



packaging **flexible packaging**

aquaseal™ packaging coatings

for **paper, film**
& **foil**



Experience performance from our
water-based heat seal & barrier
coatings for paper, film & foil

○ waxes adhesives coatings

 **paramelt**
experience. performance.

Paramelt's unique Aquaseal™ product platform provides high-solids dispersions of polyolefin polymers, such as PE, PP, EAA, EVA and ionomers. This proven technology allows application of commercial, extrusion-grade polymers using traditional printing and coating techniques

The essence

- Advanced, high-shear, aqueous dispersion technology
- Yields water-based, high molecular weight, thermoplastic polymer dispersions
- Allows co-dispersion of complex polymer blends with waxes, resins and additives
- Formulation potential to optimize end-use and application properties such as rheology, COF, matting etc.
- Unique potential for innovation in coatings, sealants & adhesive layers on a large variety of substrates
- Water-based, solvent-free, safe and environmental-friendly technology
- Provides flexible packaging converters access to new markets and applications
- Allows the packaging designer to reduce material use and create totally new packaging concepts
- Papers coated with Aquaseal™ can be repulpable through appropriate existing processes

Target markets

Given the wide range of material types within the Aquaseal™ portfolio, the applications for these dispersions are extremely broad. Some typical examples in packaging converting are:

Paper & board

- Moisture (vapour) barrier
- Oil and grease barrier
- Heat seal (peel and fibre tear)
 - Coating to coating (A/A)
 - A/B seal to paper, film and foil

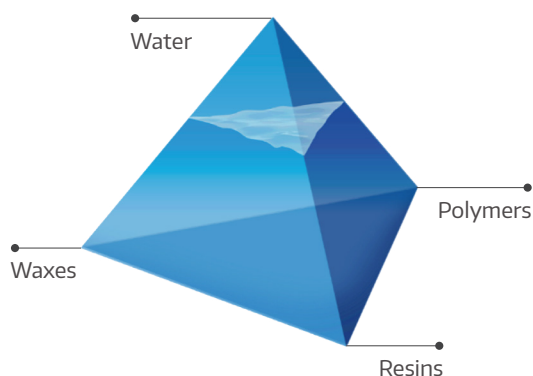
Aluminium foil

- Extrusion lamination primer
- Low temperature heat sealing
- Lidding sealants for a wide range of substrates

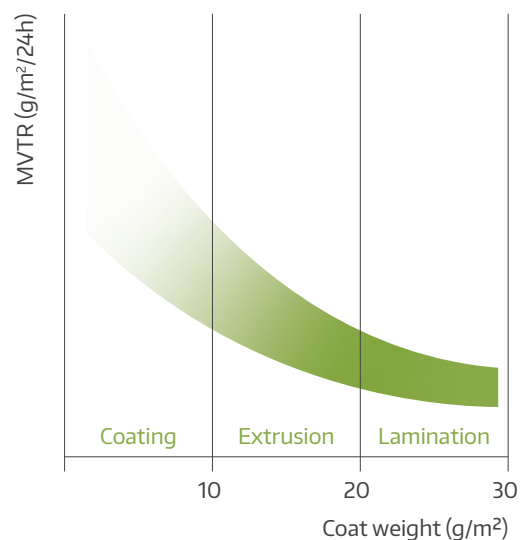
Plastic packaging - Rigid & flexible

- Heat sealing
 - Full coverage heat seal for horizontal and vertical FFS applications
 - Pattern applied sealants for optimized material use
 - Replacement of extrusion coating or film lamination for A/B sealing complexes
 - In-mould labelling & lidding sealants

Potential formulation space



Relative barrier performance



An innovative technology with superior end-use performance and formulation flexibility

