

# DIN EN 14307:2016-03 (E)

## Thermal insulation products for building equipment and industrial installations - Factory made extruded polystyrene foam (XPS) products - Specification

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
<b>1</b>	<b>Scope .....</b>	<b>6</b>
<b>2</b>	<b>Normative references .....</b>	<b>6</b>
<b>3</b>	<b>Terms, definitions, symbols, units and abbreviated terms .....</b>	<b>8</b>
<b>3.1</b>	<b>Terms and definitions .....</b>	<b>8</b>
<b>3.1.1</b>	<b>Terms and definitions as given in EN ISO 9229:2007 .....</b>	<b>8</b>
<b>3.1.2</b>	<b>Additional terms and definitions .....</b>	<b>8</b>
<b>3.2</b>	<b>Symbols, units and abbreviated terms .....</b>	<b>9</b>
<b>3.2.1</b>	<b>Symbols and units used in this standard .....</b>	<b>9</b>
<b>3.2.2</b>	<b>Abbreviations used in this standard .....</b>	<b>10</b>
<b>4</b>	<b>Requirements .....</b>	<b>10</b>
<b>4.1</b>	<b>General .....</b>	<b>10</b>
<b>4.2</b>	<b>For all applications .....</b>	<b>11</b>
<b>4.2.1</b>	<b>Thermal conductivity .....</b>	<b>11</b>
<b>4.2.2</b>	<b>Dimensions and tolerances .....</b>	<b>11</b>
<b>4.2.3</b>	<b>Dimensional stability .....</b>	<b>12</b>
<b>4.2.4</b>	<b>Reaction to fire of the product as placed on the market .....</b>	<b>13</b>
<b>4.2.5</b>	<b>Durability characteristics .....</b>	<b>13</b>
<b>4.3</b>	<b>For specific applications .....</b>	<b>13</b>
<b>4.3.1</b>	<b>General .....</b>	<b>13</b>
<b>4.3.2</b>	<b>Maximum service temperature .....</b>	<b>13</b>
<b>4.3.3</b>	<b>Minimum service temperature .....</b>	<b>14</b>
<b>4.3.4</b>	<b>Compressive stress or compressive strength .....</b>	<b>14</b>
<b>4.3.5</b>	<b>Water vapour diffusion transmission properties .....</b>	<b>14</b>
<b>4.3.6</b>	<b>Short-term water absorption by partial immersion .....</b>	<b>15</b>
<b>4.3.7</b>	<b>Trace quantities of water soluble ions and the pH-value .....</b>	<b>15</b>
<b>4.3.8</b>	<b>Release of dangerous substances .....</b>	<b>15</b>
<b>4.3.9</b>	<b>Continuous glowing combustion .....</b>	<b>15</b>
<b>5</b>	<b>Test methods .....</b>	<b>15</b>
<b>5.1</b>	<b>Sampling .....</b>	<b>15</b>
<b>5.2</b>	<b>Conditioning .....</b>	<b>15</b>
<b>5.3</b>	<b>Testing .....</b>	<b>15</b>
<b>5.3.1</b>	<b>General .....</b>	<b>15</b>
<b>5.3.2</b>	<b>Thermal conductivity .....</b>	<b>16</b>
<b>5.3.3</b>	<b>Reaction to fire .....</b>	<b>16</b>
<b>6</b>	<b>Designation code .....</b>	<b>18</b>
<b>7</b>	<b>Assessment and Verification of the Constancy of Performance (AVCP) .....</b>	<b>18</b>
<b>7.1</b>	<b>General .....</b>	<b>18</b>
<b>7.2</b>	<b>Product Type Determination (PTD) .....</b>	<b>18</b>
<b>7.3</b>	<b>Factory Production Control (FPC) .....</b>	<b>19</b>
<b>8</b>	<b>Marking and labelling .....</b>	<b>19</b>
<b>Annex A (normative) Factory production control .....</b>		<b>20</b>

<b>Annex B (normative) Determination of the aged values of thermal conductivity .....</b>	<b>22</b>
<b>B.1 Scope .....</b>	<b>22</b>
<b>B.2 Procedure for XPS foam without diffusion tight laminates .....</b>	<b>22</b>
<b>B.3 Procedure for XPS foam for use with diffusion tight facings on both sides .....</b>	<b>23</b>
<b>B.4 Blowing agent .....</b>	<b>23</b>
<b>Annex C (informative) Additional properties .....</b>	<b>24</b>
<b>C.1 General .....</b>	<b>24</b>
<b>C.2 Behaviour under cyclic loading .....</b>	<b>24</b>
<b>C.3 Compressive modulus of elasticity .....</b>	<b>24</b>
<b>C.4 Bending strength .....</b>	<b>24</b>
<b>C.5 Shear strength .....</b>	<b>24</b>
<b>C.6 Deformation under specified compressive load and temperature conditions .....</b>	<b>25</b>
<b>C.7 Compressive creep .....</b>	<b>25</b>
<b>C.8 Tensile strength perpendicular to facings .....</b>	<b>26</b>
<b>C.9 Long term water absorption by diffusion .....</b>	<b>26</b>
<b>C.10 Long term water absorption by immersion .....</b>	<b>26</b>
<b>C.11 Freeze-thaw resistance .....</b>	<b>27</b>
<b>C.12 Apparent density .....</b>	<b>27</b>
<b>C.13 Coefficient of thermal expansion .....</b>	<b>27</b>
<b>C.14 Closed cell content .....</b>	<b>27</b>
<b>Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation .....</b>	<b>29</b>
<b>ZA.1 Scope and relevant characteristics .....</b>	<b>29</b>
<b>ZA.2 Procedures for AVCP of factory made extruded polystyrene foam products .....</b>	<b>31</b>
<b>ZA.3 CE Marking and labelling .....</b>	<b>38</b>
<b>Bibliography .....</b>	<b>40</b>