

Fliesenfest S1 turbo

S1 rapid-set flexible tile adhesive

FF 451



Extra-rapid-set, cementitious flexible tile adhesive, meeting C2 FT S1 requirements to DIN EN 12004, also for fully vitrified stoneware. Suitable for use in conjunction with wall and floor heating and Sopro waterproof membranes. Flexible, sag-resistant and with high crystalline water binding capacity.

- For walls and floors, indoors and outdoors
- C2: tensile adhesion strength $\geq 1.0 \text{ N/mm}^2$
- F: early tensile adhesion strength $\geq 0.5 \text{ N/mm}^2$ after 6 hours
- T: thixotropic – high sag resistance due to fibre reinforcement
- S1: deformability $\geq 2.5 \text{ mm}$
- Working life: approx. 20 minutes
- Walkable and groutable: after approx. 2 hours
- Low-chromate to Regulation (EC) No 1907/2006, Annex XVII
- DGNB: Top quality level 4, Line 8, based on DGNB (German Sustainable Building Council) criterion "ENV1.2 Local Environmental Impact" (2018 version)

Coverage: Approx. 1.3 kg/m² per mm coat thickness.



Packaging		Packages	Pallet weight
Bag	25 kg	40	1000 kg

Use	<p>With earthenware, stoneware and fully vitrified stoneware tiles, mosaic, discoloration-resistant natural stone units, ceramic split tiles and split tile fittings, clinker floor tiles and equivalent materials. For construction of ledges/shelves, lightweight internal walls, aerated concrete block facings to sanitary appliances (e.g. bathtubs) and the like. For full-surface installation of foam, cork, peat, wood-fibre etc. insulation board. For process water tanks, swimming pools, operating theatres, escape routes.</p>				
Properties	<p>Excellent contact adhesion, fresh adhesive sag resistance and high water retentivity, resistant to water and freeze-thaw cycles, high early strength.</p>				
substrate preparation	<p>Substrate shall be clean, solid, strong, dimensionally stable and free from any adhesion-impairing substances. Fill any existing cracks in screed with structurally bonding Sopro SH 649 shaken resin. Level out any gross irregularities using Sopro RAM 3 454 renovation and levelling mortar or Sopro RS 462 repair filler; for floors, use Sopro FS 15 550 floor-levelling compound, Sopro VS 582 self-levelling filler or Sopro FS 5 549 floor-levelling compound. Cement screeds shall be 28 days old and dry. Screeds incorporating Sopro Rapidur® B1 rapid-set screed binder are ready to receive tiles after only 12 hours, Sopro Rapidur® B3 after 1 - 2 days, and Sopro Rapidur® B5 after 3 days. (Self-levelling) calcium sulphate screeds (anhydrite screeds) shall be adequately ground, vacuum-cleaned and primed, and shall exhibit moisture content ≤ 0.5% CM for unheated and ≤ 0.3% CM for heated constructions. Gypsum plasterwork shall be dry, single-coat and shall not be felt-floated or smoothed. Cement and calcium sulphate screeds incorporating heating elements shall be heated up to ensure adequate drying out prior to flooring installation. Floating cement screeds or unbonded cement screeds on separating layer shall exhibit residual moisture ≤ 2.0% CM. Bonded cement screeds may be tiled as soon as they are walkable. When laying natural stone, risk of discoloration due to moisture penetration must be taken into account. All relevant standards, guidelines and recommendations shall apply; workmanship shall comply with good practice.</p>				
Priming	<p>For high- and variable-suction substrates: Sopro GD 749 primer and Sopro SG 602 primer-sealer For non-absorbent substrates: Sopro HPS 673 bonding primer</p> <p>For calcium sulphate screeds: Sopro MGR 637 multi-purpose primer (for all sizes), Sopro GD 749 primer (sizes up to 0.2 m²), Sopro SG 602 primer-sealer (sizes up to 1.0 m²)</p> <p>For stabilizing friable mineral substrates and as adhesion promoter on smooth substrates: Sopro EPG 1522 epoxy primer</p> <p>For further information, please consult relevant technical data sheets.</p>				
Application	<p>Mix Sopro FF 451 with water to homogeneous consistency. Apply contact layer, pressing down heavily, then apply combed bed with suitable notched trowel (tool angle 45° - 60°). Do not prepare an area of more than approx. 1.5 m². Press tiles firmly into bed, position and align before adhesive skins over. Rake out joints prior to hardening and wash down covering. Do not retemper stiffened mortar by addition of water or fresh material to restore workability. Pretreatment with Sopro MGR 637 multi-purpose primer or Sopro EPG 522 epoxy primer is required when laying large-format tiles with edge length exceeding 60 cm or of size exceeding 0.2 m² on calcium sulphate-based substrates.</p>				
Water requirement	<table border="1"> <tr> <td data-bbox="528 2000 1321 2056">Per package</td> <td data-bbox="1321 2000 1481 2056">25 kg</td> </tr> <tr> <td data-bbox="528 2056 1321 2103">Water requirement</td> <td data-bbox="1321 2056 1481 2103">6.5 l - 7 l</td> </tr> </table>	Per package	25 kg	Water requirement	6.5 l - 7 l
Per package	25 kg				
Water requirement	6.5 l - 7 l				

