

METABLEN* SX-006- Impact Modifier

METABLEN SX-006 is a silicone-acrylic impact modifier, with both super-high impact and excellent weatherability, which offers significant benefits to manufacturers of various plastics such as Polycarbonate, Poly AS, PVC and the other engineering plastics. These two properties having never been compatible in butadiene and acrylic type modifiers. Mitsubishi Rayon accomplished this, with its superior expertise in polymer chemistry, using the acrylic rubber component interpenetrated with a portion of silicone rubber. The super efficiency of **METABLEN SX-006** in impact strength has made it possible to cut down the dosage of the modifier in compounds. Also, low temperature impact, which has hardly been improved with acrylic weatherable modifiers, has been accomplished with this new weatherable impact modifier, **METABLEN SX-006**.

Product Benefits

1. High Impact Strength at low temperature - The chemical composition and structure of **METABLEN SX-006** gives extremely high impact strength at low temperature to various plastics.
2. Weather resistant products made with **METABLEN SX-006** can be weatherproofed without causing any discoloration and degradation under the outdoor exposure.

Typical Physical Properties

Physical Form: White Powder
 Bulk Density: 0.30-0.50
 Particle Size: 2% on 4 mesh
 Percent Volatile: 2% max.

Physical Performance

Physical performance in AS resin

Composition	IM	Izod Impact Strength [kg.cm/cm]		Flexural Modulus [kg/cm ²]	Rockwell (R)	VST	MI (200°C/5Kg) [g/10min]	Surface (CT:200°C MT:30°C)	
		23°C	-30°C					Gloss [%]	L*
AS/IM =70/30	SX-006	11.8	5.3	25000	108	102	1.8	—	—
	ASA	4.4	3.0	24500	108	101	2.5	—	—
AS/IM =60/40	SX-006	15.0	8.2	23500	100	100	2.9	91.0	10.6
	ASA	10.2	3.1	22000	101	99	3.5	79.7	13.9

AS resin: MFR=3.0 g/10 min. 200 C, 5 kg/cm²

MITSUBISHI RAYON CO., LTD.

Metablen Department
 Shinagawa Crystal Square 6-41, Konan 1-chome, Minatoku ,Tokyo 108-8506 Japan
 Telephone: +81-3-5495-3078, Fax: +81-3-5495-3197

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Weather Resistance (Delta E) in AS resin

Impact Modifiers	Color Differences(ΔE)							
	0 hr	200 hr	400 hr	600 hr	800 hr	1000 hr	1500 hr	2000 hr
SX006	0	0.6	2.1	5.2	5.2	6.2	6.4	6.5
ASA(Acrylic)	0	2.5	5.7	9.3	9.7	10.4	11.9	12.3

Note 1) Exposed surface : SWOM (including rainy condition, 63°C)

2) AS/IM = 60/40

Physical Performance (Izod impact strength) in PC resin

Impact Modifiers		IZOD IMPACT STRENGTH					
		1/4" [kg·cm/cm]			1/8" [kg·cm/cm]		
		[phr]	23°C	0°C	−30°C	23°C	0°C
SX-006	5	84.1	65.3	16.0	78.0	75.8	67.3
	10	73.0	67.5	20.3	74.9	69.8	69.2
	15	67.4	65.6	34.7	70.1	68.9	68.4
Acrylic IM	5	78.3	51.0	13.1	74.2	75.2	8.8
	10	68.1	62.4	17.9	69.5	67.0	22.1
	15	60.4	54.8	19.2	67.9	61.9	54.1
BLANK	—	16.5	12.8	13.5	79.0	72.7	27.0

Technical Service

MITSUBISHI RAYON CO., LTD. offers complete technical service assistance in using METABLEN SX-006. Our laboratories and personnel are ready and willing to assist you with any phase of your evaluation from formulation work to end product listing. For further information on METABLEN SX-006, contact your Sales Representative or nearest sales office.

Safety And Industrial Hygiene

METABLEN SX-006 is a polymeric powder, which may be irritating to the eyes, skin and upper respiratory tract upon prolonged or repeated exposure. This product should be used with adequate ventilation, both to protect employees from excessive exposure and to insure conditions, which could cause a dust explosion are avoided. If adequate ventilation is not available, an approved respirator for nuisance dust should be employed. Employees should wear gloves, eye protection and use fresh clothing daily.

Suggested First Aid

In the event of skin contact, wash thoroughly with soap and water. In case of eye contact, wash eyes with a flowing stream of water for at least 10 minutes and consult a physician if irritation develops. Contaminated clothing should be laundered before reuse.

Note

A "Material Safety Data Sheet" on this product is available on request from MITSUBISHI RAYON CO., LTD. Metablen Department.

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