Polybutylene Terephthalate (PBT)

DURANEX®

3306

EF2001/ED3002/ED3020

Better Surface Appearance, Higher Gloss, HB

POLYPLASTICS CO., LTD.

Introduction

DURANEX® PBT is an engineering plastic that exhibits high mechanical properties, and has superior heat resistance and good processability. These properties are exploited in a wide variety of mechanical parts.
Parts molded from standard glass fiber-reinforced grades of **DURANEX** have sufficient surface gloss, but for applications which emphasize a high degree of surface gloss, we offer **DURANEX 3306**.
3306 has a 30% loading of glass fiber reinforcements.

1. Superior surface gloss
   3006 can achieve reproducible and excellent gloss without being affected by processing parameters.

2. Performance in terms of general physical properties is almost on a par with standard glass fiber-reinforced grades is exhibited.

3. Performance in terms of processing characteristics is almost on a par with standard glass fiber -reinforced grades is exhibited.

General Properties of 3306

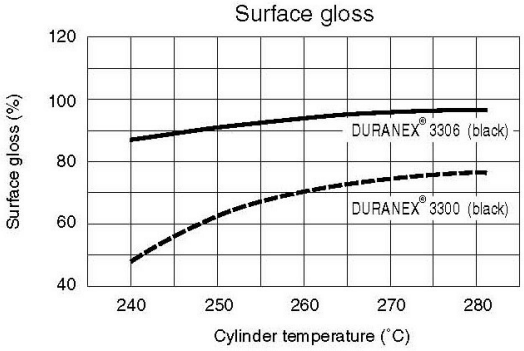
table1-1 General Properties（ISO）

Item	Unit	Test Method	Better Surface Appearance, Higher Gloss, HB
			3306
			GF30% Reinforced
Color			EF2001/ED3002/ED3020
ISO(JIS)quality-of-the-material display:		ISO11469 (JIS K6999)	>PBT+PET-GF30<
Density	g/cm^3	ISO 1183	1.54
Water absorption (23°C,24hrs,1mmt)	%	ISO 62	0.2
Tensile strength	MPa	ISO 527-1,2	140
Strain at break	%	ISO 527-1,2	2.2
Flexural strength	MPa	ISO 178	210
Flexural modulus	MPa	ISO 178	9,100
Charpy notched impact strength (23℃)	kJ/m^2	ISO 179/1eA	8.1
Temperature of deflection under load (1.8MPa)	℃	ISO 75-1,2	210
Coefficient of linear thermal expansion (23 - 55℃、Flow direction)	$x10^{-5}$/℃	Our standard	2
Coefficient of linear thermal expansion (23 - 55℃、Transverse direction)	$x10^{-5}$/℃	Our standard	7
Electric strength (3mmt)	kV/mm	IEC 60243-1	23
Volume resistivity	Ω·cm	IEC 60093	-
Volume resistivity (Our standard)	Ω·cm		-
Tracking resistance (CTI)	V	IEC 60112	350
Rockwell hardness	M(Scale)	ISO2039-2	100
Flammability		UL94	HB
The yellow card File No.			E213445
Appropriate List number of Ministerial Ordinance for Export Trade Control			Item 16 of Appendix -1

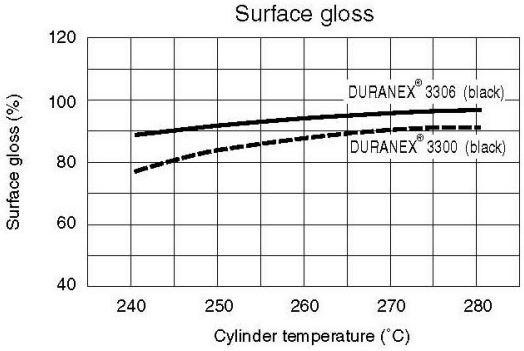
All figures in the table are the typical values of the material and not the minimum values of the material specifications.

