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Test di isolamento acustico impattivo

Pavimentazione DuraSound

Pavimentazione DuraTrain

NORUMORE s.r.l.

NOISE REDUCTION TECHNOLOGY

Via G. Querzoli 2/H, 47121 Forlì (FC)

P.IVA/C.F. 04438430409 Cell: 3516913012

Web: www.norumore.it

Email: info@norumore.it



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Data Overview: ASTM E90: Airborne Sound Transmission

TL= Transmission Loss

STC= Sound Transmission Class

		DuraSound 82	DuraSound 70	DuraSound 50	DuraTrain 31
Frequency Range of Interest	Designation	mm.	mm.	mm.	mm.
	Test Number	TL15-471	TL15-475	TL15-497	TL15-502
	STC:	55	54	53	55
	Frequency (Hz)	TL	TL	TL	TL
	31.5	35	37	39	39
	40	41	37	41	38
	50	40	38	40	37
	63	36	40	40	41
Frequency Range of Interest	80	35	35	42	39
	100	33	35	35	33
	125	34	35	35	36
	160	36	37	33	36
	200	37	37	39	39
	250	43	40	41	42
	315	46	44	44	45
	400	51	49	47	51
	500	55	53	53	55
	630	59	58	58	59
	800	62	62	62	63
	1000	66	66	65	67
	1250	69	69	69	70
	1600	72	71	72	72
	2000	76	75	76	76
	2500	79	80	80	81
	3150	82	82	82	84
	4000	84	82	83	85
	5000	84	83	83	85
		6300	78	77	78
8000		73	71	73	74
10000		66	64	65	67
12500		60	59	60	61



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Data Overview: ISO 10140-2 Airborne Sound Insulation

R= Sound Reduction Index

Rw= Weighted Sound Reduction Index

		DuraSound 82	DuraSound 70	DuraSound 50	DuraTrain 31	
Designation		mm.	mm.	mm.	mm.	
Test Number		TL15-472	TL15-476	TL15-498	TL15-503	
STC:		55	54	53	55	
Frequency (Hz)		R	R	R	R	
Frequency Range of Interest	31.5	38.7	41.2	41.1	41.5	
	40	42.9	40.2	42.5	40.9	
	50	41.0	40.5	41.2	40.1	
	63	37.4	40.2	39.5	40.5	
	80	34.3	36.2	40.8	38.7	
	100	37.7	37.1	38.8	35.1	
	125	37.8	39.2	36.5	36.6	
	160	35.6	37.5	35.8	37.1	
	200	37.9	37.4	38.2	38.9	
	250	42.1	40.5	40.4	41.1	
	315	45.8	44.1	44.4	45.0	
	400	50.9	49.2	47.4	50.6	
	500	55.6	54.2	52.5	55.1	
	630	59.6	58.6	58.4	60.0	
	800	62.9	62.5	61.9	63.3	
	1000	67.0	66.2	65.8	67.1	
	1250	69.7	69.3	69.0	70.2	
	1600	72.0	71.6	71.7	72.7	
	2000	75.6	75.3	75.3	76.2	
	2500	79.3	79.5	79.2	80.3	
	3150	81.1	81.5	81.8	83.6	
	4000	83.8	81.7	82.6	84.3	
	5000	84.0	83.2	82.8	84.3	
		6300	79.1	78.3	77.9	79.0
		8000	73.9	73.0	72.8	73.5
		10000	67.3	66.2	66.0	66.3
		12500	61.8	60.7	60.5	60.7



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Data Overview: ASTM E492 Impact Sound Transmission

Ln= Normalized Impact Sound Pressure Level

IIC= Impact Insulation Class

		DuraSound 82	DuraSound 70	DuraSound 50	DuraTrain 31
Frequency Range of Interest	Designation	mm.	mm.	mm.	mm.
	Test Number	IN15-049	IN15-053	IN15-065	IN15-069
	IIC:	55	56	57	56
	Frequency (Hz)	Ln	Ln	Ln	Ln
	31.5	70	65	70	73
	40	55	53	56	57
	50	57	55	56	59
	63	61	56	60	59
	80	60	58	58	58
	100	65	64	63	63
125	60	59	61	62	
160	60	58	58	61	
200	56	56	56	61	
250	50	52	53	60	
315	44	48	49	57	
400	41	44	43	50	
500	35	38	37	48	
630	31	32	32	46	
800	29	27	27	40	
1000	29	22	22	35	
1250	25	23	20	31	
1600	19	20	20	26	
2000	17	12	15	18	
2500	12	7	9	10	
3150	8	4	5	9	
4000	5	5	5	7	
5000	6	8	6	8	
6300	7	8	7	9	
8000	8	10	9	11	
10000	9	12	11	13	
12500	9	11	12	12	



