
GUIACAIXA

Sustentabilidade
Ambiental



SELO CASA AZUL

Boas Práticas para Habitação Mais Sustentável

Realização

CAIXA

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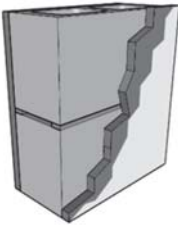
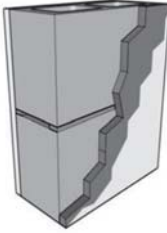
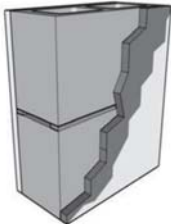
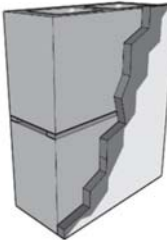
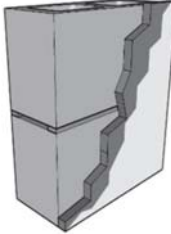
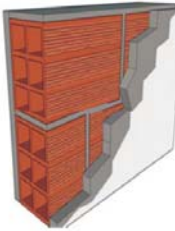
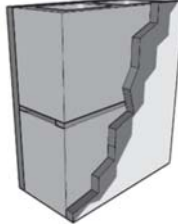
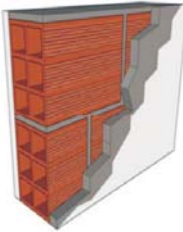
128 Categoria 4 – Conservação de Recursos Materiais

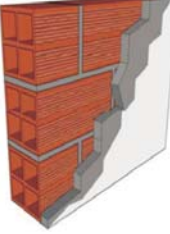

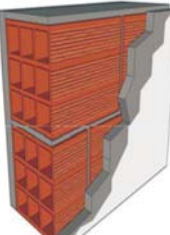
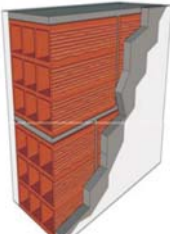
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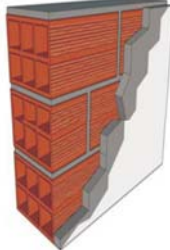

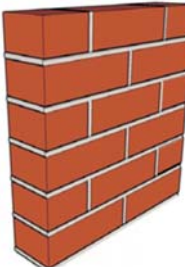
174 Categoria 6 – Práticas Sociais

Tabela 4: Tipologias – paredes

2

Parede tipo	Imagem	Descrição/Propriedades térmicas	Parede tipo	Imagem	Descrição/Propriedades térmicas
a		Argamassa interna (2,5cm) Bloco de concreto (9,0 x 19,0 x 39,0cm) Argamassa externa (2,5cm) Pintura externa (α)	e		Gesso interno (2,0cm) Bloco de concreto (14,0 x 19,0 x 39,0cm) Argamassa externa (2,5cm) Pintura externa (α)
		U CT α FCS			U CT α FCS
		[W/(m²K)] [kJ/m²K] [-] [-]			[W/(m²K)] [kJ/m²K] [-] [-]
		2.86 2.03 0.2 2.3			2.7 235 0.2 2.2
		0.4 4.6			0.4 4.3
		0.8 9.2			0.8 8.6
b		Gesso interno (2,0cm) Bloco de concreto (9,0 x 19,0 x 39,0cm) Argamassa externa (2,5cm) Pintura externa (α)	f		Sem revestimento interno Bloco de concreto (14,0 x 19,0 x 39,0cm) Argamassa externa (2,5cm) Pintura externa (α)
		U CT α FCS			U CT α FCS
		[W/(m²K)] [kJ/m²K] [-] [-]			[W/(m²K)] [kJ/m²K] [-] [-]
		2.8 174 0.2 2.2			2.95 214 0.2 2.4
		0.4 4.5			0.4 4.7
		0.8 9.0			0.8 9.4
c		Sem revestimento interno Bloco de concreto (9,0 x 19,0 x 39,0cm) Argamassa externa (2,5cm) Pintura externa (α)	g		Argamassa interna (2,5cm) Bloco cerâmico (9,0 x 14,0 x 24,0cm) Argamassa externa (2,5cm) Pintura externa (α)
		U CT α FCS			U CT α FCS
		[W/(m²K)] [kJ/m²K] [-] [-]			[W/(m²K)] [kJ/m²K] [-] [-]
		3.09 157 0.2 2.5			2.59 145 0.2 2.1
		0.4 4.9			0.4 4.1
		0.8 9.0			0.8 8.3
d		Argamassa interna (2,5cm) Bloco de concreto (14,0 x 19,0 x 39,0cm) Argamassa externa (2,5cm) Pintura externa (α)	h		Gesso interno (2,0cm) Bloco cerâmico (9,0 x 14,0 x 24,0cm) Argamassa externa (2,5cm) Pintura externa (α)
		U CT α FCS			U CT α FCS
		[W/(m²K)] [kJ/m²K] [-] [-]			[W/(m²K)] [kJ/m²K] [-] [-]
		2.76 265 0.2 2.2			2.55 115 0.2 2.0
		0.4 4.4			0.4 4.1
		0.8 8.8			0.8 8.2