Application temperature	From +5 °C to +25 °C (substrate, air, material)																			
Coat thickness	Max. 5 mm in compacted adhesive bed																			
Coverage chart	<table border="1"> <tr> <td>Serration (mm)</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>20</td> </tr> <tr> <td>Coverage kg/m²</td> <td>1.3</td> <td>2.0</td> <td>2.6</td> <td>3.3</td> <td>3.9</td> <td>--</td> </tr> </table> <p>All stated consumption/coverage rates depend on angle of application with notched trowel and on substrate type and levelness. 20 mm serration corresponds to M1 serration to TKB (German Technical Committee for Construction Adhesives) guidance paper (U-shaped serration).</p>						Serration (mm)	4	6	8	10	12	20	Coverage kg/m ²	1.3	2.0	2.6	3.3	3.9	--
Serration (mm)	4	6	8	10	12	20														
Coverage kg/m ²	1.3	2.0	2.6	3.3	3.9	--														
Loadable	After approx. 1 day; in commercial facilities after approx. 2 days, in areas subject to high wet exposure after approx. 3 days, for underwater applications after approx. 10 days, in conjunction with wall and floor heating after approx. 14 days.																			
Maturing time	3 - 5 minutes																			
Open time	Approx. 20 minutes																			
Recommendation for grouting	<p>The following are recommended for grouting ceramic tiles with absorbent tile bodies (earthenware) for stated joint widths:</p> <p>from 1 to 5 mm – Sopro Saphir[®] 5 water-repellent tile grout</p> <p>from 1 to 10 mm – Sopro DF 10 flexible designer tile grout</p> <p>The following are recommended for grouting tiles with low-suction or non-absorbent tile bodies (stoneware and fully vitrified stoneware) for stated joint widths:</p> <p>from 1 to 10 mm – Sopro DF 10 flexible designer tile grout</p> <p>from 2 to 20 mm – Sopro FL plus flexible tile grout</p> <p>The following are recommended for grouting natural and cast stone coverings for stated joint widths:</p> <p>from 1 to 10 mm – Sopro DF 10 flexible designer tile grout</p> <p>from 2 to 20 mm – Sopro FL plus flexible tile grout</p> <p>The following are recommended for grouting coverings subject to high mechanical loads (workshops, commercial facilities) for stated joint widths:</p> <p>from 1 to 10 mm – Sopro TF+ high-strength tile grout</p> <p>from 3 to 30 mm – Sopro TFb high-strength tile grout</p> <p>The following are recommended as chemical-resistant tile grouts for stated joint widths:</p> <p>from 1 to 10 mm – Sopro DFX designer epoxy tile grout</p> <p>from 1.5 to 12 mm – Sopro FEP epoxy tile grout</p>																			
Shelf life	Shelf life approx. 6 months, subject to storage on pallet in dry conditions in original unopened containers.																			

