

# Roofing

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A covering is an element which covers some part of another element and is fully dependent on that other element.

Roofing is the material used to cover the roof structure of a building.

IfcElementType	IfcCovering	=IfcExportAs
IfcPredefinedType	ROOFING	=IfcExportType
Suggested Filename:	Roofing	
Suggested LOD (Design Model)	300	
Suggested Primary Discipline	Architectural; Structural	

## Source

## Property Categories

## Classification

BIM Forum	Admin data	Masterformat	07 41 00 : Roof Panels
COBie	Code compliance data		07 50 00 : Membrane Roofing
IFC 2x3	Construction logistics data		07 61 00 : Sheet Metal Roofing
IFC4 Add2	Cost data		07 30 00 : Steep Slope Roofing
NATSPEC BIM	Facilities management data	NatspecWorksection	0421 Roofing – combined
NATSPEC Spec	Geometric data	Omniclass Table 21 Elements	21-02 10 20 20 : Roof Decks, Slabs, and Sheathing
	Manufacturer data	Omniclass Table 22 Work Results	22-07 30 00 : Steep Slope Roofing 22-07 41 00 : Roof Panels 22-07 50 00 : Membrane Roofing 22-07 61 00 : Sheet Metal Roofing
	Performance data	Omniclass Table 23 Products	23-13 39 00 : Roof Coverings, Claddings, Linings
	Scheduling data	Uniclass Elements	EF_30_10 : Roofs
	Spatial and location data	Uniclass Products	Pr_25_71_51 : Metal sheets and strips Pr_25_93_72 : Roofing and cladding units
	Specification data	Uniclass Systems	Ss_30_40 : Roof and balcony covering and finish
	Sustainability data		

systems

Unifomat

B1020.20 : Roof decks, slabs and sheathing

Property	Source	Description
Admin data		
CreatedBy	NATSPEC BIM	The name of the person, organisation or library provider that created the object.
CreatedByURL	NATSPEC BIM	URL hyperlink to the object creator's website.
ModifiedIssue	NATSPEC BIM	To record the last date of issue (version or revision) of the object within an object library. Add the date in the following format <yyyymmdd.no> where the 'no' suffix is equal to the number of times the object has been issued on that date. For example 20180316.01.
Reference	PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	Reference ID for a specified type in a project (e.g. type 'A-1'). Also known as Construction type. Provide as an alternative to the name of the object type, if software does not support object types.
Code compliance data		
EgressRequirement	NATSPEC BIM	
FireRating	BIM ForumNATSPEC BIM PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	Fire rating of object. Also known as the FRL (Fire Resistance Level) e.g. 60/60/60.
FlammabilityRating	PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	Flammability Rating of object. Also known as Flammability index.
SurfaceSpreadOfFlame	PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	Indication of how flames spread around surface, according to the applicable building code.
Construction logistics data		
ConstructionMethod	NATSPEC BIM	
GrossWeight	NATSPEC BIM	

ShippingWeight	NATSPEC BIM	
Status	PSet_CoveringCommon (IFC4)	Status of the object, predominately used in renovation or retrofitting projects. <b>Complete value with:</b> NEW, EXISTING, DEMOLISH, TEMPORARY, OTHER, NOTKNOWN or UNSET
StoragePlacementOnSite	NATSPEC BIM	
Cost data		
AdditionalTax	NATSPEC BIM	
AssemblyCost	NATSPEC BIM	
AssetAccountingType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Asset type for accounting purposes. <b>Complete value with:</b> FIXED, NONFIXED, OTHER, NOTKNOWN or UNSET (PEnum_AssetAccountingType)
AssetInsuranceType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of insurance rating. <b>Complete value with:</b> PERSONAL, REAL, OTHER, NOTKNOWN or UNSET (PEnum_AssetInsuranceType)
AssetTaxType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of taxation group. <b>Complete value with:</b> CAPITALISED, EXPENDED, OTHER, NOTKNOWN or UNSET (PEnum_AssetTaxType)
ConceptualCost	NATSPEC BIM	
CostOverRun	NATSPEC BIM	
FutureCostAssumptions	NATSPEC BIM	
InstallationCost	NATSPEC BIM	
InstalledCost	NATSPEC BIM	
PurchaseInformation	NATSPEC BIM	
RecordedActualCost	NATSPEC BIM	

