

# DUNLOP CS1-12 S1 ULTRA FLEXIBLE TILE ADHESIVE



## TECHNICAL SUMMARY

<b>Size</b>	20kg
<b>Colour</b>	White
<b>Classification</b>	C2TES1
<b>Composition</b>	Improved deformable cementitious adhesive with reduced slip and extended open time
<b>Coverage (20kg bag)</b>	Approx: 2kg/m <sup>2</sup> for dry walls Approx: 4kg/m <sup>2</sup> for floors, exterior and wet areas.
<b>Pot Life*</b>	3 hours
<b>Open Time*</b>	30-45 minutes
<b>Setting Time*</b>	12-16 hours
<b>Grout After*</b>	12-16 hours
<b>Bed Thickness</b>	2-6mm
<b>Application Temperature</b>	Room Temperature approx. 20°C (do not use below 5°C)
<b>Storage &amp; Shelf Life</b>	This product must be stored in unopened packaging, clear of the ground in cool dry conditions between 5°C and 30°C and protected from excessive draught. Ensure part-used bags are resealed. If stored correctly the shelf life of this product is 12 months.

\*Depending on temperatures, background and site conditions.

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**SITUATION**

Walls	✓	The surface must be clean, dry, sound and flat, if areas need to be filled and prepared, use a suitable compound such as DUNLOP RAPID RESCUE REPAIR FILLER.
Floors	✓	The surface must be clean, dry, sound. The surface may require priming such as DUNLOP TILERS PRIMER or DUNLOP UNIVERSAL BONDING AGENT, dependent on type of background.
Interior Dry	✓	
Wet Areas	✓	Background should be protected from water ingress. (e.g. by using DUNLOP SHOWER WATERPROOFING KIT). BS Standards recommend at least 2 weeks from completion of grouting before the shower can be used.
Power Showers	✓	Background should be protected from water ingress. (e.g. by using DUNLOP SHOWER WATERPROOFING KIT). BS Standards recommend at least 2 weeks from completion of grouting before the shower can be used.
Swimming Pools	✓	Do not fill pool for at least 3 weeks after completion of the grouting and movement joints. Contact DUNLOP TECHNICAL HELPLINE for further advice.
Exterior	✓	DUNLOP FLEXIBLE ADDITIVE may be used to enhance performance in exterior situations. Contact DUNLOP TECHNICAL HELPLINE for further advice.
Underfloor Heated Screeds	✓	The underfloor heating should be commissioned before tiling can be started. The use of DUNLOP PROCOVER UNCOUPLING MAT may be required. Contact DUNLOP TECHNICAL HELPLINE for more information NOTE: Ensure the underfloor heating is re-commissioned correctly after completion of tiling
Electric Undertile Heating	✓	Apply a suitable DUNLOP floor smoothing and levelling compound and leave to dry e.g. DUNLOP LX-360 FIBRE LEVELLER. Apply DUNLOP PROCOVER UNCOUPLING MAT. The heating must not be switched on for at least 2 weeks after completion of the grouting. Check with the manufacture of the undertile heating system. For advice, contact DUNLOP TECHNICAL HELPLINE.

**For further advice or advice on any other situations not listed above, please contact DUNLOP TECHNICAL HELPLINE on 01782 591120**

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**BACKGROUND**

The surface to be tiled should be flat, clean and free from dust, grease or any other barriers to adhesion. Suitable surfaces include:

