

Bullhide Steel Fiber® 55/30							
SingleHook	C	H	O	55	30	N	B
Made of high tensile wire	collated	Hooked-ends	Ordinary	Aspect ratio	length	Normal carbon	Bright

Description

C Collated

Fibers are glued together to ensure as homogenous mix and to avoid balling.

H Hooked-ends

Fibers designed to anchor on aggregate and in paste, and to elongate and pull out rather than break.

O Ordinary

The hooks are well designed for good performance.

55 Aspect ratio

Aspect ratio means ratio of length to diameter of the fiber. Higher aspect ratios mean better performance.

30 Length of steel fiber

Length of fiber should be min 2 times of maximum aggregate size.

N Normal carbon wire

Quality meets KS D 3552 SWM-B
JIS G 3552 SWM-B

Tensile strength for wire
; min 13,000kg/cm² (1,300N/mm²)
- test method ; KS B 0802

B Bright

Bright steel is normal mild steel fibers for typical concrete from 25-35 MPa

Application

- Shotcrete reinforcement
- Precast reinforcement



Quality

- ISO 9001, ISO14001 registered,
- Confirms to ASTM A820

Fiber quantity & Length

Approximately 16,500—17,000 pieces/kg
Fiber length ; 536m/kg

Packing

- 20kg bags (60 bags/pallet)
- 1 MT bag (1000 kg)



How to dose

- Manually adding to RM truck
- Automatic dosing machine

How to input

- By hand or using conveyor belt

Performance

Performance is based on energy absorption of fiber concrete with respect to fiber aspect ratio, fiber type and fiber dose per cubic meter.

Flexural tensile strength $f_{u,fl}$

$$f_{u,fl} = 0.393 \times (f_c)^{2/3}$$

f_c ; cubic compressive strength N/mm²

Equivalent flexural strength is tested by JSCE-SF4 for 3mm deflection.

Equivalent flexural toughness ratio $R_{e,3}$

$R_{e,3}$ = Equivalent flexural strength/flexural strength x 100

Dosage kg/m ³	25	30	35	40	45	50
$R_{e,3}$	46	52	58	63	68	75

Tensile strength after cracking

$f_t = 0.37 \times$ equivalent flexural strength

Minimum dosage based on spacing theory according to Romualdi & Mandels equation

$$S = 13.8d\sqrt{1/V_f}$$

(d ; diameter, V_f ; volume fraction)

type	length	dia	aspect ratio	pc/kg	m/kg	0.4*length		Quality
						min space	Min kg	
50/25	25	0.5	50	24,041	649	10	37	Worst
60/30	30	0.5	60	20,285	649	12	26	Good
55/30	30	0.55	55	16,764	536	12	31	Fair
45/30	30	0.7	43	10,349	331	12	51	Worst
30/0.8	30	0.8	38	7,924	254	12	66	Worst
70/35	35	0.5	70	17,544	649	14	19	Best
65/35	35	0.55	64	14,499	536	14	23	Good
50/35	35	0.7	50	8,951	331	14	37	Worst
45/35	35	0.75	47	7,797	288	14	43	Worst

** Max space for reinforcement is 0.4 times of fiber length

Bullhide Fibers & Shotcrete Supply

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