- Moisture vapour barrier
- Water resistance
- Oil & grease resistance
- Recyclable
- Heat-sealable
- Low temperature flexibility
- Direct food contact compliance
- Non-allergenic
- Range of melting points
- High and low coefficient of friction
- Coating transparency
- High filler loading

| | Product | Solids (%) | Viscosity (mPa.s)* | MST** | Food contact | Base chemistry | Typical application area |
|--------------------------------------|-----------------|------------|--------------------|-------|--------------|---------------------------------------|---|
| Paper | Aquaseal X 2155 | 45 | 600 | 90 | Y | acid copolymer | Medium temperature seal coating with very good A-A seal strength |
| | Aquaseal 2045 | 43 | 750 | 65 | Y | acid copolymer | Low temperature seal coating with very good A-A seal strength |
| | Aquaseal X 2420 | 47 | 750 | 90 | Y | TPE polyolefin | Heat seal and barrier (MVTR, O&G) coatings on paper, also sealing to PE and PP |
| | Aquaseal X 2401 | 42 | 300 | 90 | Y | LDPE | Heat seal and barrier (MVTR, O&G) coatings on paper |
| | Aquaseal X 2404 | 42 | 300 | 85 | Y | m-VLDPE | Heat seal and barrier (MVTR, O&G) coatings on paper |
| | Aquaseal X 2406 | 42 | 350 | 80 | Y | EVA | Heat seal coatings on paper |
| | Aquaseal X 2330 | 43 | 300 | 90 | Y | acid copolymer formulated for low CoF | Heat seal coating on paper for high speed packaging processes |
| | Aquaseal X 2366 | 47 | 325 | 90 | Y | acid copolymer | Heat seal and barrier coatings on paper. Very good moisture vapour barrier |
| | Aquaseal X 2377 | 48 | 430 | 65 | Y | biodegradable polyester | Compostable heat seal coating on paper |
| Foil & film | Aquaseal 1307 | 25 | 200 | 65 | Y | acid copolymer | Low temperature seal coating as glass rim coating to support alu-foil lidding |
| | Aquaseal 2077 | 33 | 100 | 65 | Y | acid copolymer | Low temperature seal coating for film like (B)OPP |
| | Aquaseal 2045 | 43 | 750 | 65 | Y | acid copolymer | Low temperature seal coating for foil (e.g. processed cheese, chocolate wrapper) and film like (B)OPP |
| | Aquaseal X 2393 | 30 | 140 | 75 | Y | acid copolymer | Medium temperature seal coating for OPP-film and foil |
| | Aquaseal X 2339 | 31 | 100 | 65 | Y | acid copolymer | Low temperature seal coating for lidding on glass containers |
| | Aquaseal X 2261 | 43 | 500 | 65 | Y | acid copolymer formulated for low CoF | Low temperature seal coating for foil (e.g. processed cheese, chocolate wrapper) |
| | Aquaseal X 2414 | 30 | 100 | 75 | Y | acid copolymer formulated for low CoF | Medium temperature seal coating for foil (e.g. processed cheese, chocolate wrapper) |
| (flexible & rigid) Plastic packaging | Aquaseal X 2088 | 55 | 300 | 85 | Y | PP co-polymer | Heat seal coating for sealing against PE, PP and OPP |
| | Aquaseal X 2151 | 50 | 150 | 65 | N | hot melt dispersion | Heat seal coating for PS, PP, PET, PE, PVC, NC |
| | Aquaseal X 2191 | 55 | 200 | 65 | N | hot melt dispersion | Heat seal coating for PS, PP, PE, PVC, NC. Suitable for IML applications |
| | Aquaseal X 2413 | 50 | 100 | 65 | N | hot melt dispersion, low CoF | Similar as AQ X 2191 but formulated for low COF and anti-block |
| | Aquaseal X 2365 | 55 | 200 | 65 | N | hot melt dispersion | Heat seal coating for PS, PP, PE, PVC, NC and especially PET |
| | Aquaseal X 2367 | 47 | 200 | 65 | N | hot melt dispersion | Alkali-washable heat seal coating for IML applications |
| | Aquaseal X 2296 | 36 | 80 | 90 | Y | acrylic formulated for low CoF | Heat sealable OPV for high speed roll-wrap applications |

* Brookfield viscosity at 23°C

** Minimum sealing temperature (2 secs / 4 bar)



We are **Paramelt**

Founded in 1898, Paramelt has over 125 years of experience and today is a global producer of wax blends, adhesives and specialty dispersions. Operating from production sites in The Netherlands, United Kingdom, the USA and China we work together in a team of about 500 employees around the world. In most of our core applications Paramelt is the acknowledged market leader.

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