



新馬工業化工(馬)有限公司

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S M I C : 0253 (NF)

NF stands for **NEW FORMULATION**, is an improved version of S M I C 0253 Greenhouse Film with extra added formulation which resulted in having improved performance for Ultra Violet (UV) blocking mechanism. These films are formulated with UV Blocker for 3 years in the 120-140 KLY / year climate condition with thickness of 200 Microns. The Vinyl Acetate content is 14.50% with the maximum transparency over 85% light transmission to improve the photosynthesis process. The revised and improved UV Blocker mechanism prevents UV radiation (up to 381 nanometers, where 400 nanometers marks the end of UV radiation and the beginning of visible light) to enter the Greenhouse on which the total spectrum of electromagnetic radiation is not necessary for photosynthesis process. UV blocking mechanism reflects specific wavelengths of light on which these films can manipulate plant growth to enhance yield and quality. With the enhance formulation of UV blocker, the blackening or petal discoloration for flower based plantation can be reduce and eliminated. Formulations that interferes IR radiation were also added into film properties which absorbs most of the long wave IR radiation from the greenhouse. The IR additive creates a barrier during night time to far infrared radiation (FIR: 5,000 - 20,000 nanometers). This helps to keep a more constant temperature in the greenhouse throughout the day, resulting in good thermicity rating and helps in maintaining a temperature close to the optimum needed by the plants. The featured Anti-Condensation formulation is essential as it prevents liquid and condensations build up on film which can lead to mold and mildew in the greenhouse, resulting in distortion in light. The Anti-Condensation formulations reduced the surface tension of condensing water vapor and raise the surface tension of the inner side of plastic. The film properties has been tested and found to have the best UV Blocker, Anti-Condensation, Thermal Effect (IR), Anti-Sulphur (up to 1000 ppm) and able to achieve maximal light transmission in the P.A.R range of the spectrum (400-700 nm), required by the plants to assist in the photosynthesis process. Thus, this film is highly recommended for all kind of crops growing using greenhouse system.

WARRANTY 3 YEARS:

Warranty will be applied if buyer complies with the general condition as specified by the company.

Physical Properties of S M I C: 0253 (NF)

Properties	Test Method	Unit	Measured Values
Film Thickness	-	MM	0.20
VA Content	MDP Method	Wt %	14.5
Ultimate Tensile Strength (MD) (TD)	ASTM D882	Mpa	28 23
Ultimate Elongation (MD) (TD)	ASTM D882	%	912 906
Puncture Strength Elongation Energy	DOW Method	N MM J	76 53 2.7
Elmendorf Tear (MD) (TD)	ASTM D1922 Method B	N	11.9 24.3
Film Haze	DOW Method	%	68
Film Surface Gloss @ 45	ASTM D1003	-	20
Light Transmission in PAR	DOW Method	%	85
Diffused Light in PAR	DOW Method	%	17
Thermicity	MDP Method	%	60

Note : The values given herein are meant for guidance only and do not constitute a specification