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# PRODUCT DATA

## KANJI™

Eco - Friendly Master Batch

| Properties | Units | Test Method |
|---|---|---|
| Melt Index | 0.23 g /10min | D1238 |
| Density | 1.240 g /$cm^3$ | D1505 |
| Vicat Softening Point | 63.6 $^oC$<br>(The softening point may heighten about 10-20$^oC$ because the different of testing condition) | |
| Character | Generate Bio – Photo Degradable, Free of Heavy Metal<br>Safe to contact with food | |
| Applications | Packaging - Shopping Bag, Bottle, Garbage bag<br>Sport - Golf tee<br>Catering - Spoon, Fork, Plate, Straw, Food tray<br>Agricultural - Mulch Film, Plantation Bag<br>Stationary - Stationary casing, Corrugated Box, File | |

**Heavy Metal Analysis**

| Properties Measured | Analysis Result | Equipment / Technique Used |
|---|---|---|
| Cadmium (as Cd); mg/kg | ND (<0.2) | Acid Digestion followed by ICP-AES |
| Lead (as Pd); mg/kg | ND (<0.2) | |
| Chromium (as Cr); mg/kg | 0.9 | |
| Zinc (as Zn); mg/kg | 2.8 | |
| Molybdenum (as Mo); mg/kg | ND (<0.2) | |
| Copper (as Mo); mg/kg | 0.3 | |
| Nickel (as Ni); mg/kg | 0.8 | |
| Arsenic (as As); mg/kg | ND (2) | |
| Selenium (as Se); mg/kg | ND (<0.2) | Acid Digestion Followed by Cold Vapor AAS |
| Mercury (as Hg); mg/kg | ND (<0.2) | Acid Digestion Followed by Cold Vapor FIMS |
| Fluorine (as F); mg/kg | ND (<10) | Bomb Combustion Followed by Ion Chromatography (IC) |

**Food And Drug Administration (FDA) Test - PSB Corporation, Singapore**

| Method of Test | Result | Maximum FDA Requirement |
|---|---|---|
| FDA CFR 21, Part 177.1520<br>Maximum Extractable Fraction in n-Hexane | 4.8% by wt | 5.5% by wt at 50$^o$ C |
| FDA CFR 21, Part 177.1520<br>Maximum Soluble Fraction in Xylene | 10.9% by wt | 11.3% by wt at 25$^o$ C |

**Degradable Analysis**

| Test Method | Test Result | Testing Body |
|---|---|---|
| ASTM D 5071-99: Standard Practice for Exposure of Photodegradable Plastic in a Xenon Arc Apparatus. | Tensile Strength Decreases 50%<br>Elongation Break Decrease 80% | SIRIM |
| ISO 14852: Determination of the ultimate Aerobic Biodegradability of plastic material in an aqueous medium. | 94 % of Biodegradation rate after 97 days | SIRIM |
| GB/T 19277-2003 | 66.2 % of Biodegradable rate after 99 days | NTSQP (China) |

*The figures listed in this table are typical values obtained under the standard test methods and may not be applicable for products that are under different application condition.