Declaration of Performance



G4248OPCPR

1. Unique identification code of the product-type:

Earthwool 032, Earthwool KD 032, Classic 032, Classic KD 032, Naturoll 032, TP 138 (Naturboard 032), Knauf Insulation 032, Knauf Insulation KD 032, Loftroll 032, TI 132U(Unifit 032), Acoustic Board, Earthwool Alu 032, Classic Alu 032, Naturoll Alu 032, Knauf Insulation Alu 032, Loftroll KD 032, Naturoll KD 032, Earthwool E 032, Earthwool E Alu 032, Loftroll Alu 032

2. Intended use or uses:

Thermal Insulation for Buildings (ThIB)

3. Manufacturer:

Knauf Insulation
75. Yıl Mah. 1. Cadde 1/G Kucuk Organize Sanayi
26250 Eskisehir, Turkey
www.knaufinsulation.com - dop@knaufinsulation.com

4. <u>Authorised representative:</u>

Not applicable

5. System or systems of assessment and verification of constancy of performance:

AVCP System 1 for Reaction to Fire AVCP System 3 for the other characteristics

6a. Harmonized Standard:

EN 13162:2012 + A1:2015

Notified body or bodies:

AVCP System 1: (Notified certification body) 1020 - TECHNICKY A ZKUSEBNI USTAV STAVEBNI PRAHA s.p. ---

AVCP System 3: (Notified testing laboratory) 2164 - TEBAR Test Belgelendirme Arastirma ve Gelistirme Tic. A.S. --- ---

6b. European Assessment document: not applicable

European Technical Assessment: not applicable Technical Assessment Body: not applicable

Notified body/ies: not applicable

7. <u>Declared Performances:</u>

See next page

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G4248OPCPR Acoustic Board



| Essential Characteristics | G42480PC | PR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Acoustic Board | Stallualu |
| Thomas Decisions | The condense of all 21 (MV/c)(A) | 3 0 022 | EN 42452 2042 : |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + A1:2015 |
| | Thermal Resistance | See product label | |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | Т3 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against | Thermal Resistance | NPD{b} | |
| heat, weathering, ageing / degradation | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Durability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance determ | ined | |

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G4248OPCPR Classic 032



| Essential Characteristics | G4248OP | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Classic 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | \dashv |
| | Thickness tolerance | T2 | _ |
| Reaction to Fire | Reaction to fire | A1 | _ |
| Durability of reaction to fire against heat, | Durability Characteristics | NPD {a} | - |
| weathering, ageing / degradation | | | |
| Durability of thermal resistance against | Thermal Resistance | NPD{b} | |
| heat, weathering, ageing / degradation | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Durability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | WS | _ |
| | Long term water absorption | WLP | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | _ |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deterr | mined | |

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G4248OPCPR Classic Alu 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Classic Alu 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | C-s1,d0 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| neat, weathering, ageing / degradation | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance detern | nined | |

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G4248OPCPR Classic KD 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Classic KD 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Ourability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | _ |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deterr | nined | |

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G4248OPCPR Earthwool 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Earthwool 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T3 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deterr | mined | |

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G4248OPCPR Earthwool Alu 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Earthwool Alu 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T3 | |
| Reaction to Fire | Reaction to fire | C-s1,d0 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| , | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance detern | mined | |

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G4248OPCPR Earthwool E 032



| Essential Characteristics | G4248OP | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Earthwool E 032 | standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30 - 100 | |
| | Thickness tolerance | Т3 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deterr | mined | |

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G4248OPCPR Earthwool E Alu 032



| Essential Characteristics | G42480PCI | PR | Harmonised technica standard |
|---|---|---------------------|------------------------------|
| | Performance | Earthwool E Alu 032 | standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30 - 100 | \dashv |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | C-s1,d0 | _ |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against | Thermal Resistance | NPD{b} | _ |
| heat, weathering, ageing / degradation | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | _ |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Durability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | \dashv |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | \dashv |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance determ | ined | |

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G4248OPCPR Earthwool KD 032



| Essential Characteristics | G4248OP | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Earthwool KD 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T3 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| meat, meathering, ageing / degradation | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deterr | mined | |

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G4248OPCPR Knauf Insulation 032



| Essential Characteristics | G42480P0 | CPR | Harmonised technical standard |
|---|---|----------------------|-------------------------------|
| | Performance | Knauf Insulation 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | _ |
| Reaction to Fire | Reaction to fire | A1 | _ |
| Durability of reaction to fire against heat, | Durability Characteristics | NPD {a} | _ |
| weathering, ageing / degradation | | | |
| Durability of thermal resistance against | Thermal Resistance | NPD{b} | |
| heat, weathering, ageing / degradation | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Durability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | _ |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | _ |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance detern | | |

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G4248OPCPR Knauf Insulation Alu 032



| Essential Characteristics | G4248OP | CPR | Harmonised technical standard |
|---|---|--------------------------|-------------------------------|
| | Performance | Knauf Insulation Alu 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | C-s1,d0 | |
| Durability of reaction to fire against heat, | Durability Characteristics | NPD {a} | |
| weathering, ageing / degradation | | | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| , 3, 5 5, 6 | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | _ |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deter | mined | |

