

# Technical Data Sheet

Date of compilation: 18/09/2023

## ARC T-20

### DESCRIPTION

Arc T-20 for increased bond strengths, is a white cement based tile adhesive for tiling to walls and floors. Its high polymer content gives excellent initial grab to enable the fixing of heavy tiles. Arc T-20 can be used on interior and exterior surfaces, showers, underfloor heated areas etc. When fully cured it has good water and frost resistance. T-20 can be used on a variety of substrates including tiles with low porosity bases.



### SUBSTRATE PREPARATION

The substrate must be structurally sound, dimensionally stable and strong enough to support the tiling installation and expected traffic. Surfaces to be tiled must be clean, suitably dry and free from contamination such as dust, paint, oils, grease, sealers or any other substance which may impair adhesion.

All tiling should be carried out to current best practice and relevant standards. For further information or details of substrates not covered below, consult Arc Tiling Guide.

**Concrete:** Concrete should be a minimum of 6 weeks old. Prime with Arc Tiler's Primer diluted 3 parts primer to 1 part water.

**Power-floated concrete:** Mechanically abrade surface and vacuum dust. Prime surface with 1 coat Arc Tiler's Primer Plus.

**Sand Cement Screeds:** New screeds should be a minimum of 4 weeks old. Prime with Arc Tiler's Primer diluted 3 parts primer to 1 part water.

**Gypsum screeds:** Screed must be confirmed dry and the residual moisture content must be below 0.5%. Mechanically abrade surface and vacuum dust. Prime surface with Arc Tiler's Primer diluted 3 parts primer to 1 part water followed by one neat coat of Arc Tiler's Primer.

**Timber floors:** Timber substrates must be sufficiently rigid and supported to be free from excessive deflection under expected loads. Arc recommend overlaying timber floors with Arc MagnaBoards, screw fixed at 150mm centres. Where plywood is used as overlay it must be exterior grade and a minimum of 15mm thick. Prime boards with Arc Tiler's Primer diluted 3 parts primer to 1 part water.

**Blockwork / Render:** New blockwork must be a min New Gypsum Plaster – Gypsum plaster must be at least 4 weeks old. Polished plaster must be brushed with a stiff brush. Weight of tiles and adhesive must be less than 20kg/m<sup>2</sup>. Prime with Arc Tiler's Primer diluted

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ed 3 parts primer to 1 part water.

**Plasterboard:** For plasterboard without a skim finish, weight of tiles and adhesive must be less than 32kg/m<sup>2</sup>. Prime with Arc Tiler's Primer diluted 3 parts primer to 1 part water.

**Plywood Walls:** Timber based boards including plywood are no longer recommended substrates for tiling. If they are present, Arc recommend replacing them or overboarding them with Arc MagnaBoards.

**Underfloor Heating:** Piped underfloor heating systems must have been fully commissioned to maximum running temperature. Turn off heating 24hrs prior to tiling (or in cold conditions to below 15°C). When tiling is completed allow 7 days before switching on heating and increase the temperature gradually by max 5°C per day.

**Movement Joints:** Ensure there is adequate provision of movement in the tiling installation by the inclusion of sufficient and adequate joints. This is particularly important on heated screeds and with larger tiles.

**Priming:** Generally prime absorbent surfaces with Arc Tiler's Primer diluted 3 parts primer to 1 part water and non-porous surfaces with 1 coat Arc Tiler's Primer Plus. Allow primer to dry before tiling.

### MIX PREPARATION

Do not use when temperatures are below 5°C. T-20 should be added to water in a clean container whilst mechanically stirring and mixed thoroughly to give a soft, slump-free, easily worked mortar. The recommended mixing proportions by volume are 1 part water to 3 parts powder (approx 5L water per 20kg bag). The consistency of the paste can be adjusted with slight additions of water or powder at the initial mixing phase, however part-used adhesive should never be "freshened up" with later water additions.

### APPLICATION METHOD

For fixing ceramic tiles or mosaics, use a notched trowel to give a ribbed mortar bed on the substrate into which the tiles are firmly bedded with a twist and slide action to ensure full contact. Use a 3mm x 3mm notch at 6mm centres for mosaics and thin flat backed wall tiling, a 5mm x 5mm notch at 10mm centres for general wall tiling and 10mm x 10mm notch at 16mm centres for floor tiling. The position of the tiles can be adjusted up to 10 minutes after initial fixing. Open time of the exposed mortar bed is approximately 20-30 minutes, depending on surface porosity and site conditions. It is recommended that tiles with raised or studded back profiles, (or in situations where dampness is likely after tiling), should be buttered to ensure solid bed fixing. Do not trowel out an area of adhesive greater than can be tiled over within a 10-15 minutes period. Surfaces such as rutted concrete

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and masonry block-work which are rough and uneven may first be levelled with Arc Floor Levelling Compound. Adhesive should not exceed 6mm in depth. Back-butter large format tiles and natural stone tiles to achieve maximum bonding.

### GROUTING

Grouting may proceed as soon as the tile bed is sufficiently firm, which for T-20 will be after approximately 24 hours at room temperature. This period will be slowed by lower temperatures and accelerated by higher temperatures.

### TILES & SUBSTRATES

#### SUITABLE TILES

Porcelain, Ceramics, Terracotta, Quarry, Quartz, Glass, Marble, Mosaics, Limestone, Travertine, Natural Stone, Slate.

#### SUITABLE SUBSTRATES

Plywood, Concrete, Plaster, Screeds, Backer Boards, Anhydrite Screed, Underfloor Heating, Plasterboard, Existing Tiles, Render, Brick & Block, Heated Screed, Vinyl Tiles, Fibre Cement, Asphalt Flooring.

### TECHNICAL DATA

Pot Life	Open Time	Set Time	Coverage	Depth	EN
4-5 hours	20-30 minutes	24 hours	4-5kg/m <sup>2</sup>	3-6mm	12004:C1TE

### STORAGE & PACKAGING

This product has a shelf life of 12 months if stored in its original unopened packaging in normal dry conditions. It is supplied in 20kg multi-ply moisture resistant paper sacks.

### HEALTH & SAFETY

For more information and precautions for use refer to the safety data sheet.

### NOTE

All products should be sold in accordance with the manufacturer's instructions. The manufacturer cannot be held responsible where conditions of use are beyond our control. Full information and advice is freely available from our Technical Services Department e-mail [technical@arcbuildingproducts.ie](mailto:technical@arcbuildingproducts.ie). Whilst any information contained herein is to the best of our knowledge true and accurate, no warranty is given or implied in connection with any recommendations or suggestions made by us, our representatives, agents, or distributors, as the conditions of use and any labour involved are beyond our control. Our warranty is therefore limited to the quality of supplied product.