The National BIM Library

BIM Object Guide: Mechanically Fastened Roof Systems

Sika-Trocal®

Version 1.0

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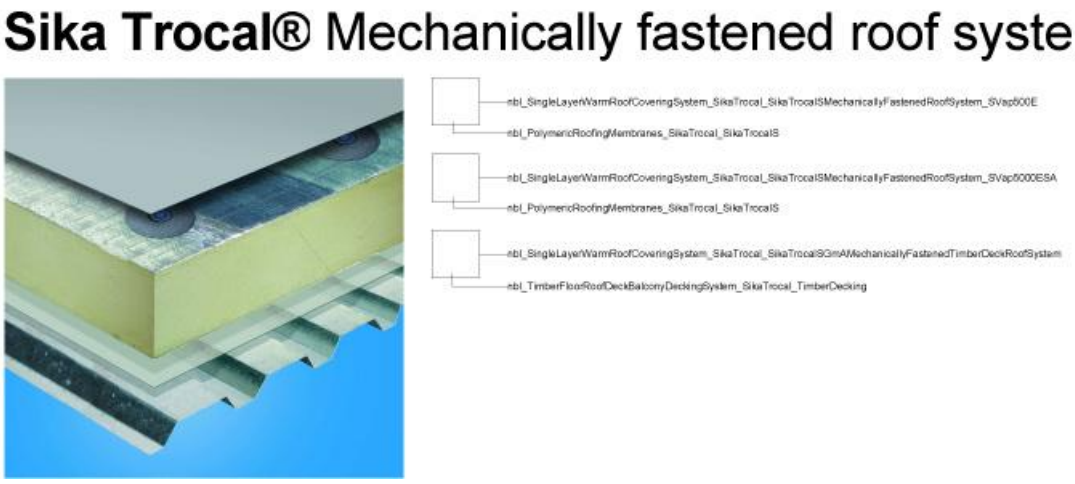
www.nationalBIMlibrary.com

Contents

1.0 Introduction

This guide covers the use of Sika-Trocal® Mechanically Fastened Roof Systems included within the National BIM Library.

Mechanically Fastened Roof Systems



All systems listed below are included in the following file:
nbl_SglLyrWmRfCovSym_SikaTrocal_MechanicallyFastenedRoofSystems

Sika-Trocal© S Mechanically Fastened Roof System – S-Vap 500E

- Sika-Trocal® S
- Polyisocyanurate foam board
- S-Vap 500E

Sika-Trocal© S Mechanically Fastened Roof System – S-Vap 5000E SA

- Sika-Trocal® S
- Polyisocyanurate foam board
- S-Vap 5000E SA

Sika-Trocal© SGmA Mechanically Fastened Timber Deck Roof System

- Timber Decking
- S-Felt T 300

- Sika-Trocal® SGmA
- Polyisocyanurate foam board
- S-Vap 500E

1.1 Naming

National BIM Library objects are named to identify their type and configuration. Fields are segregated using an under bar (_) and information within each field is segregated using hyphens (-). Fields are abbreviated to reduce characters and capitals used at the start of each abbreviation to aid readability.

File name and objects are named as below:

File name
Field1 *Author*_**Field2** *Category*_**Field3** *Manufacturer*_**Field4** *Product Range*

Object
Field1 *Author*_ **Field2** *Category* **Field3** *Manufacturer*_**Field4** *Product*_**Field5** *Differentiator*

2.0 System Parameters

Parameters included in the Mechanically Fastened Roof System BIM objects are as follows:

2.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

2.2 NBS Parameters

Certification	Product approval and certification by an accredited organisation.
Insulation	Thermal insulation to suit required performance characteristics.

LowerProtectionLayer	Lower layer to protect the vapour control layer from damage.
SeperatingLayer	Loose laid membrane to prevent direct contact between the waterproof covering and unfaced insulation boards.
SurfaceProtection	Surface protection layer to reduce the effects of solar gain or foot traffic.
UpperProtectionLayer	Further protection layer where a green roof covering is required or for protection when the roof is ballasted.
VapourControlLayer	Vapour control layer to reduce the amount of water vapour permeating through the roof construction and reducing the risk of condensation.
WaterproofCovering	Single layer polymeric sheet covering.

