

7721 System-Atramex Ambienta Magic Base Primer

Application area:

Ideal on EP, concrete, EP mortar etc.

application notes

The surface must be dry, clean, free of grease and oil, and there must be no cement skin or loose parts. The compressive strength must be at least 25 N / mm² and the adhesive tensile strength must be at least 1.5 N / mm². Unevenness or porous spots must be smoothed out beforehand or leveled over the entire surface.

surface preparation:

Insufficiently stable layers and dirt must be removed mechanically, e.g. by shot peening. Dust removal is generally necessary

Application:

The product 7721 System Atramex Ambienta Magic Base Primer once even in Apply wet condition with a short hair sealing roller over the cross. Consumption approx. 0.3-0.5 kg / m². Then sand immediately. After a drying time of 2 hours, vacuum off the excess sand and apply the Ambienta Magic floor.

The data sheet naturally does not contain all possible and future use cases partly due to the versatility of the building materials. It can therefore not release the professional processor from the question in case of doubt, the independent testing on site and the critical attention during processing. The data sheet also dispenses with information that can be assumed to be known to experts. The content of the data sheet has no legal obligation and does not establish a contractual legal relationship or an ancillary obligation from the purchase contract.



Ambienta Magic

7721 System-Atramex Ambienta Magic Base Primer

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Hazardous ingredients

< 2.5 % Dipropylenglykoldimethylether, Isomer

Giscode BSW10
Consumption depending on the surface approx. 300 - 500 g per coat

Durability:

Closed containers unmixed for 2 years from the date of production. Protect from frost and heat.

Regulatory information:

Symbol (e): none
catchword: none
ADR: none

Additional information:

EUH208 contains mixture of: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] and 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1), 1,2-Benzisothiazol-3(2H)-on. Can cause allergic reactions



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2- COMPONENT, LOW EMISSION-BASED, SUSTAINABLE AND SUSTAINABLE RAW MATERIALS, FULL-LENGTH, HIGHLY ELASTIC COATING

application areas

- Elastic gradient coating in various natural optics such as cork, corn, nut, etc
- Especially for use in hospitals, kindergartens, open-plan offices, sales and exhibition rooms, entrance halls, museums, living rooms etc.

PRODUCT FEATURES / BENEFITS

- Linseed oil based
- Over 85% sustainable raw materials
- Low VOC-Emissions
- Tested according to AgBB test criteria
- Solvent-free
- Absorbs sound
- Crack bridging
- Very good mechanical resistance
- Easy processing
- Easy to clean
- Natural color selection
- Warm underfoot
- Anti-slip
- Demands of EN 13813: SR - B1,5 – AR1 - IR4

Application notes

Mixing ratio

- Comp. A: Base 100 Parts
- Comp. B: hardener 35 Parts
- Comp. C: Additive according to the mix overview

Comp. C – mixed overview

- Fine cork 5 parts
- Medium cork 8 parts
- Cork roughly 8 parts
- Nut shell 30 parts
- Corn cobs flour 10 parts

Substrate condition:

The surface must be dry, clean, free of grease and oil, and there must be no cement skin or loose parts be that. The compressive strength must be at least 25 N / mm², and the tensile adhesive strength at least

1.5 N / mm². Unevenness or porous spots must be smoothed out beforehand or completely covered to equalize

Surface preparation:

Insufficiently stable layers and dirt must be removed mechanically, e.g. by shot peening. Dust removal is generally necessary.

Grundierung:

The product 7721 System Atramex Ambienta Magic Base Primer once even in Apply wet condition with a short hair sealing roller over the cross. Consumption approx. 0.3-0.5 kg /m²

Then sand immediately. After a drying time of 2 hours, vacuum off the excess sand and lay the Ambienta Magic floor.





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2- COMPONENT, LOW EMISSION-BASED, SUSTAINABLE AND SUSTAINABLE RAW MATERIALS, FULL-LENGTH, HIGHLY ELASTIC COATING

Mixture:

Comp. A stir well before dosing with an electric stirrer. Dose Comp. C in the correct ratio and mix at low speed for 2 minutes (approx. 300 to 400 rpm). Dose Comp. B in the correct ratio and mix at low speed for 3 minutes (approx. 300 to 400 rpm). Avoid foaming!

Transfer the mixed material into a clean container (repot) and mix briefly.

Application:

Before processing, the substrate moisture, relative humidity and the dew point be checked. The product is applied using a large flat smoothing knife or a squeegee. As soon as Ambienta Magic is "tack-free", the seal can be applied. This product is intended only for customers whose employees have the necessary knowledge of processing art. Resin floor coverings that comply with the application limits in general and corresponding feature.

