

Thermal insulation

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

Thermal insulation is a covering used to insulate an element for thermal purposes.

IfcElementType	IfcCovering	=IfcExportAs
IfcPredefinedType	INSULATION	=IfcExportType
Suggested Filename:	Insulation_Thermal	
Suggested LOD (Design Model)	300	
Suggested Primary Discipline	Architectural	

Source	Property Categories	Classification	
COBie	Admin data	Masterformat	07 21 00 : Thermal Insulation
IFC 2x3	Code compliance data		07 22 00 : Roof and Deck Insulation
IFC4 Add2	Construction logistics data		07 24 00 : Exterior Insulation and Finish Systems
NATSPEC BIM	Cost data		
NATSPEC Spec	Facilities management data	NatspecWorksection	0471 Thermal insulation and pliable membranes
	Geometric data	Omniclass Table 22 Work Results	22-07 21 00 : Thermal Insulation
	Manufacturer data		22-07 22 00 : Roof and Deck Insulation
	Performance data		22-07 24 00 : Exterior Insulation and Finish Systems
	Scheduling data		
	Spatial and location data	Omniclass Table 23 Products	23-13 25 19 11 : Slab and Board Thermal Insulation
	Specification data	Uniclass Products	Pr_25_31_28 : Expanding foams
	Sustainability data		Pr_25_31_48 : Loose insulation
			Pr_25_57_06 : Batt and quilt products
			Pr_35_31_68_84 : Spray-applied thermal insulation
		Uniclass Systems	Ss_25_13_50_11 : Cavity wall insulation systems

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		
FireRating	NATSPEC 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) NATSPEC Spec PSet_CoveringCommon (IFC2x3)	Flammability Rating of object. Also known as Flammability index.
SmokeDevelopedIndex	NATSPEC Spec	As per NCC in Australia.
SurfaceSpreadOfFlame	PSet_CoveringCommon (IFC4) NATSPEC Spec 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. Complete value with: 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. Complete value with: FIXED, NONFIXED, OTHER, NOTKNOWN or UNSET (PEnum_AssetAccountingType)
AssetInsuranceType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of insurance rating. Complete value with: PERSONAL, REAL, OTHER, NOTKNOWN or UNSET (PEnum_AssetInsuranceType)
AssetTaxType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of taxation group. Complete value with: 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 BIM Pset_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	Complete value with: '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)	Complete value with: 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 BIMPset_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 BIMPset_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 BIMCOBie_Component Pset_Warranty (IFC4)Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
Geometric data		
GrossArea	Qto_CoveringBaseQuantities (IFC4) NATSPEC BIM	
GrossVolume	NATSPEC BIM	
Length	NATSPEC BIM	
NetArea	Qto_CoveringBaseQuantities (IFC4)	Takes all openings into account.
NominalHeight	COBie_ElementTypeCOBie_Specification	Typically the vertical characteristic dimension of the object.
NominalLength	COBie_ElementTypeCOBie_Specification	Typically the primary or larger of the two perpendicular horizontal dimensions of the object.
NominalWidth	COBie_ElementTypeCOBie_Specification	Typically the secondary or smaller of the two perpendicular horizontal dimensions of the object.
Size	COBie_ElementTypeCOBie_Specification	
Thickness	NATSPEC Spec	
TotalThickness	PSet_CoveringCommon (IFC2x3)	

Width	NATSPEC BIM Qto_CoveringBaseQuantities (IFC4)	
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	Pset_ManufacturerTypeInformation (IFC4)	Defines where assembly is to take place. Complete value with: 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 NATSPEC Spec	
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	PSet_CoveringCommon (IFC4) NATSPEC Spec PSet_CoveringCommon (IFC2x3)	Acoustic rating for the object. Indicates the sound transmission resistance of the object by an index ratio.
CompressiveStrength	NATSPEC Spec	
RValue	NATSPEC Spec	
ThermalTransmittance	PSet_CoveringCommon (IFC4)	Thermal transmittance coefficient (U-Value).
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	
Combustible	PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	Is object made from combustible material. Complete value with: TRUE or FALSE (IfcBoolean)
Finish	COBie_ElementTypeCOBie_Specification PSet_CoveringCommon (IFC4)NATSPEC BIMPSet_CoveringCommon (IFC2x3)	Specification of surface finish.
FragilityRating	PSet_CoveringCommon (IFC4) PSet_CoveringCommon (IFC2x3)	
IsExternal	PSet_CoveringCommon (IFC4)	Complete value with: TRUE or FALSE (IfcBoolean)
Material	NATSPEC BIMCOBie_ElementType COBie_Specification	

	PSet_CoveringCommon (IFC2x3)	
RigidCellularSheetClass	NATSPEC Spec	
SpecificationCode	NATSPEC BIM	
SpecificationSystem	NATSPEC BIM	
SpecificationTitle	NATSPEC BIM	
Sustainability data		
CarbonFootprint	NATSPEC BIM	
ItemIsNew	NATSPEC BIM	
ItemIsPartiallyRecycled	NATSPEC BIM	
ItemIsRecycled	NATSPEC BIM	
PostConsumerRecycledContent	NATSPEC BIM	
PostIndustrialRecycledContent	NATSPEC BIM	
PreConsumerRecycledContent	NATSPEC BIM	
RecycledContent	NATSPEC BIM	