

Technical Literature G-10

## Reprocessability of AURUM<sup>®</sup>

The reprocessability of AURUM<sup>®</sup> with respect to injection molding is as follows:

(1) Sample

AURUM<sup>®</sup> PL450 (Natural)

(2) Testing Method

An AURUM<sup>®</sup> injection-molding resin (noncrystalline) was ground, 100% reprocessed AURUM<sup>®</sup> materials were molded. The mechanical properties of each reprocessed material were determined.

- Injection-molding machine: Nissei MN-10
- Molding temperature: 400°C
- Mold temperature: 200°C
- Molding cycle: 20 sec./shot

(3) Test Results

	MI g/10min	Tensile strength kg/mm <sup>2</sup>	Elongation %	Flexural strength kg/mm <sup>2</sup>	Flexural modulus kg/mm <sup>2</sup>	Izod strength Kg cm/cm
PL450 Virgin resin	6.3	9.4	70	11.4	300	9
Reprocessed 1st time	5.7	9.0	80	11.0	290	10
Reprocessed 3rd time	5.7	9.0	80	11.0	290	10
Reprocessed 5th time	5.9	9.2	80	10.8	280	10
Reprocessed 10th time	5.9	9.2	70	10.8	280	9

The information contained herein is based on the information and data available at this moment, but none of the data or evaluation results contained herein provide any warranty whatsoever.

## Reprocessability of JCN3030

### (1) Sample

AURUM<sup>®</sup> JCN3030 (a grade reinforced with 30% carbon fiber)

### (2) Testing Method

An AURUM<sup>®</sup> injection-molding resin (noncrystalline) was ground, 100% reprocessed AURUM<sup>®</sup> materials were molded. The mechanical properties of each reprocessed material were determined.

- Injection-molding machine: J75SA (Nikko)
- Test specimens taken: Tensile: 19\*178\*3; flexural: 13\*126\*3;  
Izod: 10\*63\*6 (mm), 3-cavity, (35 cc/shot)
- Cylinder temperature: C1/C2/C3/NZ = 400/410/420/430 (°C)
- Mold temperature: 210°C
- Molding cycle: 30 sec./shot
- No. of recycling: 5 times

### (3) Test Results

No. of reprocessing	MI g/10min	Tensile strength kg/mm <sup>2</sup>	Elongation %	Flexural strength kg/mm <sup>2</sup>	Flexural modulus kg/mm <sup>2</sup>	Izod strength Kg cm/cm
0	2.9	245	23.0	32.6	1940	11.0
1	4.0	221	20.6	30.0	1700	—
2	5.1	166	18.6	28.1	1490	10.7
3	4.8	158	17.5	26.8	1410	—
4	4.8	143	16.5	26.4	1310	—
5	4.4	127	15.8	24.9	1270	8.0

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