

**Improving Curling, Strength,
and Taber Abrasion in
Cementitious Flooring
with Short Stuff® Grade E620F**

MINIFIBERS, INC.

Shrinkage Reducing Admixtures (SRAs)

- Can be used to reduce drying shrinkage and curling, but.....
 - Are costly
 - Reduce Compressive Strength
 - Reduce Taber Abrasion

Short Stuff® E620F

- Reduces curling similarly while maintaining Compressive Strength and improving Taber Abrasion

Drying shrinkage - Mix Design

Product: Short Stuff[®] E620F

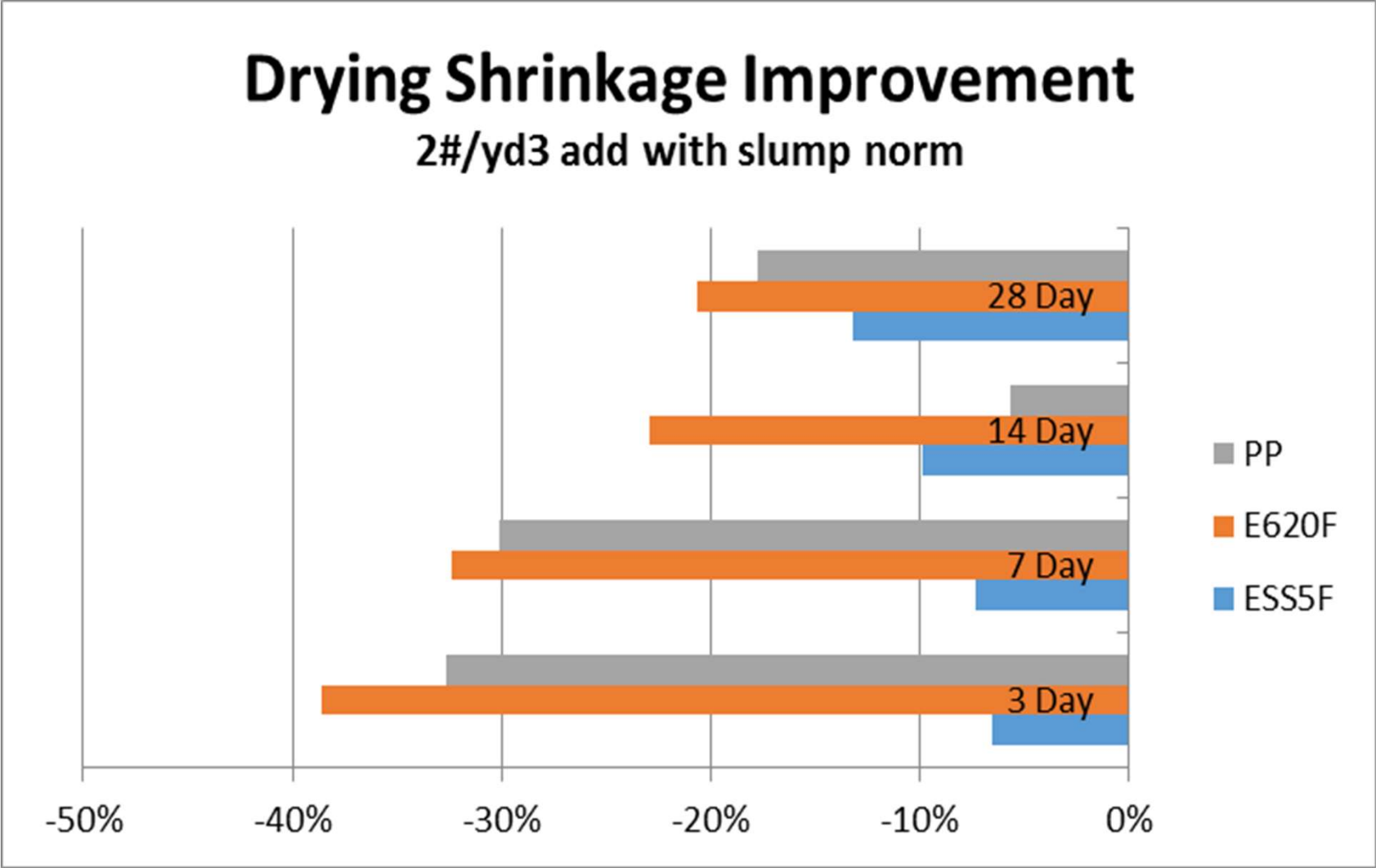
Load, typical: 2.0 #/yd³

Mini Fibers Concrete Mix Design			
Material	Specific Gravity	Weight,lbs.	Volume,cu.ft.
Cement	3.15	635	3.228
3/4" Limestone	2.66	1664	10.026
River Sand	2.65	1409	8.524
Water	1	292.16	4.682
Air Content	2%	0	0.54
Total		4000.16	27