Specified times	Apply for normal temperature range of +23 °C and 50 % relative humidity; higher temperatures shorten and lower temperatures lengthen these times.
Suitable substrates	Min. 3-month-old concrete, aerated concrete; cement and lime/cement render; renders made from masonry cement; plane, flush-jointed masonry (no composite masonry); paperless gypsum, gypsum plasterboard and gypsum fibreboard drywall panels; cement screeds; calcium sulphate screeds; board subfloors. As a basic requirement, all substrates shall, be solid, strong and dimensionally stable. Specifications of DIN 18157 shall be observed.
Tool cleaning	Wash tools with water immediately after use
Tools	Mixing attachment, notched trowel with suitable serration: 3 – 4 mm for tesserae, 4 – 6 mm for wall and floor tiles, 6 – 10 mm for heavy ceramics.
Underwater and permanently underwater area	Suitable
Walkable / groutable	After approx. 3 hours or after setting of adhesive; take measures to spread loads over floor
Wall and floor heating	Suitable
Working life	Approx. 20 minutes
Test certificates	DIN EN 12004: C2 FT S1 PG-AIV-F: System component of the general building authority test certificate (abP) as system test in combination with FDF 525/527, DSF 523, DSF RS 623, TDS 823 and other Sopro components PG-AIV-B: System component of the general building authority test certificate (abP) as a system test in combination with AEB 640 and other Sopro components.
Licence	EMICODE system of GEV (German Association for the Control of Emissions in Products for Flooring Installation, Adhesives and Building Materials): EC1 ^{PLUS} ("very-low-emission-plus") rating
Safety precautions	<p>Labelling in accordance with Regulation (EC) No 1272/2008 (CLP). GHS07</p> <p>Signal word: Attention</p> <p>H319 Causes serious eye irritation. P102 Keep out of reach of children. P103 Read carefully and follow all instructions. P264 Wash hands thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection/ P337+P313 If eye irritation persists: Get medical advice/attention. P501 Dispose of contents/container in accordance with regulations.</p> <p>The product is not considered hazardous according to CLP Regulation 1272/2008/EC. Low-chromate to Regulation (EC) No 1907/2006, Annex XVII GHS07 GHS08 GHS09 GHS10 GHS11 GHS12 GHS13 GHS14 GHS15 GHS16 GHS17 GHS18 GHS19 GHS20 GHS21 GHS22 GHS23 GHS24 GHS25 GHS26 GHS27 GHS28 GHS29 GHS30 GHS31 GHS32 GHS33 GHS34 GHS35 GHS36 GHS37 GHS38 GHS39 GHS40 GHS41 GHS42 GHS43 GHS44 GHS45 GHS46 GHS47 GHS48 GHS49 GHS50 GHS51 GHS52 GHS53 GHS54 GHS55 GHS56 GHS57 GHS58 GHS59 GHS60 GHS61 GHS62 GHS63 GHS64 GHS65 GHS66 GHS67 GHS68 GHS69 GHS70 GHS71 GHS72 