

DIN EN 1096-5:2016-06 (E)

Glass in building - Coated glass - Part 5: Test method and classification for the self-cleaning performances of coated glass surfaces

| Contents | | Page |
|-------------------------|--|-------------|
| European foreword | | 4 |
| 1 | Scope | 5 |
| 2 | Normative references | 5 |
| 3 | Terms and definitions | 5 |
| 4 | Symbols and abbreviations | 6 |
| 5 | Principle of the test | 6 |
| 6 | Instrumentation | 7 |
| 6.1 | UVA-Illumination chamber | 7 |
| 6.2 | Sample support | 7 |
| 6.3 | Spraying nozzle | 8 |
| 6.4 | Dirt mixture pressure tank | 8 |
| 6.5 | Water pressure tank | 8 |
| 6.6 | Timer for spray | 8 |
| 6.7 | Furnace used to dry the glasses | 8 |
| 7 | Preparation of the glass samples | 9 |
| 7.1 | General | 9 |
| 7.2 | Tested sample | 9 |
| 7.3 | Control sample | 10 |
| 8 | Haze measurement | 11 |
| 8.1 | Unexposed surface cleaning | 11 |
| 8.2 | Position of haze measurements on the samples | 11 |
| 8.3 | Measurement of transmission haze | 12 |
| 9 | Preparation of dirt mixture | 12 |
| 9.1 | General | 12 |
| 9.2 | Stearic acid solution | 12 |
| 9.3 | Adipic acid solution | 12 |
| 9.4 | Solid compound suspension | 13 |
| 9.5 | Final dirt mixture | 13 |
| 10 | Test procedure | 14 |
| 10.1 | General | 14 |
| 10.2 | Initial activation | 14 |
| 10.2.1 | Glass samples cleaning | 14 |
| 10.2.2 | UV irradiation | 14 |
| 10.2.3 | Initial haze measurement | 14 |
| 10.3 | First cycle | 15 |
| 10.3.1 | General | 15 |
| 10.3.2 | Dirt mixture spraying | 15 |
| 10.3.3 | Drying | 15 |
| 10.3.4 | Haze measurement after dirt spray | 16 |
| 10.3.5 | UV-A irradiation | 16 |
| 10.3.6 | Haze measurement after UV irradiation | 16 |

| | | |
|--|---|----|
| 10.3.7 | Deionized water spraying | 16 |
| 10.3.8 | Drying | 17 |
| 10.3.9 | Haze measurement after deionized water spray | 17 |
| 10.4 | Second cycle | 17 |
| 10.5 | Collection of the results | 17 |
| 11 | Classification | 18 |
| 12 | Test report | 18 |
| Annex A (normative) Sample support and spray installation | | 19 |
| A.1 | Spray rig | 19 |
| A.2 | Spray system | 20 |
| Annex B (normative) Haze measurement method | | 22 |
| B.1 | General | 22 |
| B.2 | The instrument | 22 |
| B.3 | Calculation | 23 |
| B.4 | Values | 24 |
| B.5 | Short cut procedures | 24 |
| Annex C (normative) Contamination checking procedure | | 25 |
| C.1 | General | 25 |
| C.2 | Evaluation of the contamination of the test environment | 25 |
| C.3 | Irregular contamination of the sample | 25 |
| Annex D (normative) Statistical analysis of test results - Calculation of statistical numbers to obtain a self-cleaning functionality used for classification of coated glass | | 26 |
| Annex E (informative) Round Robin tests | | 27 |
| E.1 | General | 27 |
| E.2 | Typical results | 27 |
| E.3 | Results interpretation | 29 |
| Bibliography | | 31 |