Drying shrinkage - Results

Product: Short Stuff[®] E620F

Load, typical: 2.0 #/yd³



Basic Mix Design

Material	lb./cubic yard
Lafarge Alpena Type I/II	900
Natural Fine Agg SSD	2456
Total Water (Includes SRA Water equiv.)	405
Other Properties	
Designed Air %	4.0
Cement /Sand Ratio	0.37
Water/Cement Ratio	0.45

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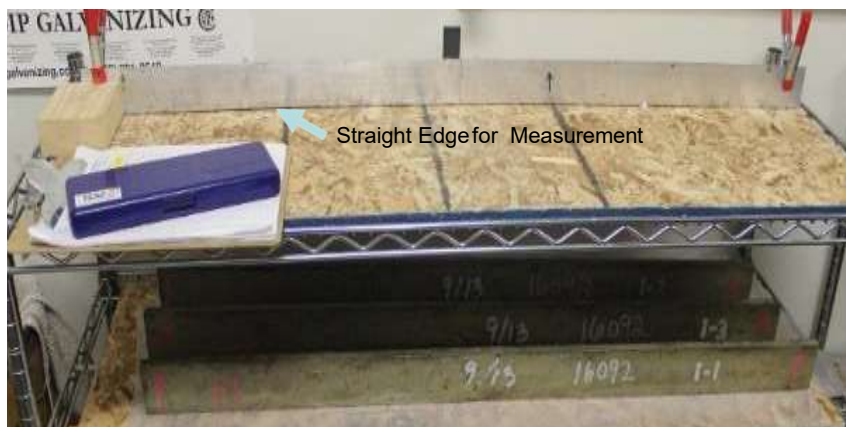
Compressive Strength



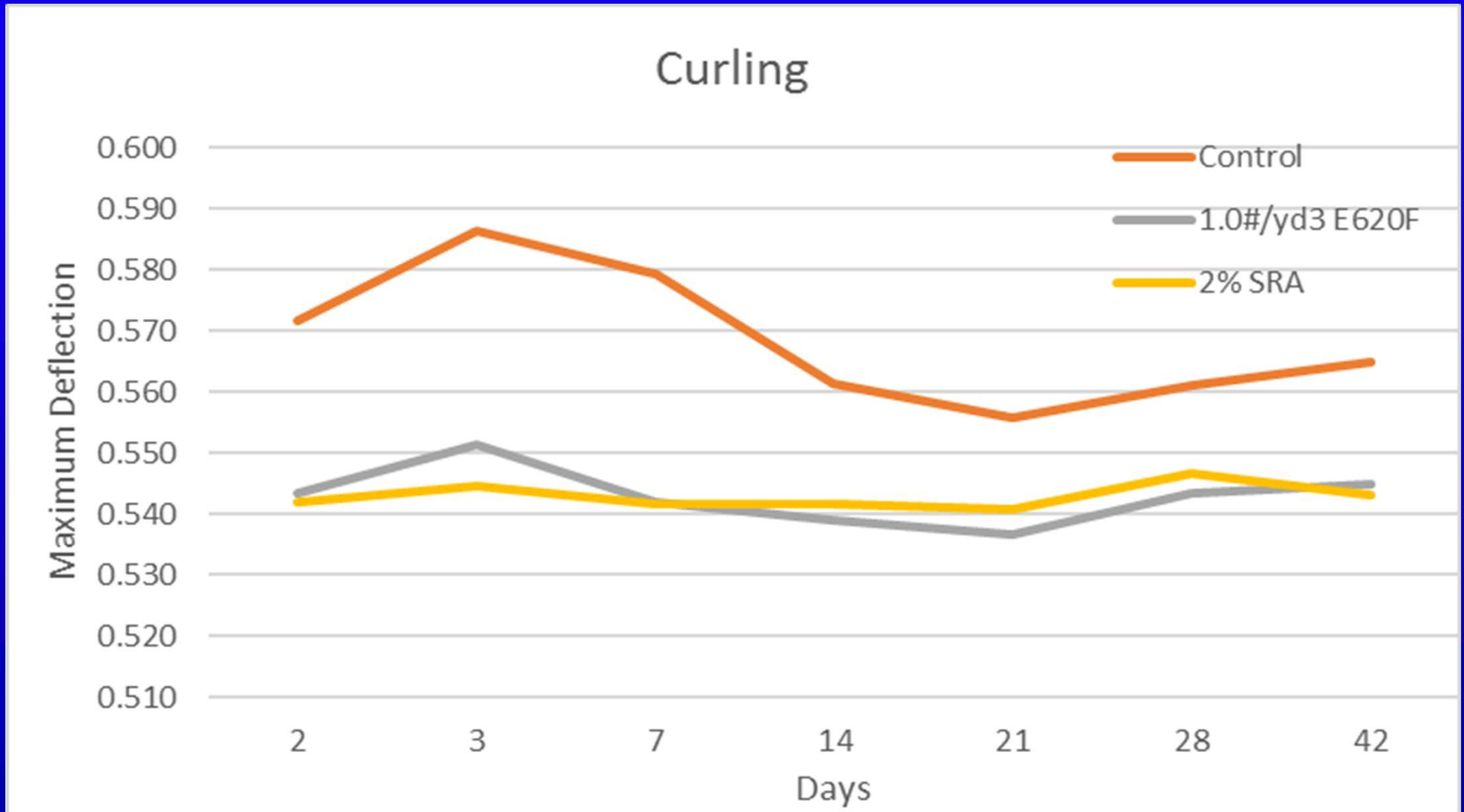
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Curling