The rules of architecture must be observed. The data sheet naturally does not include all possible and future applications, some of which are due to the versatility of the building materials. It is therefore not possible for the professional processor to respond to the query in cases of doubt, the testing site of critical attention during processing autonomous before and release. The data sheet also dispenses with information that can be assumed to be known to experts. The content of the data sheet has no legal obligation and does not constitute a contractual legal relationship or an ancillary obligation from the purchase contract. final sealing:

Apply the product 7709 System Atramax Ambienta Magic transparent finish matt uniformly evenly when wet with a short-hair sealing roller over the cross. Consumption approx. 120-150 g / m². If the seal is applied outside of 24 hours after the floor has been applied, it must be matted / sanded with a single-disc machine and a blue pad or sanding net. Then vacuum, wipe with a damp cloth and let dry.

More information::

Freshly processed Ambienta Magic must be at least 24 hours before steam, condensation and Water are protected. Uncured material reacts with water (foaming). during processing, care must be taken to ensure that no sweat drops fall onto the fresh coating. In order to achieve a uniform coloring of the floor area, Ambienta Magic can only be used from one production batch. Under unfavorable circumstances, it could be caused by high air temperatures or underfloor heating in connection with a high point load

there are impressions in the coating. If heating is required, no heaters operated with gas, paraffin or other fossil fuels may be used. These generate a large amount of CO₂ and water vapor, which have an adverse effect on the surface finish. Use only electric heaters.

All tools must be cleaned with 6251 Orangeclean amplifier immediately after use. Fully hardened material can only be removed mechanically

CLEANING AND CARE:

Please note our cleaning and care instructions.

MEASUREMENTS:

All technical data, dimensions and information in this data sheet are based on laboratory tests. Indeed in practice, measured data can deviate due to circumstances beyond our control



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Basis	Linseed oil, Biopolymere and Sustainable raw materials	
Packaging	component A component B	10,0 kg can 3,5 kg can
Fillers cork, com, nut ect.		
Appearance / hue	resin - component A Harder - component B	Transparen/coloured, liquid Transparent, liquid
Colors	Natural color selection	Color deviations are off raw Material-related reasons unavoidable.
Shelf life	12 months from the date of production	Storage conditions in originally closed containers, under dry conditions, at temperatures between + 5 ° C and + 30 ° C
Density	Component A component B Mixed resin inklusive Component C	ca. 1,34 kg/l ca. 1,2 kg/l Mixed resin ca. 1,20 kg/l All values at +23 ° C
Solid share		
material consumption	kg/m2/mm	ca. 1.2
Layer thickness	Consumption 3,40 kg/m2	ca. 2,80 mm
Material temperature	Minimal +10 ° C	Maximal +30 ° C
Air temperature	Minimal +10 ° C	Maximal +30 ° C
Relative humidity	Maximal 80 %	
Dew point	Protect against condensation! Be at least + 3 ° C above the dew point temperature, otherwise there is a risk of condensation	
Substrate temperature during application and curing		
Underground temperature	Minimal +10 ° C	Maximal +30 ° C
Underground moisture	<4 CM% for cement-bound substrates <0.3 CM% for anhydrite screeds	



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2- COMPONENT, LOW EMISSION-BASED, SUSTAINABLE AND SUSTAINABLE RAW MATERIALS, FULL-LENGTH, HIGHLY ELASTIC COATING

Waiting time before reworking with 7709 System-Atramex Ambienta Magic transparent Finish matt

Underground temperature	Minimum	Maximum
+10 °C	24 h	72 h
+20 °C	16 h	48 h
+30 °C	12 h	36 h

Waiting time until use

Temperature	Wakable after	Easily resilient after	Fully resilient after
+10 °C	30 h	48 h	6 days
+20 °C	16 h	24 h	4 days
+30 °C	12 h	18 h	3 days

The indicated times are influenced by changing conditions in particular by temperature and air humidity.

Solids ca. 100% (Weight/Volume)

Shore-Hardness (A) ca. 84 (14 Tage / +23 °C)

Tear strength, Elongation at break, adhesive tensile, strength tear resistance
Chemical resistance

(ISO 34-1)

Siehe

ca. 18 N/mm (14 Tage / +23 °C)
7709 System-Atramex Ambienta Magic transparent Finish matt ca. 0,3-0,5 kg/m²

Consumption

7721 System-Atramex Ambienta Magic Base Primer

Coating Ambienta Magic

7709 System-Atramex Ambienta-transparent Finish matt

ca. 2,8 kg/m²

ca. 0,15 kg/m²

These are theoretical values and do not include any additions for surface porosity, surface roughness level differences and residual material in the cans etc.



