

# TECHNICAL INFORMATION

## READY TO USE MORTARS

### Product Data Sheet No. 100/02

#### INTRODUCTION

Tarmac Ready-to-use mortars are factory produced, are eminently suitable for use in all types of masonry construction, both above and below damp-proof course. The exact specification will depend on the properties of the masonry unit, type of construction and the exposure conditions. The controlled mix design of Tarmac ready-to-use mortars, ensure maximum resistance to frost attack and excellent long term durability.

#### PRODUCT CONFORMITY

Tarmac Ready-to-use mortars conform to BS EN 998 – 2 as appropriate and should be tested by the methods given in BS EN 1015 and BS 4551. Where coloured mortars are supplied, the pigments used by Tarmac not only conform to BS EN 12897, but consist exclusively of synthetic iron oxides which are guaranteed against fading by the manufacturers. Site usage should be in accordance with the recommendation in BS EN 1996 Eurocode 6 PD6697

#### DESCRIPTION

##### COMPOSITION AND MANUFACTURE

Tarmac Ready-to-use mortars are factory produced mortars which are normally retarded for 36 or 72 hours and require no further machine mixing. High quality materials are accurately proportioned with special admixtures to ensure that the appropriate working time and strength are achieved.

#### DENSITY

Typical test results	Density kg/m <sup>3</sup>
Fresh wet	1700 – 1900
Set and air dried	1550 - 1750

#### PERFORMANCE

Tarmac Ready-to-use mortars are based on performance. We would recommend you consider the following strength designations when specifying mortar mixes. Results are based on prisms made from typical production material cured and tested in accordance with the requirements of BS EN 1015 part II.

#### STRENGTH

BS EN 998-2 Mortar Class	(iii) M4	(ii) M6	(i) M12
Compressive Strength N/mm <sup>2</sup>	4	6	12

**Table 1 – BS EN 998-2 compressive strengths made using prisms.**

#### FIRE PROTECTION

Tarmac Ready-to-use mortar contains less than 1.0% organic material and is classified in accordance with BS EN 13501-1 as Class A1 without testing (Commission Directive 96/603/EC).

#### EFFECT OF FREEZE THAW DAMAGE

The mix design of Tarmac Ready-to-use mortar is such that they are ideally suited for use in winter conditions. When used according to Tarmac Site Guide No.3 and No. 6, the controlled cement and air contents greatly reduce the probability of freeze thaw damage.

#### COMPATIBILITY

Tarmac ready-to-use mortars are compatible with all normal building materials.

For more details contact:  
03701 116 116 mortar@tarmacbp.co.uk

The information given in this technical data sheet is based on our current knowledge and is intended to provide general notes on our products and their uses. Tarmac endeavour to ensure that the information given is accurate, but accept no liability for its use or its suitability for particular application because of the product being used by the third party without our supervision. Any existing intellectual property right must be observed.

**DURABILITY**

Tarmac Ready-to-use mortars offer excellent long term durability due to the controlled composition and quality of aggregates used.

**HEALTH & SAFETY**

There is a real danger of contact dermatitis or serious burns. To prevent skin coming into contact with wet cement mixes such as fresh concrete, mortar or screed ensure that suitable protective clothing and eye protection is worn. Where skin contact occurs either directly or through saturated clothing wash immediately with soap and water. For eye contact, immediately wash out eyes thoroughly with clean water. If swallowed wash out mouth and drink plenty of water.

For further information please refer to Tarmac Material Safety Data Sheet – Mortars, Screeds and Renders.

**APPLICATIONS**

**USES**

Tarmac Ready-to-use mortars may be used in any application where the reliability and convenience of ready-to-use mortar is required for masonry, rendering or plastering.

**ECONIMICS**

Tarmac Ready-to-use mortars are sold by volume and one cubic metre will lay:

Solid bricks:

Typically 2000 per cubic metre i.e. 0.030m<sup>3</sup> / m<sup>2</sup> of brickwork.

(Range 1700 – 2400)

Frogged or perforated bricks:

Typically 1700 per cubic metre (150cm<sup>3</sup> frog) i.e. 0.035m<sup>3</sup> / m<sup>2</sup> of brickwork.

(Range 1300 – 1800)

The above figures apply to single skin stretcher bond only and mortar usage will obviously be higher for double or triple thickness work.

These figures are intended as a guide only and may vary widely from one site to another according to exact size of the units, depth of frog, and size of perforations, wastage and other factors. For plastering and rendering approximate coverage are shown in the table:

Thickness (mm)	Coverage Area m <sup>2</sup> /tonne (approximately)
5	100 – 120
10	54 – 63
13	42 – 49
18	31 – 36

**CONSTRUCTION / SITE WORK**

**DELIVERY STORAGE AND USE**

Tarmac ready-to-use mortars are delivered by specialist vehicles which discharge into clean site containers of 0.30m<sup>3</sup> capacity. The material is normally retarded for 36 or 72 hours. The containers, which may be hired or purchased, have polythene liners supplied with each delivery to protect the material during storage. The liners are colour coded or printed to identify the day of delivery.