2.3 Manufacturers Parameters

InsulationThickness	Roof system insulation thickness measured in [mm].
MinimumPitchAngle	Roof system minimum pitch angle in accordance to BS 6229.
SurfaceProtectionThickness	Roof system surface protection thickness measured in [mm].
UpperProtectionLayerThickness	Roof system upper protection layer thickness measured in [mm
VapourControlLayerThickness	Roof system vapour control layer thickness measured in [mm].
WaterproofCoveringThickness	Polymeric sheet covering thickness measured in [mm].

2.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

AcousticRating	Acoustic rating for this object. It is giving according to the national building code. It indicates the sound transmission resistance of this object by an index ration (instead of providing full sound absorption values).
Combustible	Indication whether the object is made from combustible material (TRUE) or not (FALSE).
Compartmentation	Property description Indication whether the object is made from combustible material (TRUE) or not (FALSE).
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
IsExternal	Indication whether the element is designed for use in the exterior (TRUE) or not (FALSE). If (TRUE) it is an external element and faces the outside of the building.
LoadBearing	Indicates whether the object is intended to carry loads (TRUE) or not (FALSE).
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
PitchAngle	Angle of the slab to the horizontal when used as a component for the roof (specified as 0 degrees or not asserted for cases where the slab is not used as a roof component).
Reference	Reference ID for this specified type in this project (e.g. type A-1).
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.
ThermalTransmittance	Thermal transmittance coefficient (U-Value) of a material. Here the total thermal transmittance coefficient through the roof surface (including all materials).

2.5 COBie Parameters

The following COBie parameters have been included within the Mechanically Fastened Roof System BIM objects and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

3.0 Product Parameters

Parameters included in the Sika-Trocal© Adhered Roof Covering System products are listed below**.**

3.1 Insulation

The Insulation product can be found in the following file:

nbl_PIRFoamBrd_SikaTrocal_Insulation

Parameters included in the Insulation product are as follows:

3.1.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

3.1.2 NBS Parameters

Certification	Product approval and certification by an accredited organisation.
CompressiveStrength	The resistance of a material to breaking under compression, measured in [kPa].
CrossSection	Product cross section profile.
Edges	Product edge profile.
Facing	Describes what material is used for the facing.
StandardThickness	Thickness range measured in [mm].

3.1.3 Manufacturer Parameters

BoardSizes	Thermal insulation board sizes available, measured in [mm].
ThermalConductivityOptions	Thermal conductivity according to insulation thickness, measured in [W/mK].
Uses	Roofing systems the thermal insulation underneath the waterproofing layer can be used in.

3.1.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

Finish	Finish selection for this object. Here specification of the surface finish for informational purposes.
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
MassDensity	Material mass density, usually measured in [kg/m3].
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
SpecificHeatCapacity	Specific heat of the products of combustion: heat energy absorbed per temperature unit. Usually measured in [J/kg K].
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.
ThermalConductivity	The rate at which thermal energy is transmitted through the material. Usually in [W/mK].
ThermalIrEmissivityBack	Thermal IR emissivity: back side. Defines the fraction of thermal energy emitted per unit area to "blackbody" at the same temperature, through the "back" side of the material.
ThermalIrEmissivityFront	Thermal IR emissivity: front side. Defines the fraction of thermal energy emitted per unit area to "blackbody" at the same temperature, through the "front" side of the material.

3.1.5 COBie Parameters

The following COBie parameters have been included within the Insulation product and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

3.2 S-Felt T 300

The S-Felt T 300 product can be found in the following file:
nbl_PolyFFlce_SikaTrocal_SFeltT300

Parameters included in the S-Felt T 300 product are as follows:

3.2.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

3.2.2 NBS Parameters

Facing	Product approval and certification by an accredited organisation.
StandardThickness	Standard thickness measured in [mm].
Weight	Determination of thickness and mass per unit area BS EN 1849-2.

3.2.3 Manufacturers Parameters

Elongation	Determination of tensile properties BS EN 12311-2.
RollLength	Standard roll length measured in [m].
RollWeight	Standard roll weight measured in [m].
RollWidth	Standard roll width measured in [m].
Surface	Surface appearance.
TensileStrength	Determination of tensile properties BS EN 12311-2.
WaterVapourResistance	Determination of water vapour transmission properties BS EN 1931.

