

Wall Constructions

Zimbabwe
ZFP

06/27/2020
12:56PM

Offices Wall

Wall Details

Outside Surface Color **Dark**
Absorptivity **0.900**
Overall U-Value **3.156** W/(m²·°K)

Wall Layers Details (Inside to Outside)

| Layers | Thickness mm | Density kg/m ³ | Specific Ht. kJ / (kg · °K) | R-Value (m ² ·°K)/W | Weight kg/m ² |
|----------------------------|-----------------|------------------------------|--------------------------------|-----------------------------------|-----------------------------|
| Inside surface resistance | 0.000 | 0.0 | 0.00 | 0.12064 | 0.0 |
| 100mm common brick | 100.000 | 1922.2 | 0.84 | 0.13757 | 192.2 |
| Outside surface resistance | 0.000 | 0.0 | 0.00 | 0.05864 | 0.0 |
| Totals | 100.000 | - | | 0.31685 | 192.2 |

Steel Wall

Wall Details

Outside Surface Color **Dark**
Absorptivity **0.900**
Overall U-Value **0.387** W/(m²·°K)

Wall Layers Details (Inside to Outside)

| Layers | Thickness mm | Density kg/m ³ | Specific Ht. kJ / (kg · °K) | R-Value (m ² ·°K)/W | Weight kg/m ² |
|----------------------------|-----------------|------------------------------|--------------------------------|-----------------------------------|-----------------------------|
| Inside surface resistance | 0.000 | 0.0 | 0.00 | 0.12064 | 0.0 |
| Steel | 1.000 | 7833.0 | 0.50 | 0.00002 | 7.8 |
| board insulation | 50.000 | 32.0 | 0.92 | 2.40746 | 1.6 |
| Outside surface resistance | 0.000 | 0.0 | 0.00 | 0.05864 | 0.0 |
| Totals | 51.000 | - | | 2.58676 | 9.4 |

Roof Constructions

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Offices Roof

Roof Details

Outside Surface Color **Dark**
 Absorptivity **0.900**
 Overall U-Value **0.585** W/(m²·°K)

Roof Layers Details (Inside to Outside)

| Layers | Thickness mm | Density kg/m ³ | Specific Ht. kJ / (kg - °K) | R-Value (m ² ·°K)/W | Weight kg/m ² |
|----------------------------|-----------------|------------------------------|--------------------------------|-----------------------------------|-----------------------------|
| Inside surface resistance | 0.000 | 0.0 | 0.00 | 0.12064 | 0.0 |
| Board insulation | 30.000 | 32.0 | 0.92 | 1.44447 | 1.0 |
| 102mm HW concrete | 150.000 | 2242.6 | 0.84 | 0.08667 | 336.4 |
| Outside surface resistance | 0.000 | 0.0 | 0.00 | 0.05864 | 0.0 |
| Totals | 180.000 | - | | 1.71042 | 337.4 |

Steel Roof

Roof Details

Outside Surface Color **Dark**
 Absorptivity **0.900**
 Overall U-Value **0.264** W/(m²·°K)

Roof Layers Details (Inside to Outside)

| Layers | Thickness mm | Density kg/m ³ | Specific Ht. kJ / (kg - °K) | R-Value (m ² ·°K)/W | Weight kg/m ² |
|----------------------------|-----------------|------------------------------|--------------------------------|-----------------------------------|-----------------------------|
| Inside surface resistance | 0.000 | 0.0 | 0.00 | 0.12064 | 0.0 |
| Steel deck | 1.000 | 7833.0 | 0.50 | 0.00002 | 7.8 |
| Board insulation | 75.000 | 32.0 | 0.92 | 3.61118 | 2.4 |
| Outside surface resistance | 0.000 | 0.0 | 0.00 | 0.05864 | 0.0 |
| Totals | 76.000 | - | | 3.79048 | 10.2 |