



COATINGS

ULTRATINT® SERIES

BUILDING BLOCKS TO
FINE-TUNE COATINGS
PERFORMANCE



OXITENO

Evolution by chemistry

Oxitenos's alkoxyated polyols were designed to be used as an intermediate for polymerization and as a low molecular weight binder to improve mechanical properties and endurance of formulated coatings.



BENEFITS

- Balance of mechanical properties
- Better substrate and intercoat adhesion
- Improved flexibility
- Better hardness profile
- Increased chemical resistance





FEATURES

- Easy to handle (Viscous liquid)
- 100% solids
- Versatility – suitable for waterborne and solvent-borne
- Package: Bulk, Drum, Sample

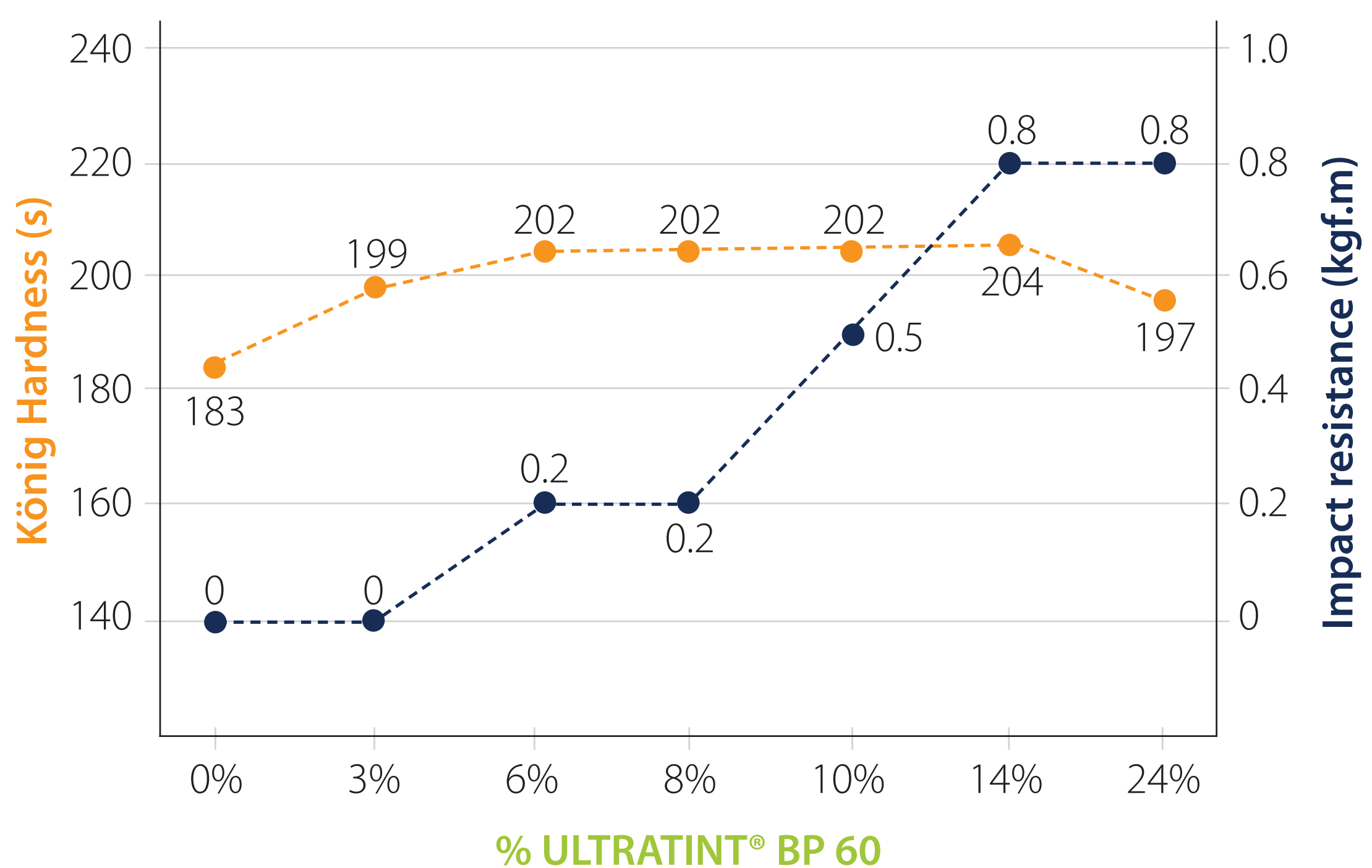
Table 1:
Typical values and properties of Building Blocks

PROPERTIES	ULTRATINT® BP 60	ULTRATINT® TM 30
Appearance @ 25 °C	Clear Liquid	Clear Liquid
Viscosity, cP @ 25 °C	~ 2500	~ 700
Actives, wt%	~ 100	~ 100
Boiling Point, °C	320	300
Hydroxyl Value, mgKOH/g	~ 232	~ 610
Functionality, eqOH/mol	2	3



PERFORMANCE TESTS

Balancing Hardness and Impact Resistance – ULTRATINT® BP



Polyester Resin (%NV = 60.0%, IOH = 5.0%) + ULTRATINT® BP 60. Curing Agent: Aliphatic Polyisocyanate (NCO = 19.6%). R (NCO/OH) = 1.0. Methods: ASTM D4366 and ASTM D6905.