3.2.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

AcousticRating	Acoustic rating for this object. It is giving according to the national building code. It indicates the sound transmission resistance of this object by an index ration (instead of providing full sound absorption values).
Combustible	Indication whether the object is made from combustible material (TRUE) or not (FALSE).
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
Finish	Finish selection for this object. Here specification of the surface finish for informational purposes.
FlammabilityRating	Flammability Rating for this object. It is given according to the national building code that governs the rating of flammability for materials.
FragilityRating	Indication on the fragility of the covering (e.g., under fire conditions). It is given according to the national building code that might provide a classification for fragility.
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
Reference	Reference ID for this specified type in this project (e.g. type A-1).
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.

3.2.5 COBie Parameters

The following COBie parameters have been included within the S-Felt T 300 product and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

3.3 Sika-Trocal® S

The Sika-Trocal® S product can be found in the following file:
nbl_PolymcRfingMbrnes_SikaTrocal_SikaTrocalS

Parameters included in the Sika-Trocal® S product are as follows:

3.3.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

3.3.2 NBS Parameters

Certification	Product approval and certification by an accredited organisation.
IntegralBackingFleece	Indication whether the product requires an integral backing fleece.
StandardThickness	Standard thickness measured in [mm].
StandardWidth	Standard width measured in [mm].
WaterVapourResistance	Determination of water vapour transmission properties BS EN 1931.

3.3.3 Manufacturers Parameters

BottomSurfaceColour	Colour of bottom surface.
DimensionStability	Determination of dimensional stability BS EN 1107-2.
EffectiveThickness	Determination of thickness and mass per unit area BS EN 1849-2.
Elongation	Determination of tensile properties BS EN 12311-2.
Flatness	Determination of length, width and straightness BS EN 1848-2.
FoldabilityAtLowTemperature	Determination of foldability at low temperature BS EN 495-5.
HailResistance	Determination of hail resistance BS EN 13583.
ImpactResistance	Determination of resistance to impact BS EN 12691.
JointPeelResistance	Determination of peel resistance of joints BS EN 12316-2.
JointShearResistance	Determination of shear resistance of joints BS EN 12317-2.
MassPerUnitArea	Determination of thickness and mass per unit area BS EN 1849-2.
RollLength	Standard roll length measured in [m].

RollWeight	Standard roll weight measured in [kg].
RollWidth	Standard roll width measured in [m].
RootPenetrationResistance	Determination of resistance to root penetration BS EN 13948.
Straightness	Determination of length, width and straightness BS EN 1848-2
StaticLoadResistance	Determination of resistance to static loading BS EN 12730
Surface	Surface appearance.
TearResistance	Determination of resistance to tearing (nail shank) BS EN 12310-2.
TensileStrength	Determination of tensile properties BS EN 12311-2.
TopSurfaceColourOptions	Available colour options to top surface.
UVExposure	Method of artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water BS EN 1297.
VisibleDefects	Determination of visible defects BS EN 1850-2.
WaterTightness	Determination of water tightness BS EN 1928.

3.3.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

AcousticRating	Acoustic rating for this object. It is giving according to the national building code. It indicates the sound transmission resistance of this object by an index ration (instead of providing full sound absorption values).
Combustible	Indication whether the object is made from combustible material (TRUE) or not (FALSE).
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
Finish	Finish selection for this object. Here specification of the surface finish for informational purposes.
FlammabilityRating	Flammability Rating for this object. It is given according to the national building code that governs the rating of flammability for materials.
FragilityRating	Indication on the fragility of the covering (e.g., under fire conditions). It is given according to the national building code that might provide a classification for fragility.
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
Reference	Reference ID for this specified type in this project (e.g. type A-1).
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.
TotalThickness	Thickness of the covering.

3.3.5 COBie Parameters

The following COBie parameters have been included within the Sika-Trocal® S product and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

3.4 Sika-Trocal® SGmA

The Sika-Trocal® SGK product can be found in the following file:
nbl_PolymcRfingMbrnes_SikaTrocal_SikaTrocalSGmA

Parameters included in the Sika-Trocal® SGmA product are as follows:

3.4.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

3.4.2 NBS Parameters

Certification	Product approval and certification by an accredited organisation.
IntegralBackingFleece	Indication whether the product requires an integral backing fleece.
StandardThickness	Standard thickness measured in [mm].
StandardWidth	Standard width measured in [mm].
WaterVapourResistance	Determination of water vapour transmission properties BS EN 1931.