Concrete; cement: sand screeds and rendering:	✓	Allow the following minimum drying times: Concrete – 6 weeks, Cement:sand screeds – 3 weeks, Cement: sand rendering – 2 weeks (3 weeks for swimming pools). If surface is porous or dusty- clean, then apply 2 coats of DUNLOP TILERS PRIMER diluted 1:1 with clean water. Allow to dry between coats.
Plaster		Must be at least 4 weeks old before tiling. Ensure finish coat has been applied, and surface is free from dust. If polished, brush thoroughly using a stiff bristled brush before priming with two undiluted coats of DUNLOP TILERS PRIMER or DUNLOP SBR UNIVERSAL BONDING AGENT diluted 1 part primer to 2 parts water by volume. Allow primer to dry. NOTE: If areas need to be filled and prepared, use a suitable compound such as DUNLOP RAPID RESCUE REPAIR FILLER. Do not tile to bonding/browning plaster. The maximum weight of tiling to plaster (including the tile adhesive) is 20kg per m <sup>2</sup>
Calcium Sulfate-based screeds i.e. Anhydrite:	✓	Before tiling, allow the screed to dry out with moisture content below 0.5% (measured using the carbide method). Mechanically remove top surface to remove weak/dusty surface layer(s). Prime with 2 coats of DUNLOP TILERS PRIMER. Apply the first coat diluted 1:1 by volume with water and the second coat undiluted at 90 degrees to the first coat. Allow to dry in between coats and the second coat should also be touch dry.
Existing glazed ceramic tiles/glazed bricks:	✓	Must be soundly bonded to a stable background that is sufficiently strong to support the weight of the new tiling. Surface must be clean, dry and dust/contamination free. Any surface sealers must be removed. Mix CS1-12 S1 ULTRA FLEXIBLE TILE ADHESIVE with DUNLOP FLEXIBLE ADDITIVE (diluted 1:3 by volume with water).
Existing unglazed ceramic tiles, quarry tiles, terrazzo and natural stone:	✓	Must be soundly bonded to a stable background that is sufficiently strong enough to support the weight of the new tiling. Surface must be clean, dry and dust/contamination free. Any surface sealers must be removed. Remove and make good any loose or hollow sounding tiles.
Plasterboard	✓	Ensure the plasterboards are dry, securely fixed i.e. at 300mm centres or as per board manufacturer's recommendations and be of a suitable thickness. If the plasterboard is dot and dabbed at 300mm centres and around the perimeter, leave to dry before tiling. Maximum weight of tiling to plasterboard (including the tile adhesive) is 32kg per m <sup>2</sup>
Fibre reinforced cement boards, and tile backer boards:	✓	Check suitability with board manufacturer. Ensure boards are sufficiently stable, can carry the additional load without excessive deflection and has adequate ventilation underneath the boards. If boards <10mm thick also use DUNLOP PROCOVER UNCOUPLING MAT. Some boards may require priming prior to tiling using a primer such as DUNLOP TILERS PRIMER (1:1 dilution).
Plywood overlay - floors (min 15mm):	✓	The existing timber floor should be sufficiently rigid and stable to receive tiles and have adequate ventilation underneath the timber. Overlay with exterior grade plywood, minimum 15mm thick, screwed at 300mm centres. Seal all timber surfaces on back face and edges with undiluted DUNLOP SBR UNIVERSAL BONDING AGENT. Prime surface to be tiled using undiluted DUNLOP SBR UNIVERSAL BONDING AGENT. Allow to dry.
Existing vinyl tiles (Not cushion floor variety):	✓	Must be securely bonded to their backgrounds and free of polish, grease etc.
Underfloor heating:	✓	For further advice, contact DUNLOP TECHNICAL HELPLINE.
T&G Floorboards	✓	Ensure T&G boards are sufficiently rigid, free from deflection and securely fixed i.e. with suitable screws to joists/noggins at 300mm centres. Remove all varnishes, lacquers and other surface coatings incompatible with adhesion by sanding and leave a dust free surface. Prime the T&G boards with 2 coats of DUNLOP TILERS PRIMER, undiluted applied at 90°between coats. Allow each coat to dry. Apply DUNLOP PROCOVER UNCOUPLING MAT as per the DUNLOP TECHNICAL DATA SHEET to the boards using a suitable DUNLOP tile adhesive e.g. DUNLOP CF-24 FLEXIBLE TILE ADHESIVE, DUNLOP CF-03 FLEXIBLE FAST SET ADHESIVE or DUNLOP CLF-03 FLEXIBLE LARGE FORMAT & NATURAL STONE ADHESIVE.

**For further advice or advice on any other backgrounds not listed above, please contact DUNLOP TECHNICAL HELPLINE on 01782 591120**

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**TILE TYPE**

Glazed - ceramic	✓	Cannot be generally used for external or heavy traffic floor areas
Unglazed - ceramic	✓	Normally used in commercial/industrial situations and more used for wet areas and external.
Porcelain	✓	Use only DUNLOP products with the Porcel Bond icon to install porcelain tiles. (note the choice of DUNLOP tile adhesive will also depend on the background to which the tiles are to be fixed.
Natural Stone – translucent / water sensitive including (resin agglomerated stone)	×	
Natural Stone – non translucent	✓	Check with the manufacture if the stone will require sealing the face before tiling or grouting.
Mosaics - ceramic	✓	Supplied on sheets, mesh/paper or plastic. Follow manufacture instruction on installation (note it is better to stagger the sheets when fixing).
Mosaics - porcelain	✓	Supplied on sheets, mesh/paper or plastic. Follow manufacture instruction on installation (note it is better to stagger the sheets when fixing).
Mosaics – natural stone	✓	Supplied on sheets, mesh/paper or plastic. Follow manufacture instruction on installation (note it is better to stagger the sheets when fixing). NOTE: If translucent – Use DUNLOP CS1-03 ULTRA FLEXIBLE FAST SET TILE ADHESIVE with DUNLOP FLEXIBLE ADDITIVE diluted 1:3 with water by volume. The sheets may require sealing before fixing, check with the mosaic manufacturer or supplier.

