DECO SHEET Specification

1. SCOPE

This specification describes the quality and test standards of **soft type MFMS (Multi Function Matt Sheet) products** that are easy to clean and do not leave fingerprints among GAG PET DECO Sheets (BELITAPET) manufactured by KP Tech.

2. GENERAL SPECIFICATION

2-1. Dimension

Item	Unit	Spec.	Tolerence
Thickness	mm	Min.0.2 / Max.0.8	+5% -0%
Width	mm	Max. 1500	+5mm -0mm
Roll diameter	mm	Max. 600	-
Core diameter	mm	152	-

The roll diameter can be changed on customer's request.

3. PHYSICAL SPECIFICATION

3-1. Color Consistency

1) Test condition

- Equipment : CM-2600D

- Peocedure : Place Specimen on the white plate and measure with a standard light source D65 with a colorimeter.

2) Specification

Item	ΔE*ab
White color	0.5
Other colors	0.8

3-2. Gloss level

Item	Spec.	Angle	Test method
MFMS (soft type)	3.0 ± 2.0	60˚	ASTM D 523

3-3. Scratch resistance

Item	Spec.	Load	Test method
MFMS (soft type)	H	250g	ASTM D 3363

3-4. Top coating adhesion

This test method is in accordance with ASTM D 3359 A.

1) Test condition

  - Equipment : Cross hatcher , 3M magic tape

  - Procedure : An X-cut is made on the film, Specified tape is applied over the cut and then removed, and Inspect the X-cut area for removal of coating from the substrate.

2) Specification

  - Peeling should not be observed.

3-5. Light Fastness

This test method is in accordance with DIN EN ISO 4892-2:2006(method A).

Item	Exposure	ΔE*ab
White color	400hrs	1.0
Other colors	400hrs	1.5

3-6. Surface resistance

This test method is in accordance with EN 12720 : 2009

Staining agents	Contact time	Spec.
		MFMS
Water	24hrs	5
liquid paraffin	24hrs	5
Ethanol (48%)	1hr	5
Coffee	1hr	5

Ratings:

5 = no change

4 = minor change (only visible under reflected light)

3 = moderate change (visible from several viewing directions)

2 = significant change in colour or gloss; slight change of structure (swelling, fibre raising, cracking, blistering)

1= strong change

3-7. Anti-finger print function

This test method is in accordance with own standard

1) Apply an appropriate amount of artificial sebum to your thumb.

2) Apply the applied artificial sebum to the sheet.

3) After 30 seconds, wipe with a wiper and check visually.

Item	Staining agents	Spec.	Test method
MFMS (soft type)	Artificial Sebum	5	In house

Ratings:

5 = no change

4 = minor change (only visible under reflected light)

3 = moderate change (visible from several viewing directions)

2 = significant change in colour or gloss; slight change of structure (swelling, fibre raising, cracking, blistering)

1= strong change

3-8. Easy Clean

This test method is in accordance with own standard

1) Mark the MFMS sheet with an oil marker.

2) After 30 seconds, wipe with a disposable ethanol swab(83%) and check visually.

Item	Staining agents	Spec.	Test method
MFMS (soft type)	Oil marker	5	In house

Ratings:

5 = no change

4 = minor change (only visible under reflected light)

3 = moderate change (visible from several viewing directions)

2 = significant change in colour or gloss; slight change of structure (swelling, fibre raising, cracking, blistering)

1= strong change

4. APPEARANCE

4-1 In-Process Inspection

During production of rolls, large size defects and periodic defects are detected.

4-2. Product inspection

1) Inspection method

Inspect the full width of about 1~2 meters for each roll. Samples are inspected at 1000Lux over.

2) Specification

Item	Spec.	Remark
Black speck	Not allowed	
TD, MD line	Not allowed	
Dent/Spot/Foreign material	Max.0.2mm/3ea allowed	
Scratch	Not allowed	

5. Packing

1) Each roll is sealed with paper laminated with PE form.

2) Stand vertically on a wooden pallet and seal with a stretch film.

3) Label marking

- Product

- Color

- Lot no

- Dimension (thickness/width/ Linear meter)

- Manufacturer