3.4.3 Manufacturers Parameters

BottomSurfaceColour	Colour of bottom surface.
DimensionStability	Determination of dimensional stability BS EN 1107-2.
EffectiveThickness	Determination of thickness and mass per unit area BS EN 1849-2.
Elongation	Determination of tensile properties BS EN 12311-2.
Flatness	Determination of length, width and straightness BS EN 1848-2.
FoldabilityAtLowTemperature	Determination of foldability at low temperature BS EN 495-5.
ImpactResistance	Determination of resistance to impact BS EN 12691.
JointShearResistance	Determination of shear resistance of joints BS EN 12317-2.
MassPerUnitArea	Determination of thickness and mass per unit area BS EN 1849-2.
RollLength	Standard roll length measured in [m].
RollWeight	Standard roll weight measured in [kg].
RollWidth	Standard roll width measured in [m].

RootPenetrationResistance	Determination of resistance to root penetration BS EN 13948.
Straightness	Determination of length, width and straightness BS EN 1848-2
StaticLoadResistance	Determination of resistance to static loading BS EN 12730
Surface	Surface appearance.
TensileStrength	Determination of tensile properties BS EN 12311-2.
TopSurfaceColourOptions	Available colour options to top surface.
VisibleDefects	Determination of visible defects BS EN 1850-2.
WaterTightness	Determination of water tightness BS EN 1928.

3.4.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

AcousticRating	Acoustic rating for this object. It is giving according to the national building code. It indicates the sound transmission resistance of this object by an index ration (instead of providing full sound absorption values).
Combustible	Indication whether the object is made from combustible material (TRUE) or not (FALSE).
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
Finish	Finish selection for this object. Here specification of the surface finish for informational purposes.
FlammabilityRating	Flammability Rating for this object. It is given according to the national building code that governs the rating of flammability for materials.
FragilityRating	Indication on the fragility of the covering (e.g., under fire conditions). It is given according to the national building code that might provide a classification for fragility.
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
Reference	Reference ID for this specified type in this project (e.g. type A-1).
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.
TotalThickness	Thickness of the covering.

3.4.5 COBie Parameters

The following COBie parameters have been included within the Sika-Trocal® SGK product and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

3.5 S-Vap 500E

The S-Vap 500E product can be found in the following file:
nbl_PolythShts_SikaTrocal_SVap500E

Parameters included in the S-Vap 500E product are as follows:

3.5.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

3.5.2 NBS Parameters

Certification	Product approval and certification by an accredited organisation.
RecycledContent	Indication whether an additional virgin film should be specified to prevent the degrading of a recycled material.
StandardThickness	Standard thickness measured in [mm].
WaterVapourResistance	Determination of water vapour transmission properties BS EN 1931.

3.5.3 Manufacturers Parameters

DurabilityAgainstAlkaline	Methods for exposure to liquid chemicals, including water BS EN 1847.
DurabilityAgainstArtificialAgeing	Method of artificial ageing by long term exposure to elevated temperature BS EN 1296.
Elongation	Determination of tensile properties BS EN 12311-2.
ImpactResistance	Determination of resistance to impact BS EN 12691.
JointShearResistance	Determination of shear resistance of joints BS EN 12317-2.
MassPerUnitArea	Determination of thickness and mass per unit area BS EN 1849-2.
RollLength	Standard roll length measured in [m].
RollWeight	Standard roll weight measured in [kg].
RollWidth	Standard roll width measured in [m].
Straightness	Determination of length, width and straightness BS EN 1848-2
TearResistance	Determination of resistance to tearing (nail shank) BS EN 12310-2.
TensileStrength	Determination of tensile properties BS EN 12311-2.
VisibleDefects	Determination of visible defects BS EN 1850-2.

WaterTightness	Determination of water tightness BS EN 1928.

