

Window

A window is predominately used to provide natural light and fresh air. It includes constructions with swinging, pivoting, sliding, or revolving panels and fixed panels. A window consists of a lining and one or several panels.

In this instance a window is a standard window usually within a wall opening, as a window panel in a curtain wall, or as a "free standing" window.

IFC 2x3 note

For IFC2x3 there are no PredefinedType enumerators for a window. Do not designate a PredefinedType.

IfcElementType	IfcWindow	=IfcExportAs
IfcPredefinedType	WINDOW	=IfcExportType
Suggested Filename:	Window	
Suggested LOD (Design Model)	300	
Suggested Primary Discipline	Architectural	

Source

Property Categories

Classification

BIM Forum	Admin data	Masterformat	08 50 00 : Windows
COBie	Code compliance data	NatspecWorksection	0451 Windows and glazed doors
IFC 2x3	Construction logistics data	Omniclass Table 21 Elements	21-02 20 20 : Exterior Windows
IFC4 Add2	Cost data		21-03 10 20 : Interior Windows
NATSPEC BIM	Facilities management data	Omniclass Table 22 Work Results	22-08 50 00 : Windows
NATSPEC Spec	Geometric data	Omniclass Table 23 Products	23-17 13 00 : Windows
	Manufacturer data	Uniclass Elements	EF_25_30 : Doors and windows
	Performance data	Uniclass Products	Pr_30_59_97 : Window panels
	Scheduling data		Pr_30_59_98 : Window units
	Spatial and location data	Uniclass Systems	Ss_25_30_95 : Window systems
	Specification data		
	Sustainability data		

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_WindowCommon (IFC4) PSet_WindowCommon (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		
EgressHeight	NATSPEC BIM	
EgressRequirement	NATSPEC BIM	
EgressWidth	NATSPEC BIM	
FireExit	PSet_WindowCommon (IFC4)	Complete value with: TRUE or FALSE (IfcBoolean)
FireRating	NATSPEC BIM PSet_WindowCommon (IFC4) NATSPEC Spec PSet_WindowCommon (IFC2x3)	Fire rating of object. Also known as the FRL (Fire Resistance Level) e.g. 60/60/60.
SmokeStop	PSet_WindowCommon (IFC4) PSet_WindowCommon (IFC2x3)	Is object is designed to provide a smoke stop. Complete value with: TRUE or FALSE (IfcBoolean)
Construction logistics data		

Construction	BIM Forum	
ConstructionMethod	NATSPEC BIM	
GrossWeight	NATSPEC BIM	
ShippingWeight	NATSPEC BIM	
Status	PSet_WindowCommon (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.
GlassCondition	BIM Forum	
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 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		
Area	NATSPEC BIM Qto_WindowBaseQuantities (IFC4)	
FirstMullionOffset	IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
FirstTransomOffset	IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
FrameDepth	NATSPEC BIM IfcWindowPanelProperties (IFC4) IfcWindowPanelProperties (IFC2x3)	
GlassThickness	NATSPEC BIM NATSPEC Spec	

Height	NATSPEC BIM Qto_WindowBaseQuantities (IFC4)	
Length	NATSPEC BIM	
LiningDepth	IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
LiningOffset	IfcWindowLiningProperties (IFC4)	
LiningThickness	IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
LiningToPanelOffsetX	IfcWindowLiningProperties (IFC4)	
LiningToPanelOffsetY	IfcWindowLiningProperties (IFC4)	
MullionThickness	NATSPEC BIM IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
MullionWidth	NATSPEC BIM	
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.
OverallHeight	IfcWindow (IFC4)IfcWindow (IFC2x3)	
OverallWidth	IfcWindow (IFC4)IfcWindow (IFC2x3)	
ParameterTakesPrecedence	IfcWindowType (IFC4)IfcWindowStyle	Reflects whether the parameter given in the properties exactly defines the geometry (TRUE), or whether the attached style shape

	(IFC2x3)	take precedence (FALSE). In the last case the parameters have only informative value. Complete value with: TRUE or FALSE (IfcBoolean)
Perimeter	Qto_WindowBaseQuantities (IFC4)	
SecondMullionOffset	IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
SecondTransomOffset	IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
Size	NATSPEC BIMCOBie_ElementType COBie_SpecificationNATSPEC Spec	
Sizeable	IfcWindowStyle (IFC2x3)	Indicates if ShapeStyle can be sized. Complete value with: TRUE or FALSE (IfcBoolean)
TransomThickness	IfcWindowLiningProperties (IFC4) IfcWindowLiningProperties (IFC2x3)	
Width	NATSPEC BIM Qto_WindowBaseQuantities (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	NATSPEC BIM 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	Bar code given to occurrence of the product.

