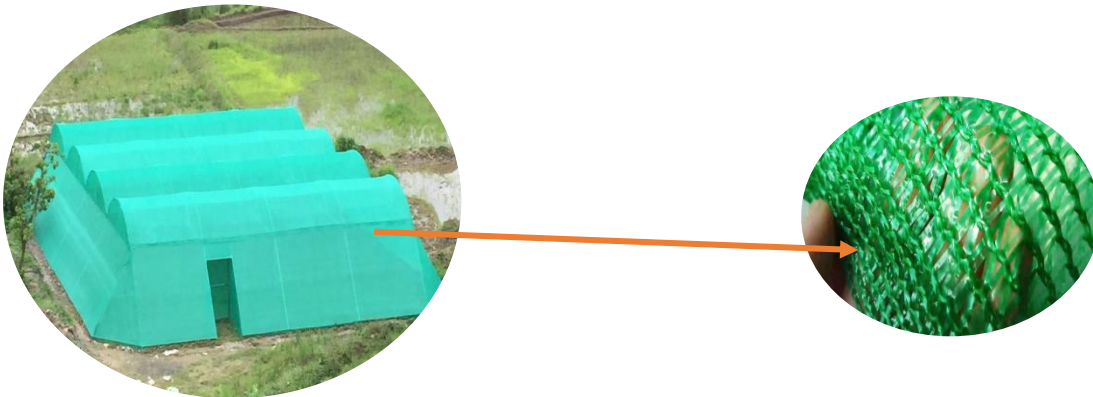


SHADE-NET



Energy received by the plant drives its growth and development, so its control can be used as an environment-friendly tool to manage crop yield and quality. Plants perceive signals from their environment that enable them to adapt and modify their biological cycle. Shade-net house is the most popular choice for protected cultivation in India. It offers opportunity of growing crops at significantly lower costs compared to growing crops in a greenhouse. However, energy management under low cost shade-net house is a big challenge. Thermal and Light Energy both needs to be properly managed in order achieve optimum result. Shade-net facilitates plant desired microclimatic conditions by modulating the incoming solar energy. Shade-net reduces the excessive solar irradiation by blocking the undesired solar irradiation. shade-net is characterized based upon its sun blocking ability e.g. 35% Shade-net which blocks 35% of the incoming solar energy. Color of the shade-net helps in providing desired color recipe to the plant which helps in enhancing the photosynthesis of the plant which in turn increases plant yield and quality. SASMIRA is Center of Excellence for Agrotextiles (CoE-Agrotech) under Ministry of Textiles, GoI. CoE-Agrotech is actively involved in development and promotion of Agrotextile in the

country and also providing support to Industry in manufacturing quality products for export purpose. Shade-net is manufactured and used in India in compliance with national product standard IS 16008: 2016

Specification of shade-net as per IS 16008 (Part1): 2016 (Tape x Tape)

SI No.	Characteristic(s)	Requirement(s)			Method of Test, Ref to
		Type I	Type II	Type III	
(1)	(2)	(3)	(4)	(5)	(6)
i)	Mass, g/m ² , <i>Min</i>	100	120	140	IS 1964
ii)	Average breaking strength of shade nets fabric (Strip method, 325 mm × 50 mm test piece with gauge length of 200 mm), N, <i>Min</i> ;				IS 1969 (Part 1)
	a) Warpway	200	250	290	
	b) Weftway	200	250	290	
iii)	Retention of breaking strength after UV exposure, N, <i>Min</i>	← 85 percent of original actual value (fabric) →			Annex B and IS 1969 (Part 1)
iv)	Color fastness to artificial light ¹⁾	4 or better	4 or better	4 or better	IS 2454
v)	Bursting pressure, kgf/cm ² , <i>Min</i>	5	6	9	IS 1966 (Part 1) or IS 1966 (Part 2)
vi)	Shading percentage	45 to 55	70 to 80	85 to 95	Annex C

¹⁾ Applicable for coloured shade nets only.

Specification of shade-net as per IS 16008 (Part2): 2016 (Mono x Mono)

SI No.	Characteristic(s)	Requirement(s)				Method of Test, Ref to
		Type I	Type II	Type III	Type IV	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Mass, g/m ² , <i>Min</i>	95	125	310	460	IS 1964
ii)	Average breaking strength of shade nets fabric (Strip method, 325 mm × 50 mm test piece with gauge length of 200 mm), N, <i>Min</i>					IS 1969 (Part 1)
	a) Warpway	300	300	450	650	
	b) Weftway	350	620	1700	4300	
iii)	Retention of breaking strength after UV exposure, N, <i>Min</i>	← 85 percent of original actual value (fabric) →				Annex B and IS 1969 (Part 1)
iv)	Colour fastness to artificial light ¹⁾	4 or better	4 or better	4 or better	4 or better	IS 2454
v)	Bursting pressure, kgf/cm ² , <i>Min</i>	11	13	30	40	IS 1966 (Part 1) or IS 1966 (Part 2)
vi)	Shading percentage	30 to 40	45 to 55	70 to 80	85 to 95	Annex C

¹⁾ Applicable for coloured shade nets only.

Contact Details

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