

## LCR Hallcrest Masterbatch (ThermoBatch™) Product Data Sheet

**ThermoBatch™ Master Batch Materials Processing and Technical Data Sheet**  
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### Critical Material Qualities and Production

Concentrated ThermoBatch™ Master Batch (yellow, orange, red, vermillion, blue, magenta, turquoise, purple etc.; -10C to 72C temperature types)

Extrusion Resin:	Primary resin (97 - 94%)
Master Batch Loading:	Loading range (3 – 6%)
Density:	0.508g/cm <sup>3</sup>
Bulk Density:	520 ± 50g/1
Specific Gravity:	0.91 ± 0.05
Pellet size disc-sphere:	2.5mm - 4mm
Melt flow index:	15-40g / 10 min. (190°C 2.15 Kgf)
Grade:	food contact grade when extruded at 1-10% w/w PP, PE, PS etc.
Materials:	All raw materials will be kept uniform and not changed during lot production
Lot identification:	All lots will be date coded, identified and recorded
Incoming raw materials:	All lot specific incoming raw materials will be qualified on a per-lot basis timely prior to lot production
Color on-set temperature:	58°F/14°C
Color saturation temp.:	47°F/8°C
Color dissipation on-set:	63°F/17°C
Color clear-out temp.:	72°F/22°C

### Storage, Self-Life and Handling

Concentrated ThermoBatch™ Master Batch

- Shelf life: Shelf life is 3 years when stored in dark, dry, cool conditions.
- Pre- dry pellets is typically not required. If drying, use standard materials dryers
- All component materials should be stored and marked separately.
- LCR Hallcrest ThermoBatch™ master batch should be added on a % weight basis along with the stationary yellow PP master batch on a % weight basis of the PP resin utilized.

## Extrusion Processing Conditions

### ThermoBatch™ Master Batch Processing Conditions

Maximum extrusion temp:	220°C (429°F)
Ideal extrusion temp:	200°C (392°F)
Extrusion zone temp:	Line dependent – average 200°C for testing
ThermoBatch™ MB let-down intensity	6.0 – 8.0% depending on part thickness and desired color intensity
Regrind:	Avoid regrind – color disruption may occur
Packaging:	20kg reinforced paper bags, sealed plastic inner bag
Screw type:	Mixing
Screw RPM	Processing dependent
MB mixing controls:	Thorough prior to use
Resin type and lot:	Polypropylene
Die cleanliness:	Clean and polished
Water temperature:	N/A
Water purity:	N/A
Water filter replacement	N/A
Air pressure/cleaning	N/A
Part parameters	N/A
	ID
	Wall thickness
	Length
	Rigidity
	Color parameters
	Smooth cut
	Die cut parameters
Periodic visual inspection:	TBD
Chilling for color change	LAB grade
	Temperature setting
	PMS color comparison

### Variance acceptance

Color on-set temperature:	58°F/14°C (Test and check with ice water)
Color saturation temp.:	47°F/8°C
Color dissipation on-set:	63°F/17°C
Color clear-out temp.:	72°F/22°C (Test and check with warm water)
Periodic sample retention:	Number per time (TBD)