	(IFC2x3)	
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	BIM Forum NATSPEC BIM PSet_WindowCommon (IFC4) NATSPEC Spec PSet_WindowCommon (IFC2x3)	Acoustic rating for the object. Indicates the sound transmission resistance of the object by an index ratio.
BlastResistance	BIM Forum	
CondensationResistance	BIM Forum	
ForcedEntryResistance	BIM Forum	
Infiltration	BIM Forum NATSPEC BIM PSet_WindowCommon (IFC4) PSet_WindowCommon (IFC2x3)	Infiltration flowrate.
PowderCoatAluminiumPerformance	NATSPEC Spec	
RValue	BIM Forum NATSPEC BIM	
SolarHeatGainCoefficient	BIM Forum NATSPEC Spec	
ThermalTransmittance	NATSPEC BIM PSet_WindowCommon (IFC4) NATSPEC Spec PSet_WindowCommon (IFC2x3)	Thermal transmittance coefficient (U-Value).
VisibleLightReflectance	NATSPEC Spec	Fraction of visible light reflected by glazing at normal incidence.
VisibleLightTransmittance	BIM Forum NATSPEC Spec	Fraction of visible light that passes through shading system at normal incidence.

WERSEnergyRatingCooling	NATSPEC Spec	
WERSEnergyRatingHeating	NATSPEC Spec	
WaterPenetrationResistance	BIM ForumNATSPEC Spec	
WaterTightnessRating	PSet_WindowCommon (IFC4)	
WindLoadRating	BIM ForumPSet_WindowCommon (IFC4)	Wind load resistance rating for object.
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		
AluminiumFrameColour	NATSPEC Spec	
BulletResistantGlazingClassification	BIM ForumNATSPEC Spec	

BushfireProtection	NATSPEC Spec	
Color	COBie_ElementTypeCOBie_Specification	
ConstructionType	IfcWindowStyle (IFC2x3)	Defines the basic construction and material type of the door. Complete value with: ALUMINIUM, HIGH_GRADE_STEEL, STEEL, WOOD, ALUMINIUM_WOOD, PLASTIC, OTHER_CONSTRUCTION or NOTDEFINED (IfcWindowStyleConstructionEnum)
ExteriorFinish	NATSPEC BIM	
Finish	BIM ForumCOBie_ElementTypeCOBie_Specification	Specification of surface finish.
FrameMaterial	NATSPEC BIMNATSPEC Spec	
FrameStyle	NATSPEC BIM	
FrameThickness	NATSPEC BIM IfcWindowPanelProperties (IFC4) IfcWindowPanelProperties (IFC2x3)	
Function	BIM Forum	
GlassBodyColour	NATSPEC Spec	
GlassCoatings	BIM Forum	
GlassConfiguration	BIM Forum	
GlassInterlayerColour	NATSPEC Spec	
GlassMaterial	BIM Forum	
GlassSurfaceCoatingColour	NATSPEC Spec	
GlassSurfaceCoatingFunction	NATSPEC Spec	

GlassSurfacePattern	NATSPEC Spec	
GlassType	NATSPEC Spec	
GlassUse	BIM Forum	
GlazingAreaFraction	PSet_WindowCommon (IFC4) PSet_WindowCommon (IFC2x3)	Fraction of glazing area relative to total area of object. Used if glazing area not given separately for all panels within object.
GlazingMethod	BIM Forum	
GlazingOpacity	NATSPEC Spec	
HardwareSet	NATSPEC BIM	
HasDrive	PSet_WindowCommon (IFC4)	Complete value with: TRUE or FALSE (IfcBoolean)
HasSillExternal	PSet_WindowCommon (IFC4)	Complete value with: TRUE or FALSE (IfcBoolean)
HasSillInternal	PSet_WindowCommon (IFC4)	Complete value with: TRUE or FALSE (IfcBoolean)
Hinges	NATSPEC BIM NATSPEC Spec	
InteriorFinish	NATSPEC BIM	
IsExternal	PSet_WindowCommon (IFC4) PSet_WindowCommon (IFC2x3)	Complete value with: TRUE or FALSE (IfcBoolean)
LockLatchDurability	NATSPEC Spec	
LockLatchKeyingSecurity	NATSPEC Spec	
LockLatchPhysicalSecurity	NATSPEC Spec	
Material	BIM Forum NATSPEC BIM COBie_ElementType COBie_Specification	

