March 21, 2023 (Revision of January 13, 2023)

# STEELGUARD™ 751

## DESCRIPTION

One component thin-film solvent-borne intumescent coating for fire protection of structural steelwork

## PRINCIPAL CHARACTERISTICS

- Tested and assessed to EN 13381-8, BS 476-20/21 and AS 1530.4 for up to 120 minutes protection to cellulosic fires
- Tested and assessed to GB14907 for up to 150 minutes protection to cellulosic fires
- Off-site or on-site application
- Up to 1500 µm (60.0 mils) DFT in a single coat
- Suitable for C1 to C4 internal and external environments (ISO 12944); for dry internal (C1) environments no topcoat is required
- Weather resistant up to 12 months without topcoat provided the coating has been applied in accordance with INFORMATION SHEET 1222 and is not subject to running or pooling water, high humidity or immersion conditions
- CE marked product, ETA 22/0574
- Assessed to EAD 350402-00-1106 for all durability classifications

## COLOR AND GLOSS LEVEL

- White
- Matt

## BASIC DATA AT 20°C (68°F)

| Data for product | |
|---|---|
| **Number of components** | One |
| **Mass density** | 1.35 kg/l (11.27 lb/US gal) |
| **Volume solids** | 75 ± 3% |
| **VOC (Supplied)** | Directive 2010/75/EU, SED: max. 257.0 g/kg<br>UK PG 6/23(92) Appendix 3: max. 330.0 g/l (approx. 2.8 lb/US gal)<br>EUR Directive: 2004/42/IIA(i)(500) 370 g/l |
| **Recommended dry film thickness** | 200 - 1500 µm (8.0 - 60.0 mils) per coat |
| **Theoretical spreading rate** | 1.07 $m^2$/l for 700 µm (43 $ft^2$/US gal for 28.0 mils) |
| **Dry to touch** | 30 minutes |
| **Overcoating Interval** | Minimum: 6 hours<br>Maximum: Unlimited |
| **Shelf life** | At least 18 months when stored cool and dry |

Notes:
- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- The required dry film thickness must be in accordance with the approval certification

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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Approved primer must be sound, dry and free from any contamination

**Substrate temperature and application conditions**

- Substrate temperature during application and curing should be between 5°C (41°F) and 40°C (104°F)
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Ambient temperature during application and curing should be between 5°C (41°F) and 40°C (104°F)
- Relative humidity during application and curing should not exceed 85%

## INSTRUCTIONS FOR USE

- Stir thoroughly until homogeneous and free of lumps
- Adding too much thinner results in reduced sag resistance and slower cure

**Airless spray**

**Recommended thinner**
THINNER 21-06 (normally no thinner required)

**Volume of thinner**
0 - 5%

**Nozzle angle**
20° – 50°, depending on shape of steel parts

**Nozzle orifice**
Approx. 0.48 – 0.64 mm (0.019 – 0.025 in)

**Nozzle pressure**
20.0 MPa (approx. 200 bar; 2901 p.s.i.)

Notes:
- All filters, including surge bottle and gun filters to be removed
- External fluid uptake pipe filter is recommended

**Brush/roller**

- For small areas only (touch up and repair)

**Recommended thinner**
No thinner should be added

**Cleaning solvent**
THINNER 21-06

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## ADDITIONAL DATA

| Spreading rate and film thickness | |
|---|---|
| **DFT** | **Theoretical spreading rate** |
| 200 µm (8.0 mils) | 3.75 $m^2$/l (150 $ft^2$/US gal) |
| 400 µm (16.0 mils) | 1.88 $m^2$/l (75 $ft^2$/US gal) |
| 700 µm (28.0 mils) | 1.07 $m^2$/l (43 $ft^2$/US gal) |
| 1000 µm (40.0 mils) | 0.75 $m^2$/l (30 $ft^2$/US gal) |
| 1500 µm (60.0 mils) | 0.50 $m^2$/l (20 $ft^2$/US gal) |

Note: Maximum DFT when brushing: 300 µm (12.0 mils)

| Overcoating interval for DFT up to 700 µm (28.0 mils) | | | | | | |
|---|---|---|---|---|---|---|
| **Overcoating with...** | **Interval** | **5°C (41°F)** | **10°C (50°F)** | **15°C (59°F)** | **20°C (68°F)** | **30°C (86°F)** |
| itself | Minimum | 12 hours | 10 hours | 8 hours | 6 hours | 4 hours |
| | Maximum | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |

Note: All overcoating times have been measured at an intumescent wet film thickness of 1000µm (approx. 700µm DFT) under controlled temperature and relative humidity below 85 %. Higher thicknesses will take longer to cure.

| Overcoating interval for DFT up to 700 µm (28.0 mils) | | | | | | |
|---|---|---|---|---|---|---|
| **Overcoating with...** | **Interval** | **5°C (41°F)** | **10°C (50°F)** | **15°C (59°F)** | **20°C (68°F)** | **30°C (86°F)** |
| STEELGUARD 2458 | Minimum | 4 hours | 2 hours | 1.5 hours | 1 hour | 45 minutes |
| | Maximum | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |
| other approved topcoats | Minimum | 5 days | 3 days | 60 hours | 48 hours | 36 hours |
| | Maximum | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |

Notes:

- The system should be dry to handle and coating thickness gauge should not to leave an indentation on the surface prior to applying subsequent coats. Curing time(s)/overcoating interval(s) may be extended at higher applied DFT's and/or there is a change in environmental conditions.
- Prior to application of a topcoat, the applicator must ensure that the specified dry film thickness has been achieved.

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| Curing time for DFT up to 700 µm (28.0 mils) | |
|---|---|
| **Substrate temperature** | **Dry to touch** |
| 5°C (41°F) | 2 hours |
| 10°C (50°F) | 1.5 hours |
| 15°C (59°F) | 1 hour |
| 20°C (68°F) | 30 minutes |
| 30°C (86°F) | 20 minutes |

Note: All curing times have been measured at an intumescent wet film thickness of 1000µm (approx. 700µm DFT) under controlled temperature and relative humidity below 85 %. Higher thicknesses will take longer to cure.

## SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- This is a solvent-borne paint and care should be taken to avoid inhalation of spray mist or vapor, as well as contact between the wet paint and exposed skin or eyes

## REFERENCES

| | | |
|---|---|---|
| • STEELGUARD™ APPLICATION GUIDELINES | INFORMATION SHEET | 1222 |
| • STEELGUARD™ QUALIFIED PRIMERS | INFORMATION SHEET | 1224 |
| • STEELGUARD™ QUALIFIED TOPCOATS | INFORMATION SHEET | 1226 |
| • CONVERSION TABLES | INFORMATION SHEET | 1410 |
| • EXPLANATION TO PRODUCT DATA SHEETS | INFORMATION SHEET | 1411 |
| • SAFETY INDICATIONS | INFORMATION SHEET | 1430 |
| • SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD | INFORMATION SHEET | 1431 |
| • SAFE WORKING IN CONFINED SPACES | INFORMATION SHEET | 1433 |
| • DIRECTIVES FOR VENTILATION PRACTICE | INFORMATION SHEET | 1434 |
| • CLEANING OF STEEL AND REMOVAL OF RUST | INFORMATION SHEET | 1490 |
| • SPECIFICATION FOR MINERAL ABRASIVES | INFORMATION SHEET | 1491 |
| • RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE | INFORMATION SHEET | 1650 |

## WARRANTY

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