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G4248OPCPR Knauf Insulation KD 032



| Essential Characteristics | G42480P | CPR | Harmonised technical standard |
|---|---|-------------------------|-------------------------------|
| | Performance | Knauf Insulation KD 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λD 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, | Durability Characteristics | NPD {a} | |
| weathering, ageing / degradation | | | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Durability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | \neg |
| | Compressibility | NPD | \neg |
| | Air flow resistivity | NPD | \dashv |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance determ | mined | |

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G4248OPCPR Loftroll 032



| Essential Characteristics | G4248OP | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Loftroll 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deterr | mined | |

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G4248OPCPR Loftroll Alu 032



| Essential Characteristics | G42480PC | PR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Loftroll Alu 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30 - 100 | |
| | Thickness tolerance | T3 | |
| Reaction to Fire | Reaction to fire | C-s1,d0 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance determ | nined | |

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G4248OPCPR Loftroll KD 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Loftroll KD 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30 - 100 | |
| | Thickness tolerance | Т3 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance detern | nined | |

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G4248OPCPR Naturoll 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Naturoll 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance detern | nined | |

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G4248OPCPR Naturoll Alu 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Naturoll Alu 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | C-s1,d0 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance detern | nined | |

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G4248OPCPR Naturoll KD 032



| Essential Characteristics | G4248OP0 | CPR | Harmonised technical standard |
|---|---|-------------------|-------------------------------|
| | Performance | Naturoll KD 032 | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30 - 100 | |
| | Thickness tolerance | Т3 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| , | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Ourability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | _ |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance detern | nined | |

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G4248OPCPR TI 132U(Unifit 032)



| Essential Characteristics | G4248OP | CPR | Harmonised technical standard |
|---|---|---------------------|-------------------------------|
| | Performance | TI 132U(Unifit 032) | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λο 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T2 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | NPD | |
| | Point Load | | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Durability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | NPD | |
| | Long term water absorption | NPD | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deter | mined | |

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G4248OPCPR TP 138 (Naturboard 032)



| Essential Characteristics | G4248OP | CPR | Harmonised technical standard |
|---|---|-------------------------|-------------------------------|
| | Performance | TP 138 (Naturboard 032) | Standard |
| Thermal Resistance | Thermal conductivity (W/mK) | λD 0,032 | EN 13162:2012 + |
| | Thermal Resistance | See product label | A1:2015 |
| | Thickness range (mm) | 30-100 | |
| | Thickness tolerance | T3 | |
| Reaction to Fire | Reaction to fire | A1 | |
| Durability of reaction to fire against heat, weathering, ageing / degradation | Durability Characteristics | NPD {a} | |
| Durability of thermal resistance against heat, weathering, ageing / degradation | Thermal Resistance | NPD{b} | |
| , | Thermal conductivity | NPD | |
| | Durability characteristics | NPD {c} | |
| Compressive Strength | Compressive Stress / Compressive Strength | | |
| | Point Load | NPD | |
| Tensile / Flexural strength | Tensile strength perpendicular faces | NPD {d} | |
| Durability of compressive Strength against ageing / degradation | Compressive creep | NPD | |
| Water Permeability | Short term water absorption | WS | _ |
| | Long term water absorption | WLP | |
| Water vapour permeability | Water vapour transmission, water vapour diffusion resistance factor | NPD | |
| Impact noise transmissions index (for | Dynamic stiffness | NPD | |
| floors) | Thickness | NPD | |
| | Compressibility | NPD | |
| | Air flow resistivity | NPD | |
| Acoustic absorptions index | Sound absorption | NPD | |
| Direct airborne sound insulation index | Air flow resistivity | NPD | |
| Release of dangerous substances to the indoor environment | Release of dangerous substances | NPD {e} | |
| Continuous glowing combustion | Continuous glowing combustion | NPD {e} | |
| | NPD - No performance deter | mined | |

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8. Appropriate Technical Documentation and / or Specific Technical Documentation:

Not applicable

The performance of the product identified above is in conformity with the set of declared performances.

This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

| Thermal Re | sistance T | able | | | | | | |
|------------|------------|------|------|------|------|------|------|------|
| [mm] | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| [m²K/W] | 0,90 | 1,25 | 1,55 | 1,85 | 2,20 | 2,50 | 2,80 | 3,15 |

Signed for an on behalf of the manufacturer by:

Erkan Uçok - Plant manager (Name and function)

Eskisehir - 17-10-19 (Place and date of issue)

eleft

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[{]a} No change in reaction to fire properties for MW Products. The fire performance of MW does not deteriorate with time. The Euroclass classification of the product is related to the organic content, which cannot increase with time.

[{]b} Thermal conductivity of MW products does not change with time, experience has shown the fibre structure to be stable and the porosity contains no other gases than atmospheric air

[{]c} For dimensional stability thickness only

 $^{\{}d\}$ This characteristic also covers handling and installation

 $[\]ensuremath{\{e\}}\ European\ test\ methods\ are\ under\ development$

[{]f} Also valid and applicable for multilayers