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Data Overview: ASTM E2179 Effectiveness in Floor Coverings

L_d= Reduction in Impact Sound Pressure Level

ΔIIC= Increase in Impact Insulation Class

		DuraSound 82	DuraSound 70	DuraSound 50	DuraTrain 31
	Designation	mm.	mm.	mm.	mm.
	Test Number	IFC15-017	IFC15-019	IFC15-024	IFC15-026
	ΔIIC	27	27	28	26
	Frequency (Hz)	L _d	L _d	L _d	L _d
Frequency Range of Interest	100	2	2	3	3
	125	6	7	5	4
	160	7	7	7	4
	200	13	10	10	5
	250	19	15	14	7
	315	25	20	19	11
	400	27	23	24	17
	500	34	31	32	21
	630	38	38	38	24
	800	40	42	42	29
	1000	41	47	47	34
	1250	46	49	52	41
	1600	54	53	53	47
	2000	56	61	58	55
	2500	60	66	64	63



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Data Overview: ISO 10140-3: Impact Sound Insulation

Ln= Normalized Impact Sound Pressure Level

Ln,w= Weighted Impact Sound Pressure Level

		DuraSound 82	DuraSound 70	DuraSound 50	DuraTrain 31
	Designation	mm.	mm.	mm.	mm.
	Test Number	IN15-050	IN15-054	IN15-066	IN15-070
	Ln,w	48	47	49	51
	Frequency (Hz)	Ln	Ln	Ln	Ln
	31.5	69.2	64.9	58.5	59.1
	40	57.4	56.3	56.7	58.7
	50	59.7	58.4	59.2	61.3
	63	61.0	58.9	62.9	64.0
	80	59.2	57.4	58.6	58.5
	Frequency Range of Interest	100	59.9	57.7	58.4
125		56.8	56.6	58.0	58.3
160		58.9	55.9	57.8	58.5
200		53.7	53.2	55.0	58.0
250		48.8	50.9	53.2	58.1
315		44.2	45.7	48.3	53.0
400		41.5	43.7	44.9	47.7
500		34.4	37.0	38.0	45.2
630		27.8	31.0	30.7	43.3
800		25.4	25.6	24.7	39.6
1000		24.9	24.3	20.5	34.6
1250		21.9	23.3	17.8	29.1
1600		15.0	20.4	20.6	24.2
2000		12.2	12.2	15.2	17.6
2500		7.4	7.2	9.2	10.9
3150		5.1	5.1	6.8	8.8
4000		4.4	4.3	5.6	8.1
5000		6.1	6.1	6.9	9.0
	6300	7.0	6.9	7.8	8.7
	8000	8.2	8.3	9.2	9.9
	10000	9.7	10.1	11.1	11.8
	12500	9.6	9.8	11.8	12.3



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Data Overview: ASTM E2179 Effectiveness in Floor Coverings

ΔL = Improvement of Impact Sound Insulation

ΔL_w = Weighted Reduction of Impact Sound Pressure level

		DuraSound 82	DuraSound 70	DuraSound 50	DuraTrain 31
Frequency Range of Interest	Designation	mm.	mm.	mm.	mm.
	Test Number	IN15-050	IN15-054	IN15-066	IN15-070
	ΔL_w	28	27	25	23
	Frequency (Hz)	ΔL	ΔL	ΔL	ΔL
Frequency Range of Interest	100	4.9	4.8	4.1	2.5
	125	7.5	7.4	6.0	5.7
	160	7.5	7.0	5.1	4.4
	200	12.6	11.2	9.4	6.4
	250	18.9	16.5	14.2	9.3
	315	23.3	20.7	18.1	13.4
	400	27.6	23.6	22.4	19.6
	500	32.8	32.6	31.6	24.4
	630	40.9	38.5	38.8	26.2
	800	42.2	42.6	43.5	28.6
	1000	44.9	45.8	49.6	35.5
	1250	48.4	47.1	52.6	41.3
	1600	57.0	51.8	51.6	48.0
	2000	60.1	60.0	57.0	54.6
	2500	64.3	64.4	62.4	60.7
	3150	67.3	68.1	66.4	64.4