

# DIN EN ISO 15741:2021-04 (E)

## Paints and varnishes - Friction-reduction coatings for the interior of on- and offshore steel pipelines for non-corrosive gases (ISO 15741:2016)

---

<b>Contents</b>		<b>Page</b>
<b>European foreword</b>	.....	<b>4</b>
<b>Foreword</b>	.....	<b>5</b>
<b>Introduction</b>	.....	<b>6</b>
<b>1 Scope</b>	.....	<b>7</b>
<b>2 Normative references</b>	.....	<b>7</b>
<b>3 Terms and definitions</b>	.....	<b>8</b>
<b>4 Coating material</b>	.....	<b>8</b>
4.1 General	.....	8
4.2 Particular requirements for qualification of the coating material	.....	9
4.2.1 General	.....	9
4.2.2 Non-volatile matter (by mass)	.....	9
4.2.3 Non-volatile matter (by volume)	.....	9
4.2.4 Viscosity	.....	9
4.2.5 Density	.....	9
4.2.6 Ash (residue on ignition)	.....	9
4.2.7 Pot life	.....	10
4.2.8 Infrared spectrograms	.....	10
4.2.9 Appearance	.....	10
4.3 Particular requirements for qualification of the cured paint film	.....	10
4.3.1 Preparation of test panels	.....	10
4.3.2 Conditioning of test panels	.....	10
4.3.3 Dry film thickness	.....	11
4.3.4 Adhesion	.....	11
4.3.5 Buchholz hardness	.....	11
4.3.6 Resistance to neutral salt spray	.....	11
4.3.7 Resistance to artificial ageing	.....	11
4.3.8 Bend test (conical mandrel)	.....	11
4.3.9 Resistance to gas pressure variations	.....	11
4.3.10 Resistance to water immersion	.....	12
4.3.11 Resistance to chemicals	.....	12
4.3.12 Resistance to hydraulic blistering	.....	12
4.4 Packaging, labelling and storing	.....	12
4.5 Quality assurance	.....	12
4.6 Product data sheet	.....	12
4.7 Qualification certificate	.....	13
4.8 Batch test certificate	.....	14
<b>5 Application of the coating material</b>	.....	<b>15</b>
5.1 General	.....	15
5.2 Surface preparation	.....	16
5.3 Paint preparation	.....	16
5.4 Paint application	.....	16
<b>6 Production control</b>	.....	<b>17</b>
6.1 Assessment of the coating on the pipes	.....	17
6.1.1 Appearance	.....	17
6.1.2 Dry film thickness	.....	17
6.2 Assessment of the coating on steel panels	.....	17
6.2.1 Preparation of test panels	.....	17

6.2.2	Adhesion .....	17
6.2.3	Buchholz hardness .....	17
6.2.4	Bend test .....	17
6.2.5	Curing test .....	17
6.2.6	Porosity test .....	17
<b>7</b>	<b>Repairs .....</b>	<b>18</b>
<b>8</b>	<b>Handling, transportation and storage .....</b>	<b>18</b>
8.1	Handling .....	18
8.2	Transportation to the storage area .....	18
8.3	Storage .....	18
8.4	Loading coated pipes for transportation .....	18
<b>Annex A (normative) Determination of ash (refer to <a href="#">4.2.5</a>) .....</b>		<b>19</b>
<b>Annex B (normative) Dry film thickness (refer to <a href="#">6.1.2</a>) .....</b>		<b>20</b>
<b>Annex C (normative) Resistance to gas pressure variations (refer to <a href="#">4.3.9</a>) .....</b>		<b>21</b>
<b>Annex D (normative) Hydraulic-pressure blistering (refer to <a href="#">4.3.12</a>) .....</b>		<b>24</b>
<b>Annex E (normative) Porosity of a film of the coating material on a glass panel (refer to <a href="#">6.2.6</a>) .....</b>		<b>26</b>
<b>Annex F (normative) Curing test (refer to <a href="#">6.2.5</a>) .....</b>		<b>27</b>
<b>Annex G (normative) Wet-sponge test (refer to <a href="#">6.2.6</a>) .....</b>		<b>28</b>
<b>Bibliography .....</b>		<b>29</b>