

# ISO 16757-5:2025-10 (E)

## Data structures for electronic product catalogues for building services - Part 5: Product catalogue exchange format

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>2</b>
<b>4</b>	<b>Overview of supported processes .....</b>	<b>2</b>
4.1	General .....	2
4.2	Creation of product catalogues using the definitions in the data dictionary .....	3
4.3	Provision of the product catalogue .....	4
4.4	Product determination in the product catalogue .....	4
4.5	Product integration into the technical system model .....	4
4.6	Data exchange of the technical system model .....	5
4.7	Use of product catalogues according to the ISO 16757 series .....	5
<b>5</b>	<b>Product representation .....</b>	<b>5</b>
5.1	Part numbers .....	5
5.2	Geometry .....	5
5.3	Symbolic geometry .....	8
5.4	Shape geometry .....	8
5.5	Ports .....	10
5.6	In/outlets .....	10
5.7	Spaces .....	12
5.8	Media data .....	12
<b>6</b>	<b>Product catalogue as IFC structure .....</b>	<b>13</b>
6.1	General .....	13
6.2	IFC catalogue metadata .....	14
6.3	Product classes and their structures in IFC .....	14
6.4	Product series in IFC .....	16
6.5	Components and accessories in IFC .....	16
6.6	Properties and constraints for property values in IFC .....	17
6.7	Parametric geometry in IFC .....	20
6.8	Product ports in IFC .....	21
6.9	Product in/outlets in IFC .....	22
6.10	Part numbers in IFC tables or created by scripts .....	23
6.11	External media data .....	24
<b>7</b>	<b>Centrally stored property data dictionary .....</b>	<b>24</b>
<b>8</b>	<b>JavaScript (ECMA script) functions .....</b>	<b>24</b>
<b>Annex A (informative)</b>	<b>Data structure examples .....</b>	<b>25</b>
<b>Annex B (informative)</b>	<b>Example: product selection programme, procedure .....</b>	<b>32</b>
<b>Annex C (informative)</b>	<b>Example: IFC file with IFC meta-object geometry .....</b>	<b>33</b>

<b>Annex D (informative) Example: PseudoIFC file as meta geometry with variable dimension terms (reduced) .....</b>	<b>39</b>
<b>Annex E (informative) Example: spreadsheet as meta geometry .....</b>	<b>53</b>
<b>Annex F (informative) Example: silencer referencing an external document .....</b>	<b>67</b>
<b>Annex G (informative) Example: silencer with properties and various types of constraints .....</b>	<b>70</b>
<b>Bibliography .....</b>	<b>89</b>