2. Surface gloss characteristics of DURANEX® 3306

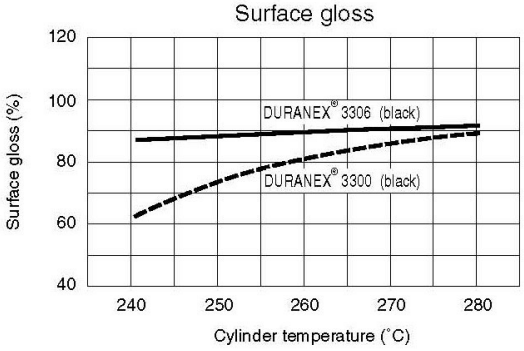
Parts molded with **Duranex 3306** have superior gloss characteristics compared with the standard grade 3300. In addition, the surface gloss of 3300 is affected greatly by the processing parameters employed (melt temperature, mold temperature, injection speed, etc.), while a reproducible and excellent surface gloss can be achieved using **3306.**



Mold temperature: 80˚C

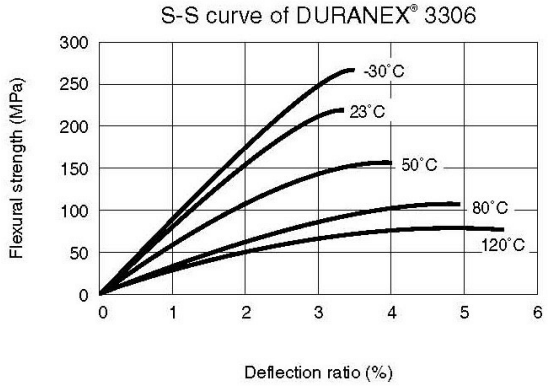


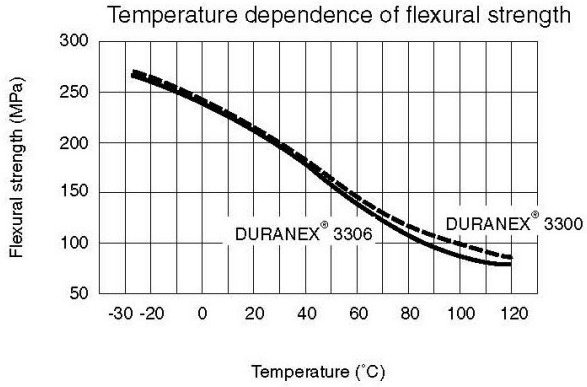
Mold temperature: 80˚C
Accumulator used

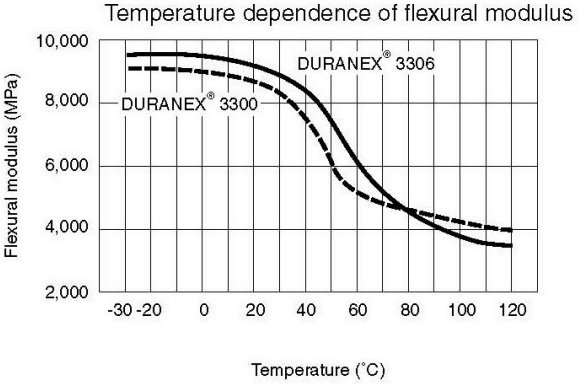


Mold temperature: 120˚C

3. Flexural strength characteristics of DURANEX® 3306

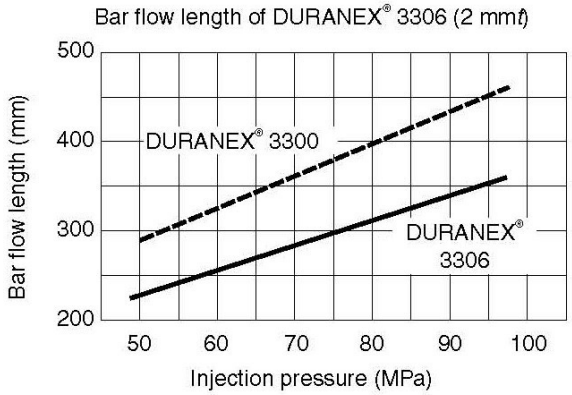






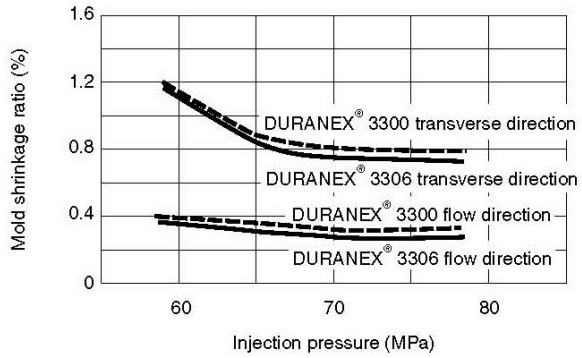
4. Processing characteristics of DURANEX® 3306

Flow characteristics of DURANEX® 3306



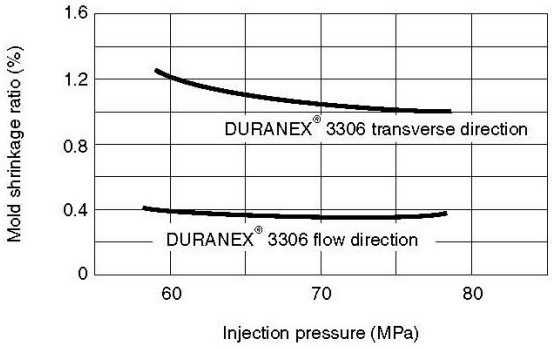
Processing parameters
Cylinder temperature: 260-260-230-200˚C
Mold temperature: 70˚C
Injection speed: 67 mm/sec
Mold: 2 mmt bar flow mold

Mold shrinkage ratio of DURANEX® 3306 (3 mmt)



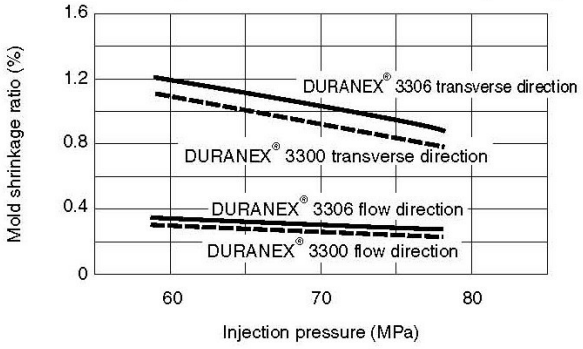
Processing parameters
Cylinder temperature: 250-250-220-200˚C
Mold temperature: 60˚C
Injection speed: 25 mm/sec
Cycle time: 15 s holding phase/15 s cooling
Test piece: 120×120×3 mmt flat plate
Gate: 4 (*W*)×2*t* mm

Mold shrinkage ratio of DURANEX® 3306 (3 mm*t*)



Processing parameters
- Cylinder temperature: 250-250-220-200˚C
- Mold temperature: 100˚C
- Injection speed: 25 mm/sec
- Cycle time: 15 s holding phase/15 s cooling
- Test piece: 120×120×3 mmt flat plate
- Gate: 4 (W)×2*t* mm

Mold shrinkage ratio of DURANEX® 3306 (2 mm*t*)



Processing parameters
- Cylinder temperature: 260-250-230-200˚C
- Mold temperature: 60˚C
- Injection speed: 25 mm/sec
- Cycle time: 25 s holding phase/10 s cooling
- Test piece: 120×120×3 mmt flat plate
- Gate: 4 (*W*)×2*t* mm

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NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under conditions prescribed by applicable standards and test methods.
- This brochure has been prepared based on our own experiences and laboratory test data, and therefore all data shown here are not always applicable to parts used under different conditions. We do not guarantee that these data are directly applicable to the application conditions of users and we ask each user to make his own decision on the application.
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- For safe handling of materials we supply, it is advised to refer to the Safety Data Sheet "**SDS**" of the proper material.
- This brochure is edited based on reference literature, information and data available to us at the time of creation. The contents of this brochure are subject to change without notice upon achievement of new data.
- Please contact our office for any questions about products we supply, descriptive literatures or any description in this brochure.

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