- Specimens in 50% RH for drying shrinkage
- Only one wide surface for drying
- Sample curls when moisture gradient is created (drier surface)
- Curl decreases once specimen comes to uniform moisture content



Curling Data

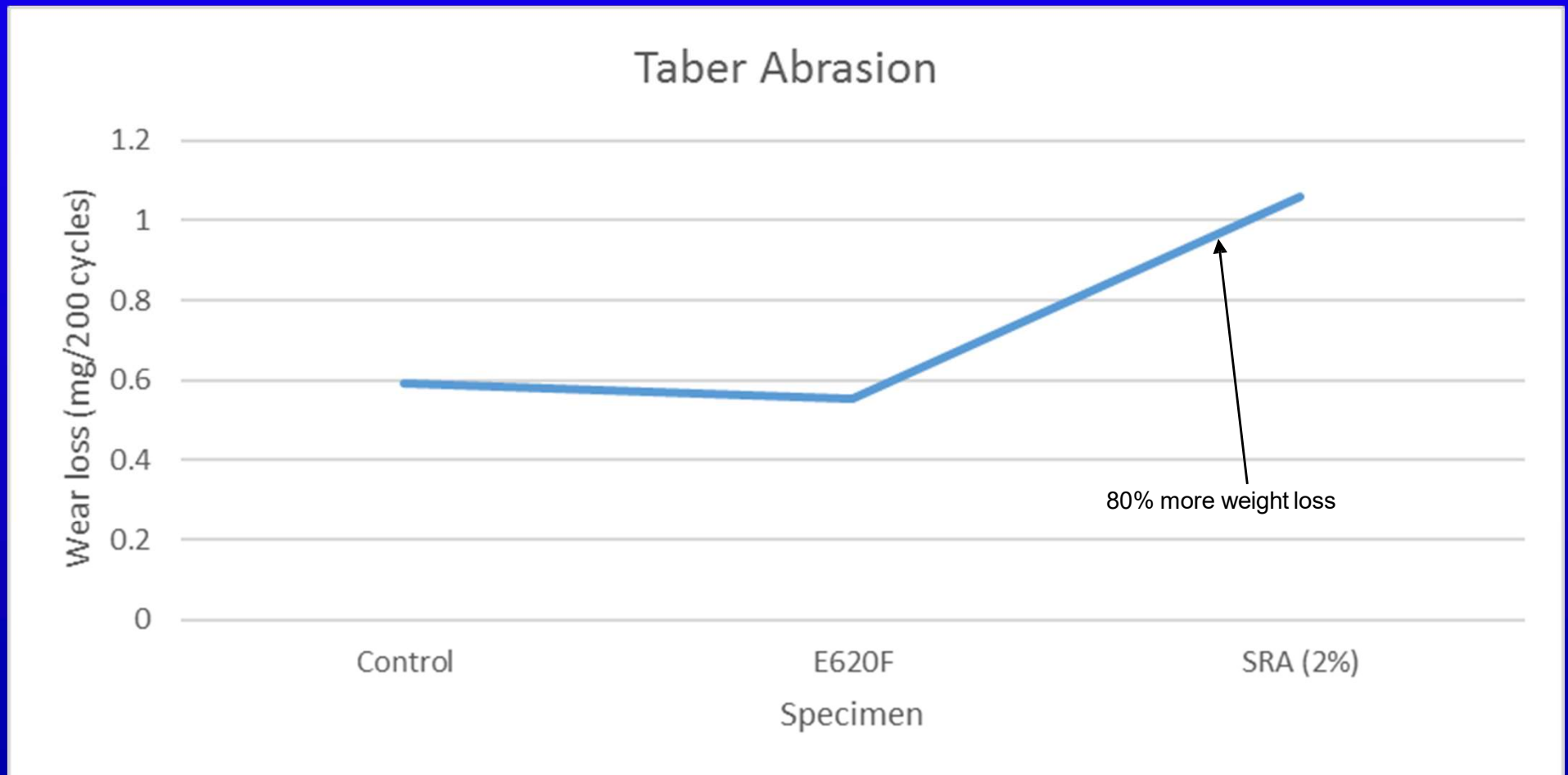


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Taber Abrasion Weight Loss After Abrasion



Taber Abrasion: ASTM G195 and C1803



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Summary

Short Stuff® E620F

- Gave equivalent curling reduction vs. an SRA
- Improved compressive strength vs. an SRA
- Improved Taber abrasion resistance vs. an SRA

Short Stuff[®]
Grade E620F
is available from:

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