System Atramex

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7719 System-Atramex Ambienta Magic transparent Finish matt

Quality Characteristics

- Very good melting
- Fast drying
- Easy to clean and sure-footed
- UV blocked
- Extremely good chemical resistance
- High scratch resistance and hardness

Area of application

Resilient floor coverings such as rubber nubs, PVC, linoleum, EP, and synthetic resin floors

Application instructions

Clean and pre-treat the surface according to the degree of soiling and requirements

Mixing ratio : 8 Parts resin : 1.5 Parts hardener 7729 .

Leave to stand for at least 10 minutes after mixing. Apply the product evenly with a plastic roller over the cross when wet. Dust-free after 2 hours and can be walked on carefully. Can be used carefully 8 hours after the last sealing layer has dried. After 7 days full durability and chemical resistance is given. Sandable after 4 - 6 hours depending on temperature. Clean equipment and rollers with water. Pot life approx. 2 hours. At temperatures above + 20° C the pot life is reduced.

The data sheet naturally does not include all possible and future applications that are partly also given by the versatility of the building materials. Therefore, it cannot release the professional processor from the need to consult in cases of doubt, to test the material on site and to pay critical attention during processing. The data sheet also does not contain any information that can be assumed to be known by experts. The content of the data sheet is without legal obligation and does not constitute a contractual legal relationship.



System Atramax

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7719 System-Atramax Ambienta Magic transparent Finish matt

Dangerous ingredients:

component A : none
component B : Aliphatisches Polyisocyanat, Hexamethylen-1,6-diisocyanat

Indications:

Only clean and correctly prepared and completely dry surfaces may be treated will be. Wear gloves and protective goggles during processing. After the first application apply the Matt protective film with a single disc machine and blue pad or abrasive net (between grind / matt), then vacuum, wipe damp, allow to dry before further protective films can be applied. Application minimum + 5° C, the relative humidity must not exceed 80 %. For application, the surface temperature must be approx. 5-20° Celsius. Dew point must not be achieved. For the pre-cleaning of the surfaces we recommend 6250 Orangeclean System Atramax Basic Cleaner. For maintenance cleaning we recommend the following products 2055 Atrafor or 2530 Atra 3 floor cleaner. For basic cleaning 7719 System-Atramax Ambienta Magic transparent finish matt protected surfaces we recommend 6250 Orangeclean System Atramax basic cleaner. If unsuitable cleaning agents are used, we reject any liability for the sealing product. We assume no liability for improper use and resulting damages. Tire ingredients or plasticizers can lead to surface discoloration.

Technical data

Giscode	W1 DD
Water vapour diffusion u H2O	7.000 - 8.000
Pendulum hardness	120
Abrasion (Taber) CS/1000rev/10N [mg]	< 20
Abrasion resistance	mind. 30.000 Rollstuhlszyklen
Coefficient of sliding friction [μ]	> 0,4 — < 0,6
Solvent-resistant: - Testbenzin (testpetrol)	very well
- Diesel oil	very well
- Aceton	well
- Aethanol	very well
Mandrel bending test DIN 6860	20 mm
Erichsentest	9,5 mm
Consumption depending on substrate	ca. 120 - 150 g per coat
Layer thickness	ca. 50 - 70 μm per coat

Shelf-life:

2 years from date of production unmixed

Information on legislation :

component A	
Symbol (e):	none
Signal word:	none
ADR:	none
component B	
Symbol (e):	GHS07
Signal word:	Attention
ADR:	none



The results are only valid for the tested sample(s).

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Measuring equipment and reverberation room dimensions

Measuring equipment	Name	Serial No.
Condenser microphone	B&K (Brüel & Kjær) 4134	2527717
Microphone preamplifier	B&K 2669	2554550
Rotating microphone boom	B&K 3923	2630663
Power amplifier	Yamaha MX-1000	
Loudspeakers	Sinmarc V121L	
Real-time analyser	Nor 830	31429
Sound calibrator	B&K 4228	3063558

Reverberation room dimensions:	Floor	Height	Volume
(KH 3)	5.95 m x 7.2m	4.7 m	201 m ³

Thickness of the concrete waal, floors and ceiling of the reverberation room is 0,25 m