

sasmira

(An Approved Body of Ministry of Textiles, Government of India)



AGROTEXTILE - CROP COVER

Crop Cover

Crop cover engineered for low tunnels or row cover applications, serve a multitude of purposes that contribute to the overall success of agricultural practices. Understanding the primary objectives of crop covers enhances their effective application in the farming application.

1. Temperature Regulation

Purpose

- Thermal insulation.

Benefits

- Protection against frost and cold stress.
- Establishment of a microclimatic conditions for optimal plant growth.

2. Frost Protection

Purpose

- Prevent frost damage

Benefits

- Safeguarding delicate plant tissues from frost-induced damage.
- Extending the growing season by mitigating frost-related risks.

3. Pest and Insect Management

Purpose

- Physical barrier to insects and pests.

Benefits

- Minimizing crop damage caused by pests.
- Reducing the reliance on chemical pesticides.

4. UV Radiation Control

Purpose

- Protection from excessive UV radiation.

Benefits

- Prevention of sunburn on sensitive crops.
- Protection against excessive UV radiation.

5. Moisture Retention

Purpose

- Conserve soil moisture within the covered area.

Benefits

- Conserving water resources and reducing irrigation needs.
- Promoting optimal hydration for plant growth.

6. Chilling Wind Protection

Purpose

- Protection against cold wind.

Benefits

- Prevention of physical damage to crops caused by wind.
- Stabilization of the microenvironment within the low tunnel.

7. Early Season Planting

Purpose

- Off-Season Cultivation.

Benefits

- Accelerated germination and growth in cooler seasons.
- Increased flexibility in planting schedules.

8. Enhanced Crop Quality

Purpose

- Improve overall quality of crop.

Benefits

- Improved texture, color, and taste of produce.
- Consistent and high-quality yields.

BIS Standard for Crop Covers

At CoE-Agrotech, we take pride in contributing to the development and standardization of Agrotextiles. Our commitment to quality is reflected in a comprehensive set of 24 Agrotextile standards, developed in collaboration with the Technical Committee TXD35 under the Bureau of Indian Standards (BIS). The committee is chaired by CoE-Agrotech, comprises industry experts, academicians, agriculturists, and BIS officials. These standards serve as a benchmark, ensuring that Agrotextile products meet rigorous criteria for performance, durability, and safety.

BIS Standard for Crop cover made from Polypropylene (PP)

IS 16718 : 2021

Sr.No.	Characteristics	Requirement		Method of Text, Ref To
		Type 1	Type 2	
(1)	(2)	(3)	(4)	(5)
i)	Thickness, mm, Min	0.18	0.22	IS 15891 (Part 2) (Method A)
ii)	Fabric mass, g/m ² , Min	17	22	IS 15891 (Part 1)
iii)	Breaking strength, N/50 mm, Min:			IS 15891 (Part 3)
	a) Machine direction	30	35	
	b) Cross direction	20	25	
iv)	Elongation at break, percent:			IS 15891 (Part 3)
	a) Machine direction	55 to 100	55 to 100	
	b) Cross direction	55 to 100	55 to 100	
v)	Trapezoid tear strength, N, Min:			IS 15891 (Part 4)
	a) Machine direction	25	35	
	b) Cross direction	12	18	
vi)	Air permeability, cm ³ /cm ² /s, Min	400	350	IS 15891 (Part 15)
vii)	Water vapour permeability, in g/m ² /day, Min	800	800	Annex B
viii)	UV stability test, retained strength after 144 h UV exposure, percent, Min:			Annex C
	a) Machine direction	50	50	
	b) Cross direction	50	50	
ix)	Ash content, percent, Max	1	1	Annex D
x)	Index puncture resistance, N, Min	10	15	Annex E
xi)	Water absorption capacity, percent, Min	50	50	IS 15891 (Part 6)
xii)	Colour	White or as agreed	White or as agreed	Visual

In the dynamic world of agriculture, where the right inputs make all the difference, selecting crop covers that adhere to Bureau of Indian Standards (BIS) is a choice synonymous with excellence. opting for BIS standard-compliant crop covers is a smart decision for farmers seeking quality, durability, and consistent performance.

1. Assured Quality

BIS Standard Compliance

- Crop covers complying with BIS standards ensure adherence to rigorous quality benchmarks.

Benefits

- Assurance of superior material composition, meeting the highest quality standards.
- Consistent and reliable performance in various agricultural applications.

2. UV Resistance for Longevity

BIS Standard Compliance

- BIS standards include guidelines for UV resistance in crop covers.

Benefits

- Extended lifespan of crop covers, even under prolonged exposure to sunlight.
- Protection against UV-induced degradation, ensuring durability.

3. Strength and Durability

BIS Standard Compliance

- Parameters for tensile strength, tear resistance, and overall durability are part of BIS standards.

Benefits

- Crop covers capable of withstanding environmental stressors.
- Long-lasting performance in the field, minimizing the need for frequent replacements.

4. Consistency in Performance

BIS Standard Compliance

- BIS standards establish criteria for the consistent performance of crop covers.

Benefits

- Farmers can confidently select crop covers, knowing they meet standardized performance levels.
- Fair competition among manufacturers, ensuring quality across different brands.

For Guidance

- For guidance on manufacturing of Agrotextile Crop Cover or its applications reach out to CoE-Agrotech, SASMIRA.



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