A clear opportunity for labelling

Neill Dutton, business development manager, Paramelt B.V. reports on a new technology that allows for maximum performance from water-based heat seal coatings.

While there are many inter-regional differences across the global packaging arena, many of the underlying drivers are the same. FMCG producers must try to maintain consumer appeal and brand awareness in an increasingly competitive market, and offer more functionality and convenience from their packaging. Yet they are encouraged by the retailers to reduce both the cost and environmental impact of their packaging materials.

In relation to labelling and decoration, these trends have driven the shift from simple pre-glued/glue-applied paper labels to a wide range of complex plastic media, offering the opportunity for much greater graphic appeal and geometric flexibility. In parallel, costs can be reduced by integrating the labelling step with the container production process and through selection of compatible source materials recyclability of the whole container is achieved.

Market growth of adhesive labels

	pre-glued		glue-applied		reactivated pre-glued	
Adhesive technology	gummed	pressure sensitive	patch	wrap around	IML	sleeves
Market growth	-5%	3-5%		15-20%		

WATER-BASED DISPERSIONS

Traditional label and packaging converters are targeting the new high-growth sectors. Paramelt has developed a new range of water-based, heat-activated adhesives to support this trend. These unique materials offer cost-effective and environmentally sound solutions, and enable completely new design concepts or product constructions to be achieved.

The basis of this technology is the ability to produce previously unavailable, high-solids, water-based dispersions of high molecular weight thermoplastic polymers. Enabled by the unique flexibility of BLUEWAVE™ technology from Dow, this approach allows complete freedom of material selection with the optimised performance and functionality of water-based heat seal coatings.

Aquaseal® heat sealable dispersions offer numerous economic and environmental benefits:

- Solvent-free alternatives to solvent-based lacquers
- Potential for significantly lower coating weight compared to extrusion
- Possibility of partial coating – functionality only where needed
- Little or no VOCs
- High solids (up to 60%) offer reduced supply chain costs and environmental impact
- Application using standard printing/coating methods: flexo, gravure, rotary screen, air knife, etc.

MAXIMUM PERFORMANCE

Traditional dispersion polymers such as acrylics, styrene acrylates or PVA, are limited by the need to select monomers that are sufficiently reactive yet provide enough affinity to water for product stability. This new technology offers the ability to produce polymer dispersions based on almost any thermoplastic.

Paramelt have concentrated initial Aquaseal developments on polyolefins, offering a range of dispersions based on PE and PP copolymers together with other high ethylene content materials such as EAA and EVA.

This versatility in material selection allows property optimisation based on application requirements rather than material limitations. In this way, products can be designed to achieve the best balance of characteristics, such as:

- Matched substrate affinity
- Tailored seal initiation temperature
- Controlled coefficient of friction (COF)
- Low in-reel blocking
- Broad sealing range for maximal operating window

HIGH GROWTH TARGETS

Paramelt now offers a complete solution package for these high growth sectors in labelling and decorating:

- Wraparound labels: hot melts for both magazine and roll-fed (one-way and returnable)
- Thermoforming and blow-moulding IML: dispersion coating with low activation temperature and broad substrate compatibility
- Injection moulding IML: polymer blends for facestock-to-polymer compatibilisation
- Shrink sleeves: with balanced adhesion to key sleeve materials and container types

This innovative technology promises many more exciting applications in flexible packaging and labelling in the future. **pci**

Notes
BLUEWAVE™ is a trademark of The Dow Chemical Company ('Dow') or an affiliated company of Dow.

Further information

Paramelt B.V.
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