3.5.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

AcousticRating	Acoustic rating for this object. It is giving according to the national building code. It indicates the sound transmission resistance of this object by an index ration (instead of providing full sound absorption values).
Combustible	Indication whether the object is made from combustible material (TRUE) or not (FALSE).
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
Finish	Finish selection for this object. Here specification of the surface finish for informational purposes.
FlammabilityRating	Flammability Rating for this object. It is given according to the national building code that governs the rating of flammability for materials.
FragilityRating	Indication on the fragility of the covering (e.g., under fire conditions). It is given according to the national building code that might provide a classification for fragility.
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
Reference	Reference ID for this specified type in this project (e.g. type A-1).
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.

3.5.5 COBie Parameters

The following COBie parameters have been included within the S-Vap 500E product and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

3.6 S-Vap 5000E SA

The S-Vap 500E product can be found in the following file:
nbl_RBitmnMbrnVaprCtrlLyr_SikaTrocal_SVap5000ESA

Parameters included in the S-Vap 5000E SA product are as follows:

3.6.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

3.6.2 NBS Parameters

BitumenModification	Bitumen modification type.
Certification	Product approval and certification by an accredited organisation.
MembraneCarrierMaterial	Type of material used for the membrane carrier.
RecycledContent	Indication whether an additional virgin film should be specified to prevent the degrading of a recycled material.
StandardThickness	Standard thickness measured in [mm].
WaterVapourResistance	Determination of water vapour transmission properties BS EN 1931.

3.6.3 Manufacturers Parameters

BottomSurfaceColour	Colour to bottom surface.
ColdBendingTest	Determination of foldability at low temperature BS EN 495-5.
DurabilityAgainstAlkaline	Methods for exposure to liquid chemicals, including water BS EN 1847.
DurabilityAgainstArtificialAgeing	Method of artificial ageing by long term exposure to elevated temperature BS EN 1296.
ElongationAtBreak	Determination of tensile strength and elongation BS EN 29073-3/ISO 9073-3.
ImpactResistance	Determination of resistance to impact BS EN 12691.
JointPeelResistance	Determination of peel resistance of joints BS EN 12316-2.
JointShearResistance	Determination of shear resistance of joints BS EN 12317-2.
MassPerUnitArea	Determination of thickness and mass per unit area BS EN 1849-2.
RollLength	Standard roll length measured in [m].
RollWeight	Standard roll weight measured in [kg].

RollWidth	Standard roll width measured in [m].
Straightness	Determination of length, width and straightness BS EN 1848-2
TearResistance	Determination of resistance to tearing (nail shank) BS EN 12310-2.
TensileStrength	Determination of tensile properties BS EN 12311-2.
TopSurfaceColour	Colour options to top surface.
VisibleDefects	Determination of visible defects BS EN 1850-2.
WaterTightness	Determination of water tightness BS EN 1928.

3.6.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

AcousticRating	Acoustic rating for this object. It is giving according to the national building code. It indicates the sound transmission resistance of this object by an index ration (instead of providing full sound absorption values).
Combustible	Indication whether the object is made from combustible material (TRUE) or not (FALSE).
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
Finish	Finish selection for this object. Here specification of the surface finish for informational purposes.
FlammabilityRating	Flammability Rating for this object. It is given according to the national building code that governs the rating of flammability for materials.
FragilityRating	Indication on the fragility of the covering (e.g., under fire conditions). It is given according to the national building code that might provide a classification for fragility.
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
Reference	Reference ID for this specified type in this project (e.g. type A-1).
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.

3.6.5 COBie Parameters

The following COBie parameters have been included within the S-Vap 5000E SA product and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

3.7 Timber Decking

The Timber Decking product can be found in the following file:
nbl_TmbrFlrRfDkBlcnyDkgSym_SikaTrocal_TimberDecking

Parameters included in the Timber Decking product are as follows:

3.7.1 National BIM Library Parameters

Author	The name of the BIM objects Author.
BIMObjectName	Name of the BIM object as it will appear in software. Using NBL naming procedure.
Description	The full description of a product or system.
Help	URL of a website where additional help notes are available.
IssueDate	The issue date of this BIM object.
ManufacturerURL	URL of the product or system manufacturer.
NBSDescription	NBS Uniclass title.
NBSNote	Where a second system which is related to the BIMobject can be described.
NBSReference	NBS Uniclass section/clause number.
NBSTypeID	A reference to the object for the user if one or more is used within the project.
Uniclass2	Uniclass2 code.
Version	The version number of the BIM object.