GHS73 GHS74 GHS75 GHS76 GHS77 GHS78 GHS79 GHS80 GHS81 GHS82 GHS83 GHS84 GHS85 GHS86 GHS87 GHS88 GHS89 GHS90 GHS91 GHS92 GHS93 GHS94 GHS95 GHS96 GHS97 GHS98 GHS99 GHS100 GHS101 GHS102 GHS103 GHS104 GHS105 GHS106 GHS107 GHS108 GHS109 GHS110 GHS111 GHS112 GHS113 GHS114 GHS115 GHS116 GHS117 GHS118 GHS119 GHS120 GHS121 GHS122 GHS123 GHS124 GHS125 GHS126 GHS127 GHS128 GHS129 GHS130 GHS131 GHS132 GHS133 GHS134 GHS135 GHS136 GHS137 GHS138 GHS139 GHS140 GHS141 GHS142 GHS143 GHS144 GHS145 GHS146 GHS147 GHS148 GHS149 GHS150 GHS151 GHS152 GHS153 GHS154 GHS155 GHS156 GHS157 GHS158 GHS159 GHS160 GHS161 GHS162 GHS163 GHS164 GHS165 GHS166 GHS167 GHS168 GHS169 GHS170 GHS171 GHS172 GHS173 GHS174 GHS175 GHS176 GHS177 GHS178 GHS179 GHS180 GHS181 GHS182 GHS183 GHS184 GHS185 GHS186 GHS187 GHS188 GHS189 GHS190 GHS191 GHS192 GHS193 GHS194 GHS195 GHS196 GHS197 GHS198 GHS199 GHS200 GHS201 GHS202 GHS203 GHS204 GHS205 GHS206 GHS207 GHS208 GHS209 GHS210 GHS211 GHS212 GHS213 GHS214 GHS215 GHS216 GHS217 GHS218 GHS219 GHS220 GHS221 GHS222 GHS223 GHS224 GHS225 GHS226 GHS227 GHS228 GHS229 GHS230 GHS231 GHS232 GHS233 GHS234 GHS235 GHS236 GHS237 GHS238 GHS239 GHS240 GHS241 GHS242 GHS243 GHS244 GHS245 GHS246 GHS247 GHS248 GHS249 GHS250 GHS251 GHS252 GHS253 GHS254 GHS255 GHS256 GHS257 GHS258 GHS259 GHS260 GHS261 GHS262 GHS263 GHS264 GHS265 GHS266 GHS267 GHS268 GHS269 GHS270 GHS271 GHS272 GHS273 GHS274 GHS275 GHS276 GHS277 GHS278 GHS279 GHS280 GHS281 GHS282 GHS283 GHS284 GHS285 GHS286 GHS287 GHS288 GHS289 GHS290 GHS291 GHS292 GHS293 GHS294 GHS295 GHS296 GHS297 GHS298 GHS299 GHS300 GHS301 GHS302 GHS303 GHS304 GHS305 GHS306 GHS307 GHS308 GHS309 GHS310 GHS311 GHS312 GHS313 GHS314 GHS315 GHS316 GHS317 GHS318 GHS319 GHS320 GHS321 GHS322 GHS323 GHS324 GHS325 GHS326 GHS327 GHS328 GHS329 GHS330 GHS331 GHS332 GHS333 GHS334 GHS335 GHS336 GHS337 GHS338 GHS339 GHS340 GHS341 GHS342 GHS343 GHS344 GHS345 GHS346 GHS347 GHS348 GHS349 GHS350 GHS351 GHS352 GHS353 GHS354 GHS355 GHS356 GHS357 GHS358 GHS359 GHS360 GHS361 GHS362 GHS363 GHS364 GHS365 GHS366 GHS367 GHS368 GHS369 GHS370 GHS371 GHS372 GHS373 GHS374 GHS375 GHS376 GHS377 GHS378 GHS379 GHS380 GHS381 GHS382 GHS383 GHS384 GHS385 GHS386 GHS387 GHS388 GHS389 GHS390 GHS391 GHS392 GHS393 GHS394 GHS395 GHS396 GHS397 GHS398 GHS399 GHS400 GHS401 GHS402 GHS403 GHS404 GHS405 GHS406 GHS407 GHS408 GHS409 GHS410 GHS411 GHS412 GHS413 GHS414 GHS415 GHS416 GHS417 GHS418 GHS419 GHS420 GHS421 GHS422 GHS423 GHS424 GHS425 GHS426 GHS427 GHS428 GHS429 GHS430 GHS431 GHS432 GHS433 GHS434 GHS435 GHS436 GHS437 GHS438 GHS439 GHS440 GHS441 GHS442 GHS443 GHS444 GHS445 GHS446 GHS447 GHS448 GHS449 GHS450 GHS451 GHS452 GHS453 GHS454 