MechanicalLoadRating	PSet_WindowCommon (IFC4)	
MullionPosition	NATSPEC BIM	
NumberOfSashes	NATSPEC BIM	
OpeningDirection	NATSPEC BIM	
OperationType	IfcWindowPanelProperties (IFC4)	<p>Defines window panel operation Complete value with: SIDEHUNGRIGHTHAND, SIDEHUNGLEFTHAND, TILTANDTURNRIGHTHAND, TILTANDTURNLEFTHAND, TOPHUNG, BOTTOMHUNG, PIVOTHORIZONTAL, PIVOTVERTICAL, SLIDINGHORIZONTAL, SLIDINGVERTICAL, REMOVABLECASEMENT, FIXEDCASEMENT, OTHEROPERATION or NOTDEFINED (IfcWindowPanelOperationEnum)</p>
OperationType	IfcWindowPanelProperties (IFC2x3)	<p>Defines window panel operation Complete value with: SIDEHUNGRIGHTHAND, SIDEHUNGLEFTHAND, TILTANDTURNRIGHTHAND, TILTANDTURNLEFTHAND, TOPHUNG, BOTTOMHUNG, PIVOTHORIZONTAL, PIVOTVERTICAL, SLIDINGHORIZONTAL, SLIDINGVERTICAL, REMOVABLECASEMENT, FIXEDCASEMENT, OTHEROPERATION or NOTDEFINED (IfcWindowPanelOperationEnum)</p>
OperationType	IfcWindowStyle (IFC2x3)	<p>Defines the general layout and operation of the window. Complete value with: SINGLE_PANEL, DOUBLE_PANEL_VERTICAL, DOUBLE_PANEL_HORIZONTAL, TRIPLE_PANEL_VERTICAL, TRIPLE_PANEL_BOTTOM, TRIPLE_PANEL_TOP, TRIPLE_PANEL_LEFT, TRIPLE_PANEL_RIGHT, TRIPLE_PANEL_HORIZONTAL, USERDEFINED or NOTDEFINED (IfcWindowStyleOperationEnum)</p>
		<p>Defines position of panel within window.</p>

PanelPosition	IfcWindowPanelProperties (IFC4)	Complete value with: LEFT, MIDDLE, RIGHT, BOTTOM, TOP or NOTDEFINED (IfcWindowPanelPositionEnum)
PanelPosition	IfcWindowPanelProperties (IFC2x3)	Defines position of panel within window. Complete value with: LEFT, MIDDLE, RIGHT, BOTTOM, TOP or NOTDEFINED (IfcWindowPanelPositionEnum)
PartitioningType	IfcWindow (IFC4)	Type defining the general layout of the window in terms of the partitioning of panels. Complete value with: SINGLE_PANEL, DOUBLE_PANEL_VERTICAL, DOUBLE_PANEL_HORIZONTAL, TRIPLE_PANEL_VERTICAL, TRIPLE_PANEL_BOTTOM, TRIPLE_PANEL_TOP, TRIPLE_PANEL_LEFT, TRIPLE_PANEL_RIGHT, TRIPLE_PANEL_HORIZONTAL, USERDEFINED or NOTDEFINED (IfcWindowTypePartitioningEnum)
PowderCoatAluminiumCategory	NATSPEC Spec	
PowderCoatAluminiumGlossLevel	NATSPEC Spec	
RadiationProtection	BIM Forum	
RadioFrequencyInterferenceProtection	BIM Forum	
RoughOpening	NATSPEC BIM	
SashBalances	NATSPEC Spec	
SashLiftsPulls	NATSPEC Spec	
SashMaterialInside	NATSPEC BIM	
SashMaterialOutside	NATSPEC BIM	
SashOperator	NATSPEC Spec	
	PSet_WindowCommon (IFC4)	Index based rating system indicating security level according to

SecurityRating	PSet_WindowCommon (IFC2x3)	the applicable building code.
ShadingCoefficient	BIM Forum	
ShapeAspectStyle	IfcWindowLiningProperties (IFC2x3) IfcWindowPanelProperties (IFC2x3)	Defines the shape aspect (IfcShapeAspect)
SillAngle	NATSPEC BIM	
SillDepth	NATSPEC BIM	
SillMaterial	NATSPEC BIM	
SpecificationCode	NATSPEC BIM	
SpecificationSystem	NATSPEC BIM	
SpecificationTitle	NATSPEC BIM	
Stays	NATSPEC Spec	
TotalGlassArea	NATSPEC BIM	
TransomIncluded	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