3.7.2 NBS Parameters

TimberFramingMembers	Structural softwood or hardwood members to support flooring sheets and boards.
SheetsBoards	Specification according to application.

AssembleyFasteners	Fastener type to secure the decking system.
ConcreteMasonryAnchor	Anchor type according to fixing method.
Adhesive	Required adhesive for glued joints in timber.

3.7.3 Manufacturers Parameters

3.7.4 IFC Parameters

Note: IFC definitions have been obtained from BuildingSmart IFC2x3 website (http://buildingsmart-tech.org).

AcousticRating	Acoustic rating for this object. It is giving according to the national building code. It indicates the sound transmission resistance of this object by an index ration (instead of providing full sound absorption values).
Combustible	Indication whether the object is made from combustible material (TRUE) or not (FALSE).
FireRating	Fire rating for this object. It is given according to the national fire safety classification.
Finish	Finish selection for this object. Here specification of the surface finish for informational purposes.
FlammabilityRating	Flammability Rating for this object. It is given according to the national building code that governs the rating of flammability for materials.
FragilityRating	Indication on the fragility of the covering (e.g., under fire conditions). It is given according to the national building code that might provide a classification for fragility.
IsExternal	Indication whether the element is designed for use in the exterior (TRUE) or not (FALSE). If (TRUE) it is an external element and faces the outside of the building.
Material	Main material of the covering, it should only be given, if no IfcMaterial class is assigned to the IfcCovering instance.
Reference	Reference ID for this specified type in this project (e.g. type A-1).
SurfaceSpreadOfFlame	Indication on how the flames spread around the surface, It is given according to the national building code that governs the fire behaviour for materials.

3.7.5 COBie Parameters

The following COBie parameters have been included within the Timber Decking product and can be used to prepare COBie data schedules:

AccessibilityPerformance	Accessibility issue(s) which the product satisfies.
AssetIdentifier	The asset identifier assigned to an occurrence of a product (prior to handover).
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product.
CodePerformance	Code Compliance requirement(s) which the product satisfies.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
Cost	Cost impact of replacement process.
Documentation	Location (Uniform Resource Information) for further product information.
DocumentReference	Location (Uniform Resource Information) for the source or updates to this product information.
Features	Features or other important characteristics relevant to product specification.
Grade	Standard grading(s) to which the product corresponds.
InstallationDate	The date that the manufactured item was installed.
LifeCyclePhase	Life Cycle Phase as defined in ISO 15978.
Manufacturer	The organization that manufactured or assembled the item.
MethodOfMeasurement	Method of measurement.
ModelLabel	The model number assigned by manufacturer.
ModelReference	The name used by the manufacturer.
NominalHeight	Nominal height of product, typically the vertical or secondary characteristic dimension.

NominalLength	Nominal length of product, typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
Process	Specification of process.
ProductionYear	The year of production for the manufactured item.
ReferenceStandard	Reference standard(s) to which the product is compliant.
ReplacementCost	An indicative cost for unit replacement.
SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer.
ServiceLifeDuration	The length or duration of a service life.
ServiceLifeType	The typical service life that is quoted for an artefact under reference operating conditions.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Sustainability issue(s) which the product satisfies.
TagNumber	The tag number assigned to an occurrence of a product.
WarrantyDescription	Description of the warranty.
WarrantyDurationLabour	Duration of labour warranty (years).
WarrantyDurationParts	Duration of parts warranty (years).
WarrantyGuarantorLabour	Organization acting as guarantor of labour warranty.
WarrantyGuarantorParts	Organization acting as guarantor of parts warranty.
WarrantyStartDate	The date on which the warranty commences.

4.0 Abbreviations

Bitmn	Bitumen
Blcny	Balcony
Brd	Board
Ctrl	Control
Dk	Deck
Dkg	Decking
F	Fibre
Flce	Fleece
Flr	Floor
Foam	Foam
Lyr	Layer
Mbrne	Membrane
Mbrnes	Membranes
nbl	national BIM library
Poly	Polyester
Polyth	Polyethylene
PIR	Polyisocyanurate
Polymc	Polymeric
R	Reinforced
Rf	Roof
Rfing	Roofing
Sgl	Single
Shts	Sheets
Sys	System
Tmbr	Timber
Vapr	Vapour
Wm	Warm