ShippingCost	NATSPEC BIM	
TotalOwnershipCost	NATSPEC BIM	
Facilities management data		
AccessibilityPerformance	COBie_ElementTypeCOBie_Specification	Accessibility issue(s) that product satisfies.
AcquisitionDate	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Date the item was purchased (Format: YYYY-MM-DD).
AssessmentCondition	NATSPEC BIMPset_Condition (IFC4)	Overall condition rating based on assessment. Rating scale to be agreed prior (e.g. Good, OK , Poor).
AssessmentDate	Pset_Condition (IFC4)	Date of overall condition assessment (Format: YYYY-MM-DD).
AssessmentDescription	Pset_Condition (IFC4)	Qualitative description of the condition.
AssetIdentifier	COBie_Component	Alternative identifier for specific component, used as defined by contract.
AssetType	COBie_AssetCOBie_ElementType	<b>Complete value with:</b> 'Fixed' or 'Movable'
Category	COBie	Classification code.
CodePerformance	COBie_ElementTypeCOBie_Specification	Code compliance requirement(s) that product satisfies.
ComponentID	NATSPEC BIM	
Constituents	COBie_ElementTypeCOBie_Specification	Details of various parts of the object.
Description	COBie	Concise description of the object.
DurationUnit	COBie	Units used to record expected life duration. Typically 'year'.
Exclusions	Pset_Warranty (IFC4)Pset_Warranty (IFC2x3)	Items, conditions or actions that may be excluded from the warranty or that may cause the warranty to become void.

ExpectedLife	NATSPEC BIMCOBie	Expected serviceable life of object.
Features	COBie_ElementTypeCOBie_Specification	Primary features or important characteristics of the product.
Grade	COBie_ElementTypeCOBie_Specification	Standard grading(s) to which the product corresponds.
InstallationDate	NATSPEC BIMCOBie_Component	Format: YYYY-MM-DD.
IsExtendedWarranty	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
ModelNumber	COBie	Model number or designator of the product model (or product line) as assigned by the manufacturer.
Name	COBie	Unique human readable name for object type.
ReplacementCost	NATSPEC BIM COBie_EconomicImpactValues COBie_ElementType	Cost to replace product.
Shape	COBie_ElementTypeCOBie_Specification	Characteristic shape of the object. e.g. Square.
SustainabilityPerformance	COBie_ElementTypeCOBie_Specification	Sustainability issue(s) that product satisfies.
TagNumber	COBie_Component	Tag number for product or equipment at installation.
WarrantyContent	NATSPEC BIM Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Description of what is included in warranty.
WarrantyDescription	COBie_Warranty	Concise description of warranty content and any items, conditions or actions that are excluded from warranty or that will cause the warranty to become void.
WarrantyDurationLabor	COBie_Warranty	Duration of labour warranty.
WarrantyDurationParts	COBie_Warranty	Duration of parts warranty.
WarrantyDurationUnit	COBie	Units used to record warranty durations. Typically 'year'.

WarrantyEndDate	NATSPEC BIM Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
WarrantyGuarantorLabor	COBie_Warranty	email address for organisation responsible for labour warranty.
WarrantyGuarantorParts	COBie_Warranty	email address for organisation responsible for parts warranty.
WarrantyIdentifier	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Identifier assigned to warranty.
WarrantyPeriod	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	
WarrantyStartDate	NATSPEC BIM COBie_Component Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
Geometric data		
BaseMetalThickness	NATSPEC Spec	
GrossArea	Qto_CoveringBaseQuantities (IFC4) NATSPEC BIM	
Length	NATSPEC BIM	
NetArea	Qto_CoveringBaseQuantities (IFC4)	Takes all openings into account.
NominalHeight	COBie_ElementType COBie_Specification	Typically the vertical characteristic dimension of the object.
NominalLength	COBie_ElementType COBie_Specification	Typically the primary or larger of the two perpendicular horizontal dimensions of the object.
NominalWidth	COBie_ElementType COBie_Specification	Typically the secondary or smaller of the two perpendicular horizontal dimensions of the object.
PitchAngle	NATSPEC BIM	Angle of item to the horizontal
Size	COBie_ElementType COBie_Specification	

Thickness	NATSPEC Spec NATSPEC BIM	
TotalThickness	PSet_CoveringCommon (IFC2x3)	
Width	NATSPEC BIM Qto_CoveringBaseQuantities (IFC4)	
WidthBetweenSeams	NATSPEC Spec	
Manufacturer data		
Accessories	NATSPEC BIM	Details of available accessories.
ArticleNumber	Pset_ManufacturerTypeInformation (IFC4) Pset_ManufacturerTypeInformation (IFC2x3)	Reference applied to product, according to scheme for article number definition defined by manufacturer. Often used as purchasing number.
AssemblyPlace	NATSPEC BIM Pset_ManufacturerTypeInformation (IFC4)	Defines where assembly is to take place. <b>Complete value with:</b> SITE, FACTORY or NOTDEFINED (IfcAssemblyPlaceEnum)
Availability	NATSPEC BIM	
BarCode	COBiePset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Bar code given to occurrence of the product.
BatchReference	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Identity of the batch from which the occurrence of the product is taken.
Defects	NATSPEC BIM	To record any defects found.
GlobalTradeItemNumber	Pset_ManufacturerTypeInformation (IFC4)	GTIN is an identifier for trade items developed by GS1 (www.gs1.org).
Manufacturer	COBieNATSPEC BIM Pset_ManufacturerTypeInformation (IFC4) NATSPEC Spec Pset_ManufacturerTypeInformation (IFC2x3)	Name of the manufacturer (or assembler).