GHS455 GHS456 GHS457 GHS458 GHS459 GHS460 GHS461 GHS462 GHS463 GHS464 GHS465 GHS466 GHS467 GHS468 GHS469 GHS470 GHS471 GHS472 GHS473 GHS474 GHS475 GHS476 GHS477 GHS478 GHS479 GHS480 GHS481 GHS482 GHS483 GHS484 GHS485 GHS486 GHS487 GHS488 GHS489 GHS490 GHS491 GHS492 GHS493 GHS494 GHS495 GHS496 GHS497 GHS498 GHS499 GHS500 GHS501 GHS502 GHS503 GHS504 GHS505 GHS506 GHS507 GHS508 GHS509 GHS510 GHS511 GHS512 GHS513 GHS514 GHS515 GHS516 GHS517 GHS518 GHS519 GHS520 GHS521 GHS522 GHS523 GHS524 GHS525 GHS526 GHS527 GHS528 GHS529 GHS530 GHS531 GHS532 GHS533 GHS534 GHS535 GHS536 GHS537 GHS538 GHS539 GHS540 GHS541 GHS542 GHS543 GHS544 GHS545 GHS546 GHS547 GHS548 GHS549 GHS550 GHS551 GHS552 GHS553 GHS554 GHS555 GHS556 GHS557 GHS558 GHS559 GHS560 GHS561 GHS562 GHS563 GHS564 GHS565 GHS566 GHS567 GHS568 GHS569 GHS570 GHS571 GHS572 GHS573 GHS574 GHS575 GHS576 GHS577 GHS578 GHS579 GHS580 GHS581 GHS582 GHS583 GHS584 GHS585 GHS586 GHS587 GHS588 GHS589 GHS590 GHS591 GHS592 GHS593 GHS594 GHS595 GHS596 GHS597 GHS598 GHS599 GHS600 GHS601 GHS602 GHS603 GHS604 GHS605 GHS606 GHS607 GHS608 GHS609 GHS610 GHS611 GHS612 GHS613 GHS614 GHS615 GHS616 GHS617 GHS618 GHS619 GHS620 GHS621 GHS622 GHS623 GHS624 GHS625 GHS626 GHS627 GHS628 GHS629 GHS630 GHS631 GHS632 GHS633 GHS634 GHS635 GHS636 GHS637 GHS638 GHS639 GHS640 GHS641 GHS642 GHS643 GHS644 GHS645 GHS646 GHS647 GHS648 GHS649 GHS650 GHS651 GHS652 GHS653 GHS654 GHS655 GHS656 GHS657 GHS658 GHS659 GHS660 GHS661 GHS662 GHS663 GHS664 GHS665 GHS666 GHS667 GHS668 GHS669 GHS670 GHS671 GHS672 GHS673 GHS674 GHS675 GHS676 GHS677 GHS678 GHS679 GHS680 GHS681 GHS682 GHS683 GHS684 GHS685 GHS686 GHS687 GHS688 GHS689 GHS690 GHS691 GHS692 GHS693 GHS694 GHS695 GHS696 GHS697 GHS698 GHS699 GHS700 GHS701 GHS702 GHS703 GHS704 GHS705 GHS706 GHS707 GHS708 GHS709 GHS710 GHS711 GHS712 GHS713 GHS714 GHS715 GHS716 GHS717 GHS718 GHS719 GHS720 GHS721 GHS722 GHS723 GHS724 GHS725 GHS726 GHS727 GHS728 GHS729 GHS730 GHS731 GHS732 GHS733 GHS734 GHS735 GHS736 GHS737 GHS738 GHS739 GHS740 GHS741 GHS742 GHS743 GHS744 GHS745 GHS746 GHS747 GHS748 GHS749 GHS750 GHS751 GHS752 GHS753 GHS754 GHS755 GHS756 GHS757 GHS758 GHS759 GHS760 GHS761 GHS762 GHS763 GHS764 GHS765 GHS766 GHS767 GHS768 GHS769 GHS770 GHS771 GHS772 GHS773 GHS774 GHS775 GHS776 GHS777 GHS778 GHS779 GHS780 GHS781 GHS782 GHS783 GHS784 GHS785 GHS786 GHS787 GHS788 GHS789 GHS790 GHS791 GHS792 GHS793 GHS794 GHS795 GHS796 GHS797 GHS798 GHS799 GHS800 GHS801 GHS802 GHS803 GHS804 GHS805 GHS806 GHS807 GHS808 GHS809 GHS810 GHS811 GHS812 GHS813 GHS814 GHS815 GHS816 GHS817 GHS818 GHS819 GHS820 GHS821 GHS822 GHS823 GHS824 GHS825 GHS826 GHS827 GHS828 GHS829 GHS830 GHS831 GHS832 