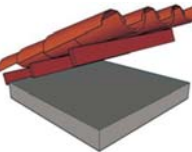

Parede tipo	Imagem	Descrição/Propriedades térmicas																
i		Sem revestimento interno Bloco cerâmico (9,0 x 9,0 x 24,0cm) Argamassa externa (2,5cm) Pintura externa (α)																
		<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">2.86</td> <td rowspan="3">100</td> <td>0.2</td> <td>2.2</td> </tr> <tr> <td>0.4</td> <td>4.5</td> </tr> <tr> <td>0.8</td> <td>8.9</td> </tr> </tbody> </table>	U	CT	α	FCS	[W/(m²K)]	[kJ/m²K]	[-]	[-]	2.86	100	0.2	2.2	0.4	4.5	0.8	8.9
U	CT	α	FCS															
[W/(m²K)]	[kJ/m²K]	[-]	[-]															
2.86	100	0.2	2.2															
		0.4	4.5															
		0.8	8.9															
j		Sem revestimento interno Bloco cerâmico (9,0 x 9,0 x 24,0cm) Sem revestimento externo																
		<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">3.12</td> <td rowspan="3">41</td> <td>0.2</td> <td>2.5</td> </tr> <tr> <td>0.4</td> <td>5.0</td> </tr> <tr> <td>0.8</td> <td>10.0</td> </tr> </tbody> </table>	U	CT	α	FCS	[W/(m²K)]	[kJ/m²K]	[-]	[-]	3.12	41	0.2	2.5	0.4	5.0	0.8	10.0
U	CT	α	FCS															
[W/(m²K)]	[kJ/m²K]	[-]	[-]															
3.12	41	0.2	2.5															
		0.4	5.0															
		0.8	10.0															
k		Argamassa interna (2,5cm) Bloco cerâmico (14,0 x 19,0 x 29,0cm) Argamassa externa (2,5cm) Pintura externa (α)																
		<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1.98</td> <td rowspan="3">156</td> <td>0.2</td> <td>1.6</td> </tr> <tr> <td>0.4</td> <td>3.2</td> </tr> <tr> <td>0.8</td> <td>6.3</td> </tr> </tbody> </table>	U	CT	α	FCS	[W/(m²K)]	[kJ/m²K]	[-]	[-]	1.98	156	0.2	1.6	0.4	3.2	0.8	6.3
U	CT	α	FCS															
[W/(m²K)]	[kJ/m²K]	[-]	[-]															
1.98	156	0.2	1.6															
		0.4	3.2															
		0.8	6.3															
l		Gesso interno (2,0cm) Bloco cerâmico (14,0 x 19,0 x 29,0cm) Argamassa externa (2,5cm) Pintura externa (α)																
		<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1.89</td> <td rowspan="3">122</td> <td>0.2</td> <td>1.5</td> </tr> <tr> <td>0.4</td> <td>3.0</td> </tr> <tr> <td>0.8</td> <td>6.1</td> </tr> </tbody> </table>	U	CT	α	FCS	[W/(m²K)]	[kJ/m²K]	[-]	[-]	1.89	122	0.2	1.5	0.4	3.0	0.8	6.1
U	CT	α	FCS															
[W/(m²K)]	[kJ/m²K]	[-]	[-]															
1.89	122	0.2	1.5															
		0.4	3.0															
		0.8	6.1															