ManufacturerURL	NATSPEC BIM	URL hyperlink to the manufacturer's website.
ModelLabel	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM	The descriptive model name of the product model (or product line) as assigned by the manufacturer of the manufactured item.
ModelLabel	Pset_ManufacturerTypeInformation (IFC2x3)	The model number and/or unit designator assigned by the manufacturer of the manufactured item.
ModelReference	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM NATSPEC Spec	The model number or designator of the product model (or product line) as assigned by the manufacturer of the manufactured item.
ModelReference	Pset_ManufacturerTypeInformation (IFC2x3)	The name of the manufactured item as used by the manufacturer.
OrderNumber	NATSPEC BIM	
PointOfContact	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Organization that should be contacted for action under the terms of the warranty.
ProductInformation	NATSPEC BIM	A valid URL hyperlink to further product information, such as technical documentation, installation guides, etc.
ProductType	NATSPEC BIM	
ProductionYear	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM Pset_ManufacturerTypeInformation (IFC2x3)	
SerialNumber	COBiePset_ManufacturerOccurrence (IFC4) NATSPEC BIM Pset_ManufacturerOccurrence (IFC2x3)	Serial number assigned to an occurrence of a product.
Performance data		
AcousticRating	NATSPEC BIM Pset_CoveringCommon (IFC4) Pset_CoveringCommon (IFC2x3)	Acoustic rating for the object. Indicates the sound transmission resistance of the object by an index ratio.
CondensationResistance	BIM Forum	

DeadLoad	NATSPEC BIM	
Deflection	NATSPEC BIM	
ImpactResistanceHail	BIM Forum	
Infiltration	BIM ForumNATSPEC BIM	Infiltration flowrate.
LiveLoad	NATSPEC BIM	
PointLoadCapacity	NATSPEC BIM	
RValue	BIM ForumNATSPEC BIM	
RadiationResistance	NATSPEC BIM	
SolarHeatGainCoefficient	NATSPEC Spec	
ThermalTransmittance	NATSPEC BIM Set_CoveringCommon (IFC4)NATSPEC Spec	Thermal transmittance coefficient (U-Value).
UVResistance	BIM Forum	
WaterPenetrationResistance	BIM Forum	
WindLoadCapacity	NATSPEC BIM	
WindLoadCapacityDrag	BIM Forum	
WindLoadCapacityPressure	BIM Forum	
WindbourneDebrisResistance	BIM Forum	
Scheduling data		
DeliverBy	NATSPEC BIM	
FabricationTime	NATSPEC BIM	

InstallationSequence	NATSPEC BIM	
InstallationTime	NATSPEC BIM	
LeadTime	NATSPEC BIM	
Spatial and location data		
FloorID	NATSPEC BIM	
GISTag	NATSPEC BIM	
GPSTag	NATSPEC BIM	
SpaceID	NATSPEC BIM	
Specification data		
Color	COBie_ElementTypeCOBie_Specification NATSPEC Spec	
Combustible	PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	Is object made from combustible material. <b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
ExposureSeverityCategory	NATSPEC Spec	
ExteriorFinish	NATSPEC BIM	
Fasteners	NATSPEC Spec	
Finish	COBie_ElementTypeCOBie_Specification PSet_CoveringCommon (IFC4) NATSPEC Spec PSet_CoveringCommon (IFC2x3)	Specification of surface finish.
FragilityRating	PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	
InteriorFinish	NATSPEC BIM	

IsExternal	PSet_CoveringCommon (IFC4)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
JointingMethod	NATSPEC Spec	
Material	NATSPEC BIMCOBie_ElementType COBie_SpecificationNATSPEC Spec PSet_CoveringCommon (IFC2x3)	
MaterialInsulation	BIM Forum	
MaterialSkin	BIM Forum	
MaterialSubstrate	BIM Forum	
Profile	NATSPEC Spec	
RadiationProtection	BIM Forum	
RadioFrequencyInterferenceProtection	BIM Forum	
SpecificationCode	NATSPEC BIM	
SpecificationSystem	NATSPEC BIM	
SpecificationTitle	NATSPEC BIM	
Translucency	NATSPEC Spec	
<b>Sustainability data</b>		
ItemIsNew	NATSPEC BIM	
ItemIsPartiallyRecycled	NATSPEC BIM	
ItemIsRecycled	NATSPEC BIM	
PostConsumerRecycledContent	NATSPEC BIM	
PostIndustrialRecycledContent	NATSPEC BIM	

PreConsumerRecycledContent	NATSPEC BIM	
RecycledContent	NATSPEC BIM	