GHS833 GHS834 GHS835 GHS836 GHS837 GHS838 GHS839 GHS840 GHS841 GHS842 GHS843 GHS844 GHS845 GHS846 GHS847 GHS848 GHS849 GHS850 GHS851 GHS852 GHS853 GHS854 GHS855 GHS856 GHS857 GHS858 GHS859 GHS860 GHS861 GHS862 GHS863 GHS864 GHS865 GHS866 GHS867 GHS868 GHS869 GHS870 GHS871 GHS872 GHS873 GHS874 GHS875 GHS876 GHS877 GHS878 GHS879 GHS880 GHS881 GHS882 GHS883 GHS884 GHS885 GHS886 GHS887 GHS888 GHS889 GHS890 GHS891 GHS892 GHS893 GHS894 GHS895 GHS896 GHS897 GHS898 GHS899 GHS900 GHS901 GHS902 GHS903 GHS904 GHS905 GHS906 GHS907 GHS908 GHS909 GHS910 GHS911 GHS912 GHS913 GHS914 GHS915 GHS916 GHS917 GHS918 GHS919 GHS920 GHS921 GHS922 GHS923 GHS924 GHS925 GHS926 GHS927 GHS928 GHS929 GHS930 GHS931 GHS932 GHS933 GHS934 GHS935 GHS936 GHS937 GHS938 GHS939 GHS940 GHS941 GHS942 GHS943 GHS944 GHS945 GHS946 GHS947 GHS948 GHS949 GHS950 GHS951 GHS952 GHS953 GHS954 GHS955 GHS956 GHS957 GHS958 GHS959 GHS960 GHS961 GHS962 GHS963 GHS964 GHS965 GHS966 GHS967 GHS968 GHS969 GHS970 GHS971 GHS972 GHS973 GHS974 GHS975 GHS976 GHS977 GHS978 GHS979 GHS980 GHS981 GHS982 GHS983 GHS984 GHS985 GHS986 GHS987 GHS988 GHS989 GHS990 GHS991 GHS992 GHS993 GHS994 GHS995 GHS996 GHS997 GHS998 GHS999 GHS1000</p>

CE marking



Please observe the current version of the product information, the currently valid declaration of performance under the EU Construction Products Regulation, and the latest version of the relevant safety data sheet to EC Regulation No 1907/2006, also available from the Internet at www.sopro.com! This document serves as a product description and sets out general details, based on empirical and test data, that take no account of specific cases of application. No liability may be construed and no claims shall be accepted in respect of these details. Should you require assistance, please contact our Technical Counselling Service.

Disposal

The generation of waste should be avoided or minimized wherever possible. Recover if possible. A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

bringing european innovation

smet

FOR MORE INFORMATION CONTACT: **Smet Building Products Ltd**

93A Belfast Road | Newry | BT34 1QH | Northern Ireland

T: +44 (0)28 3026 6833 ROI: +353 (0) 1697 8586

E: info@smetbuildingproducts.com

smetbuildingproducts.com or smet.ie



Marketplace+

The information, and, in particular, the recommendations relating to the application and end-use of SMET distributed products, are given in good faith based on SMET's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with the manufacturer's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. The manufacturer reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.