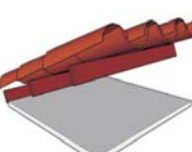
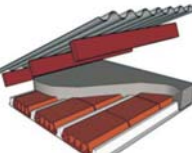
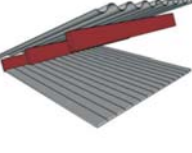
Parede tipo	Imagem	Descrição/Propriedades térmicas																
m		Sem revestimento interno Bloco cerâmico (14,0 x 14,0 x 29,0cm) Argamassa externa (2,5cm) Pintura externa (α)																
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U	CT	α	FCS															
[W/(m²K)]	[kJ/m²K]	[-]	[-]															
2.09	103	0.2	1.7															
		0.4	3.3															
		0.8	6.7															
n		Sem revestimento interno Bloco cerâmico (14,0 x 9,0 x 24,0cm) Sem revestimento externo																
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U	CT	α	FCS															
[W/(m²K)]	[kJ/m²K]	[-]	[-]															
2.49	55	0.2	2.0															
		0.4	4.0															
		0.8	8.0															
o		Sem revestimento interno Tijolo maciço (10,0 x 6,0 x 22,0cm) Sem revestimento externo																
		<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">3.7</td> <td rowspan="3">149</td> <td>0.2</td> <td>3.0</td> </tr> <tr> <td>0.4</td> <td>5.9</td> </tr> <tr> <td>0.8</td> <td>11.8</td> </tr> </tbody> </table>	U	CT	α	FCS	[W/(m²K)]	[kJ/m²K]	[-]	[-]	3.7	149	0.2	3.0	0.4	5.9	0.8	11.8
U	CT	α	FCS															
[W/(m²K)]	[kJ/m²K]	[-]	[-]															
3.7	149	0.2	3.0															
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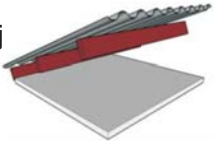

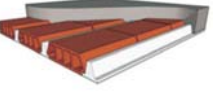
Fonte: Laboratório de Eficiência Energética em Edificações da Universidade Federal de Santa Catarina – LabEEE/UFSC.



Tabela 5: Tipologias – coberturas

Cobertura tipo	Imagem	Descrição/Propriedades térmicas																
a		Laje maciça (10,0cm) Câmara de ar (> 5,0cm) Telha cerâmica																
		<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">2.05</td> <td rowspan="3">238.5</td> <td>0.2</td> <td>1.6</td> </tr> <tr> <td>0.4</td> <td>3.3</td> </tr> <tr> <td>0.8</td> <td>6.6</td> </tr> </tbody> </table>	U	CT	α	FCS	[W/(m ² K)]	[kJ/m ² K]	[-]	[-]	2.05	238.5	0.2	1.6	0.4	3.3	0.8	6.6
		U	CT	α	FCS													
		[W/(m ² K)]	[kJ/m ² K]	[-]	[-]													
2.05	238.5	0.2	1.6															
		0.4	3.3															
		0.8	6.6															
<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1.92</td> <td rowspan="3">113</td> <td>0.2</td> <td>1.5</td> </tr> <tr> <td>0.4</td> <td>3.1</td> </tr> <tr> <td>0.8</td> <td>6.1</td> </tr> </tbody> </table>		U	CT	α	FCS	[W/(m ² K)]	[kJ/m ² K]	[-]	[-]	1.92	113	0.2	1.5	0.4	3.1	0.8	6.1	
U	CT	α	FCS															
[W/(m ² K)]	[kJ/m ² K]	[-]	[-]															
1.92	113	0.2	1.5															
		0.4	3.1															
		0.8	6.1															
<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1.75</td> <td rowspan="3">21.4</td> <td>0.2</td> <td>1.4</td> </tr> <tr> <td>0.4</td> <td>2.8</td> </tr> <tr> <td>0.8</td> <td>5.6</td> </tr> </tbody> </table>		U	CT	α	FCS	[W/(m ² K)]	[kJ/m ² K]	[-]	[-]	1.75	21.4	0.2	1.4	0.4	2.8	0.8	5.6	
U	CT	α	FCS															
[W/(m ² K)]	[kJ/m ² K]	[-]	[-]															
1.75	21.4	0.2	1.4															
		0.4	2.8															
		0.8	5.6															
d		Forro madeira (1,0cm) Câmara de ar (> 5,0cm) Telha cerâmica																
		<table border="1"> <thead> <tr> <th>U</th> <th>CT</th> <th>α</th> <th>FCS</th> </tr> <tr> <th>[W/(m²K)]</th> <th>[kJ/m²K]</th> <th>[-]</th> <th>[-]</th> </tr> </thead> <tbody> <tr> <td rowspan="3">2.02</td> <td rowspan="3">26.4</td> <td>0.2</td> <td>1.6</td> </tr> <tr> <td>0.4</td> <td>3.2</td> </tr> <tr> <td>0.8</td> <td>6.4</td> </tr> </tbody> </table>	U	CT	α	FCS	[W/(m ² K)]	[kJ/m ² K]	[-]	[-]	2.02	26.4	0.2	1.6	0.4	3.2	0.8	6.4
		U	CT	α	FCS													
		[W/(m ² K)]	[kJ/m ² K]	[-]	[-]													
2.02	26.4	0.2	1.6															
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Fonte: Laboratório de Eficiência Energética em Edificações da Universidade Federal de Santa Catarina – LabEEE/UFSC.