MASTER® >> BUILDERS **SOLUTIONS**

MasterFiber® Selection Guide

SPECIAL CONDITIONS

USAGE

STRUCTURE TYPE

REPLACES

MASTERFIBER PRODUCT







•Adverse ambient conditions (ex: hot, dry, windy)



•Holds cracks tight • Reduces plastic shrinkage cracking



 Residential slab-on-ground • Driveways and sidewalks • Basement and garage slabs •Ultra-thin whitetopping • Topping slabs



•Light gauge welded-wire reinforcement (WWR) 6x6 WI.4xWI.4 152x152-MW9.1xMW9.1

Fibrillated F 70, F 100

1.5 lb/yd³ 0.9 kg/m³

• Saves the contractor time • Improves jobsite safety • Ensures reinforcement is in the correct location

N/A

•Holds cracks tight





•#3, #4 rebar 10 mm, 13 mm rebar •WWR

MAC Matrix, MAC 100, MAC 100 Plus, MAC 360 FF, MAC 2200 CB*

MacroFiber

3 - 15 lb/yd³ $1.8 - 9.0 \text{ kg/m}^3$

 Increases post-crack loadcarrying performance Increases ductility, energy absorption and impact resistance • Improves jobsite safety and saves time

* Minimum dosage of 2.5 lb/yd³ (1.5 kg/m³)

overlays •Utility Precast

MasterFiber MAC Matrix, MAC 100, MAC 360 FF

| Fiber dosage for replacing WWR for slab-on-ground, lb/yd ³ | | | | | | | | | |
|---|---|--------------------|-----------|--------------------|--------------------|----------------------|--------------------|--------------------|--------------------|
| | | 6 x 6 | | | | 4 x 4 | | | |
| Slab thickness (in.) | Concrete Compressive strength (psi) | W2.0xW2.0 (8/8) | W2.1xW2.1 | W2.9xW2.9 (6/6) | W4.0xW4.0 (4/4) | WI.4xWI.4 (10/10) | W2.0xW2.0 (8/8) | W2.9xW2.9 (6/6) | W4.0xW4.0 (4/4) |
| 4 | 3000 3500 4000 | | | | 4.5 4 3.5 | | | 5 4.5 4 | NA |
| 5 | 3000 3500 4000 | | | | 3.25 3 3 | | | 3.5 3.25 3 | 5.5 5 4.5 |
| 6 | 3000 3500 4000 | | | | | | | | 4.5 4 3.5 |
| 7 | 3000 3500 4000 | | | | | | | | 3.5 3.25 3 |
| 8 | 3000 3500 4000 | | | 5 | | | 3 | | |
| 10 | 3000 3500 4000 | | | | | | | | |

For specified welded-wire reinforcement (fy = 65 ksi) located in top third of slab

| Fiber dosage for replacing rebar for slab-on-ground, lb/yd ³ | | | | | | | | | |
|---|-------------------------------|----------------------|------------------|------------------|------------------|----------------------|-------------------|-------------------|----------------------|
| | | #3 Rebar | | | | #4 Rebar | | | |
| Slab | Concrete | On Center Spacing | | | | On Center Spacing | | | |
| thickness (in.) | Compressive strength (psi) | 9 " | 12" | Ι5" | 18" | 12" | I 5" | 18" | 24" |
| 4 | 3000 3500 4000 | NA | NA | 4.5 4 3.75 | 3.5 3.25 3 | NA | NA | NA | 5.25 4.75 4.25 |
| 5 | 3000 3500 4000 | NA . | 4.5 4 3.75 | 3.5 3 3 | | NA | NA | NA | 4 3.5 3.25 |
| 6 | 3000 3500 4000 | 5.25 4.75 4.25 | 3.5 3.25 3 | | | NA | NA . | 4.5 4 3.75 | |
| 7 | 3000 3500 4000 | 4.5 4 3.5 | | | | NA | 4.75 4.25 4 | 3.75 3.25 3 | |
| 8 | 3000 3500 4000 | 3.5 3.25 3 | | 3 | | 5.25 4.75 4.25 | 4 3.5 3.25 | | |
| 10 | 3000 3500 4000 | | | | | 4 3.5 3.25 | | | 5 |

| PLASTIC-SHRINKAGE CRACK | TEMPERATURE CRACKING | DRYING SHRINKAGE CRACKING | * For MasterFiber MAC 2200CB | | |
|---|--|---|------------------------------------|--|--|
| A surface crack that occurs in concrete before initial set. | Cracking caused by temperature drop in members subjected to external restraints or by temperature differential in members subjected to internal restraints (also called thermal cracking). | Cracking caused by restraint to volume change due to loss of moisture from hardened concrete. | Builders Solutions representative. | | |

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