In hot or windy conditions extra protection should be added to prevent evaporation of the water leading to loss of workability. Any slight loss of consistency may be restored by addition of small quantities of water either on the spot board or in the site container (up to 5 litres per 0.30m<sup>3</sup> tub) during the specified working time.

Bins of mortar which are not required for immediate use (especially if to be kept overnight) should be treated by adding a maximum of five litres (one gallon) of water onto the surface per full bin of 0.30m<sup>3</sup> of mortar before covering. Apart from turning over the mortar before use, no other mixing should normally be required.

Addition of water within the working period will have no adverse effect on the strength or durability of the masonry. In fact, the full properties will be restored as a better bond will be achieved when mortar is used at the correct consistency.

In winter, protection from freezing should be provided as necessary, by means of an insulating cover or storage under cover.

### **TECHNICAL SUPPORT**

Tarmac provides a comprehensive sales and technical advisory service to Specifiers and customers.

A quality system has been implemented throughout the company. Quality procedures are in conformity with BS EN 998-2 KM 90447. All Tarmac factories hold third party certification from the British Standards Institution. Details of the certification status of individual factories may be obtained from the technical helpdesk.

### **PRICES AND CONDITIONS OF SALE**

Prices vary according to mix design, quantity and delivery location. For specific quotations contact your local Tarmac representative or call out National Sales Helpline on 03701 116116.

All quotations given, orders placed and materials supplied are subject to the Conditions of Sale available via download from the Tarmac website [www.tarmac.com](http://www.tarmac.com) or upon request from your nearest Tarmac Building Products Regional Office.

### **SUPPLY**

Tarmac ready-to-use mortars are available direct from mortar factories located strategically throughout mainland United Kingdom: contact your nearest Tarmac Regional Office for further details

### **ORDERING**

When ordering, please state mortar type and strength class, quantity, date and preferred time of delivery. 24 hours should normally be allowed for delivery. Orders should be for full tubs i.e. in multiples of 0.30m<sup>3</sup>. 24 hours should normally be allowed for delivery.

REFERENCES	
British Standards Institute	
BS EN 197-1 :Part 1:2011	Cement Part 1: Composition, specifications and conformity criteria for common cements
BS 7979:2016	Specification for limestone fines for use with Portland cement
BS EN 459 : Part 1 : 2015	Building lime. Definitions, specification and conformity criteria
BS EN 12878 : 2014	Pigments for the colouring of building materials based on cement and/or lime specification and methods of test
BS EN 13139 : 2002	Aggregates for mortar
PD 6682 – 3 : 2003	Aggregates – Part 3 : Aggregates for mortar – Guidance on the use of BS EN 13139
BS EN 13501 – 1 : 2007+A1:2009	Fire classification of construction products and building elements Part 1:Classification using test data from fire reaction tests
BS 4551 : 2005 +A2:2013	Mortar – Methods of test for mortar – Chemical analysis and physical testing
BS EN 1996-1-1:2005+A1:2012	Eurocode 6. Design of masonry structures. General rules for reinforced and unreinforced masonry structures
BS EN 1996-1-2:2005	Eurocode 6. Design of masonry structures. General rules. Structural fire design
BS EN 1996-2-2006	Eurocode 6. Design of masonry structures. Design considerations, selection of materials and execution of masonry
BS EN 1996-3-2006	Eurocode 6. Design of masonry structures. Simplified calculation methods for unreinforced masonry structures
NA to BS EN 1996-1-1:2005+A1:2012	UK National Annex to Eurocode 6. Designs in masonry structures. General rules for reinforced and unreinforced masonry structures
NA to BS EN 1996-1-2:2005	UK National Annex to Eurocode 6. Design of masonry structures. General rules. Structural fire design
NA to BS EN 1996-2-2006	UK National Annex to Eurocode 6 Design of masonry structures. Design considerations, selection of materials and execution of masonry
NA to BS EN 1996-3-2006	UK National Annex to Eurocode 6. Design of masonry structures. Simplified calculation methods for unreinforced masonry structures
PD6697 : 2010	Recommendations for the design of masonry structures to BS EN 1996
PD 6678 : 2005	Guide to the selection and specification of masonry mortar

BS EN 1008	Mixing water for concrete – specification for sampling, testing and assessing the suitability of water, including water recovered from processes in the concrete industry, as mixing water for concrete
BS EN 934	Part 1 2008 Admixtures for concrete, mortar and grout: Part 2: 2009+A1:2012 Concrete admixtures – definitions, requirements, conformity, marking and labelling Part 3: 2009+A1:2012 Admixtures for masonry mortar – definitions, requirements, conformity, marking and labelling
Building Research Establishment	
Digest 361	Why do buildings crack?
Digest 362	Building mortar
Tarmac	
Product Data Sheet No. 100/02	Tarmac Dry-Silo-Mortar
Site Guide No. 100/01	Ready-to-use mortars
Site Guide No. 6	Winter working recommendations for mortars
Site Guide No. 7	Summer working recommendation for mortars
Tarmac Safety Data Sheet	Mortar