

Stage

R&D

Introduction consideration

Practical stage

Keyword

Mechanical
RecyclingHazardous
Substance
Reduction

Monomaterial

Use

Ink / Coating / Primer

Challenge

- Ensuring ink adhesion to polyolefin substrates
- Supporting mono-material packaging for the EU Packaging and Packaging Waste Regulation (PPWR)
- Demand for toluene-free inks and coatings

Solution

- Proposal of new PE-based binder with excellent PO adhesion

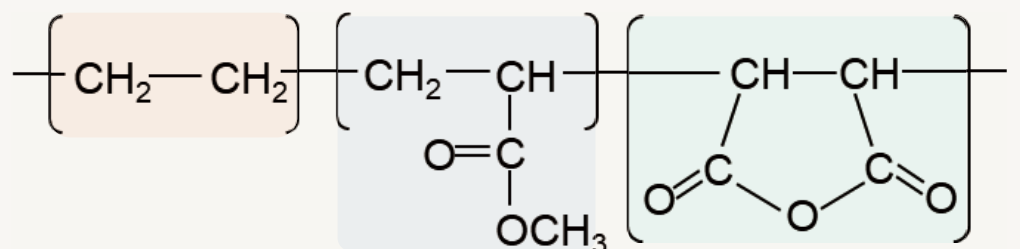
REXPEARL™ ET Highly soluble type



Cross-cut test (JIS K 5600-6), Grid spacing 3mm,
Substrate LLDPE sheet

- Expanded solvent options with solvent-soluble REXPEARL™ ET grades

REXPEARL™ ET



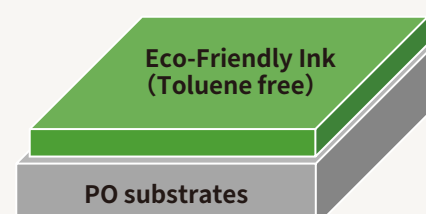
	Highly Soluble Type		Highly Fluid Type		LDPE
MFR (g/10min)	11		600		-
MA (wt%)	30		23		-
MAH ratio	Middle		Middle		-
Stirring Condition	80°C	23°C ※	80°C	23°C ※	80°C
Toluene	Excellent	Excellent	Excellent	Excellent	Good
Methyl cyclohexane	Excellent	Excellent	Excellent	Good	Bad
Tetrahydrofuran	Excellent	Excellent	Excellent	Good	Bad
Methyl ethyl ketone	Excellent	Good	Excellent	Good	Bad

[10 wt%, stirring for 1 h]

※Cooling after stirring 80 °C

Benefit

- Contributes to improved recyclability and reduced environmental impact by supporting mono-material packaging design and toluene-free formulations



■ PE-Based Binder
(Mono-Material Packaging)
■ Toluene-Free

Contact |  Japan Polyethylene Corporation

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