TUMN Color for TPU Calender

(Type of Thermoplastic Polyurethane: Polyester)

- 1. Description: TUMN is the colorants which are designed for TPU. This product has good dispersion, physical properties and coloration. It is suitable for TPU Calender and other related applications.
- 2. Appearance: Irregular Crusher
- 3. Product Code: TUMN can be custom-made by different requirements (ex. color shade, concentration, operations' process and physical properties).

Item Code	Color	Pigment No.	Light Fastness	Migration	Halogen*
TUMN YELLOW	Yellow	PY-138	7-8	4.3-4.6	Not found
U0057	(Greenish)	F 1-136	7-8	4.3-4.0	Not loulid
TUMN YELLOW	Yellow	PY-191	6-7	4.4-4.6	Existed
U0058	(Reddish)	1 1-191	0-7	4.4-4.0	Existed
TUMN RED	Red	PR-48:3	5-6	4.9	Existed
U2086	(Yellowish)	F N-46.3	3-0	4.9	Existed
TUMN RED	Red	PR-57:1	4-5	4.7	Existed
U2087	(Bluish)	FR-37.1	4-3	4.7	Existed
TUMN BLUE	Blue	PB-15:1	7-8	4.9	Existed
U5105	(Reddish)		7-0	4.9	Existed
TUMN BLUE	Blue	PB-15:3	7-8	4.9	Not found
U5106	(Yellowish)	FD-13.3	7-8	4.9	Not loulid
TUMN GREEN	Green	PG-7	8	4.9	Existed
U6039	Green	ru-/	0	4.7	EXISTEU
TUMN BLACK	Black	PBk-7	8	4.9	Not found
U7132	Diack	rdk-/	o	4.7	riot loulid
TUMN WHITE	White	PW-6	8	5.0	Not found
U8052	White	r w-0	o	3.0	mot louid

^{*} The amount of Halogen in the pigment structure definition was conducted according to IEC 61249-2-21:2003 and the each amount of Chlorine / Bromine < 900ppm, the total amount of Chlorine + Bromine < 1500ppm.

Remarks:

- a. The light fastness test was conducted according to ISO 105-B02 Blue Wool Scale from 1 to 8. The dosage of pigment: 0.2%. The condition of light fastness test: Xenon arc lamp irradiation energy $1.1 \text{W/m}^2 \times 24 \text{hrs}$.
- b. The migration test was conducted according to CIBA-GEIGY grey scale and the rating from 1 to 5. The full shade dosage of pigment: 1.6% and white shade is used to TiO_2 3%. The condition of Migration test: $80^{\circ}\text{C} \times 100\text{g/cm}^2 \times 24\text{hrs}$.
- c. The carry of TUMN Colorants is used to 70A TPU resin.
- 4. Recommended dosage is 2-4% depends on the customers' conditions and requirements.

5. Notices:

- a. Adequate drying before using is recommended.
- b. Recommended Processing Temperature: controlled between 140~200°C.

The above data and results are based on controlled or lab work and must be confirmed by buyer by testing for the intended conditions of use.

品 名	CI Pigment No.	Color: 4. OPHR	Color:4.0PHR TiO2:4.0 PHR
UMN YL U0057	PY-138		
UMN YL U0058	PY-191		
TUMN RD U2086	PR-48:3		
CUMN RD U2087	PR-57:1		
TUMN BL U5105	PB-15:1		
'UMN BL U5106	PB-15:3		
UMN GN U6039	PG-7		

品名	CI Pigment No	Color:4.0PHR	Color:4.0PHR TiO2:4.0 PHR
TUMN BK U71	32 PBK-7		
品 名	CI Pigment No	Color:4.0PHR	Color:4.0PHR C.Black:1.0 PHR
TUMN WH U80	952 PWH-6		
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TUMN Color for TPU Calender

(Type of Thermoplastic Polyurethane: Polyether)

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- 2. Appearance: Irregular Crusher
- 3. Product Code: TUMN can be custom-made by different requirements (ex. color shade, concentration, operations' process and physical properties).

Item Code	Color	Pigment No.	Light Fastness	Migration	Halogen*
TUMN YELLOW	Yellow	PY-138	7-8	4.7-4.8	Not found
U0051	(Greenish)	F 1-136	7-8	4./-4.0	Not lound
TUMN YELLOW	Yellow	PY-191	6-7	4.7-4.8	Existed
U0053	(Reddish)	1 1-171	0-7	4.7-4.0	Existed
TUMN RED	Red	PR-48:3	5-6	4.9	Existed
U2079	(Yellowish)	1 K-46.3	3-0	4.9	Existed
TUMN RED	Red	PR-57:1	4-5	4.8-4.9	Existed
U2080	(Bluish)	1 K-57.1	4-3	4.0-4.9	Existed
TUMN BLUE	Blue	PB-15:1	7-8	4.9-5.0	Existed
U5101	(Reddish)	1 D-13.1	7-8	4.7-3.0	Existed
TUMN BLUE	Blue	PB-15:3	7-8	5.0	Not found
U5102	(Yellowish)	1 D-13.3	7-8	3.0	Not lound
TUMN GREEN	Green	PG-7	8	5.0	Existed
U6036	GICCII	10-7	7	3.0	Existed
TUMN BLACK	Black	PBk-7	8	5.0	Not found
U7127	Black PBK-/		O	3.0	riot iound
TUMN WHITE	White	PW-6	8	5.0	Not found
U8050	VV IIILE	r w-u	O	3.0	inot iouiid

^{*} The amount of Halogen in the pigment structure definition was conducted according to IEC 61249-2-21:2003 and the each amount of Chlorine / Bromine < 900ppm, the total amount of Chlorine + Bromine < 1500ppm.

Remarks:

- a. The light fastness test was conducted according to ISO 105-B02 Blue Wool Scale from 1 to 8. The dosage of pigment: 0.2%. The condition of light fastness test: Xenon arc lamp irradiation energy $1.1 \text{W/m}^2 \times 24 \text{hrs}$.
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- c. The carry of TUMN Colorants is used to 70A TPU resin.
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The above data and results are based on controlled or lab work and must be confirmed by buyer by testing for the intended conditions of use.

品 名	CI Pigment No.	Color:4.0PHR	Color:4.0PHR TiO2:4.0 PHR
TUMN YL U00	51 PY-138		
TUMN YL UOO	53 PY-191		
TUMN RD U20	79 PR-48:3		
TUMN RD U20	980 PR-57:1		
TUMN BL U51	01 PB-15:1		
	02 PB-15:3		
TUMN GN U60)36 PG-7		
2 -			

品 名	CI Pigment No.	Color:4. OPHR	Color:4.0PHR TiO2:4.0 PHR
TUMN BK U7127	РВК-7		
品 名	CI Pigment No	Color:4.0PHR	Color:4.0PHR C.Black:1.0 PHR
TUMN WH U8050	PWH-6		