**For further advice or advice on any other tile types not listed above, please contact DUNLOP TECHNICAL HELPLINE on 01782 591120**

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**IN A NUTSHELL**

DUNLOP CS1-12 S1 ULTRA FLEXIBLE TILE ADHESIVE is a water resistant, deformable, high grab, non-slip powder-based tile adhesive with extended open time and pot life. Suitable for fixing wall and floor tiles including porcelain, ceramic, fully vitrified, large format, mosaics, most natural stone (excluding moisture sensitive stone), quarry tiles and brick slips. Suitable for bed thickness from 2-6mm or up to 12mm in isolated areas of limited extent in interior and exterior areas including patios. Tiles can be grouted 12-16 hours after fixing. Water and frost resistant, it can be used in showers, wet rooms, swimming pools and areas of limited movement and underfloor heating. DUNLOP CS1-12 S1 ULTRA FLEXIBLE TILE ADHESIVE exceeds the requirements of BS EN12004 for a C2TES1 tile adhesive.

**MIXING**

Mix in the ratio of approx. 3 parts powder to 1 part water by volume. This 20kg bag uses 5.4 litres of clean water. Add to water and mix thoroughly until a smooth consistency is obtained. Allow mixed adhesive to stand for 1-2 minutes before remixing for 30 seconds. Use within 3 hours of mixing (at room temperature). Do not use below 5°C. Note: If using an electric drill mixer, blend at slow speed (i.e. under 300rpm.)

If adhesive feels to be firming up before the 3hr pot life (at room temperature) is exceeded, you can re-mix but DO NOT add any more water.

**APPLICATION**

1. Spread the adhesive with a suitable notched trowel to cover approximately 1m<sup>2</sup> or an area that can be tiled in approx. 30 – 45 minutes. Spread adhesive so ribs all go in one direction to help achieve solid bed. DO NOT use a “Dot and Dab” method.
2. For floor tiling, large format wall tiles, wet areas and exterior situations, a solid-bed trowel must be used.
3. Press the dry tiles firmly into the adhesive, checking periodically that good contact is maintained with the backs of the tiles. Back buttering of large format tiles may be necessary. Tiles should be fixed within approx. 30-45 minutes of adhesive being applied, depending on the porosity of the surface and the atmospheric conditions (check the adhesive ribs periodically and if a skin has formed, remove the adhesive and apply a new layer). Tiles can be adjusted up to 20 minutes after initial positioning.
4. Leave minimum 2mm joints between wall tiles and 3mm joints between floor tiles.
5. Remove all surplus adhesive from tiles and joints with a damp sponge/cloth before it sets.
6. Ensure adhesive is fully set before grouting. This will help avoid possible issues with grout finish. For example, efflorescence or patchy grout.

**NOTES**

This product is fully resistant to water, however, being cement-based it is not impervious to passage of water. To improve flexibility & adhesion use DUNLOP FLEXIBLE ADDITIVE (pre-diluted 1:3 by volume with clean cold water). When protecting water-sensitive backgrounds apply a tanking membrane to the background such as DUNLOP SHOWER WATERPROOFING KIT.

**COVERAGE**

On a level background the amount of adhesive will be approx.: 2kg/m<sup>2</sup> for dry walls and approx.: 4kg/m<sup>2</sup> for floors, exterior and wet areas.

**10 YEAR GUARANTEE**

As a testament to the reliability and performance of our rigorous quality control procedures, all Dunlop products carry a 10-year guarantee. Subject to terms and conditions -see website for details [www.dunloptrade.com](http://www.dunloptrade.com)

**HEALTH & SAFETY INFORMATION**

For detailed information on safety guidance, please refer to the Product Material Safety Data Sheet (available on request or via the Dunlop website [www.dunloptrade.com](http://www.dunloptrade.com))

**DUNLOP TECHNICAL HELPLINE**

For free expert guidance on the use of this product or any aspect of ceramic tiling telephone the DUNLOP TECHNICAL HELPLINE on: Tel: 01782 591120 Fax: 01782 591121.

Note: The customer must verify the suitability of any information, opinion, recommendation or advice (“Information”) provided by the Company for the particular application for which any goods are intended to be used and the Company accepts no liability (whether in contract tort, or otherwise) whatsoever for any loss, damage, or expense arising from the misuse of any information it supplies nor for the use of any information in or for applications which are unsuitable or inappropriate. Building Adhesives Ltd operates a continuous research and development programme and reserves the right to alter or update information from time to time.