Total binder composition in solids (% w/w)

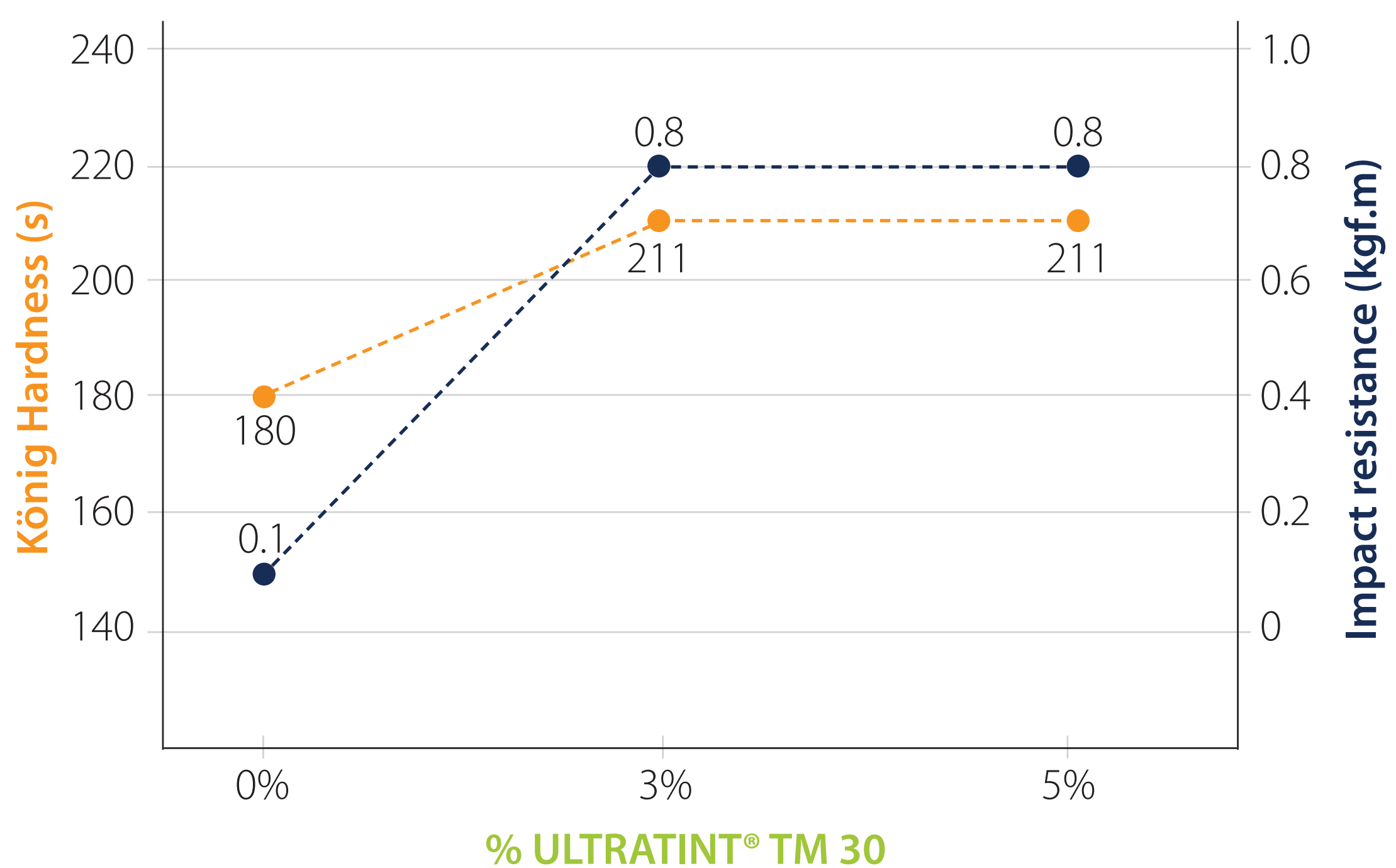
% ULTRATINT® BP 60	0%	3%	6%	8%	10%	14%	24%
Polyester	61%	58%	54%	52%	50%	45%	34%
Curing Agent	39%	39%	40%	40%	40%	41%	41%

The addition of 6% of ULTRATINT® BP 60 improved the impact resistance of the system without losing the hardness of the film. For the system studied, the addition of 15% of ULTRATINT® BP 60 delivered the best balance of impact resistance and hardness.



PERFORMANCE TESTS

Balancing Hardness and Impact Resistance – ULTRATINT® TM



Polyester Resin (%NV = 60.0%, IOH = 5.0%) + ULTRATINT® TM 30. Curing Agent: Aliphatic Polyisocyanate (NCO = 19.6%). R (NCO/OH) = 1.0. Methods: ASTM D4366 and ASTM D6905.

Total binder composition in solids (% w/w)

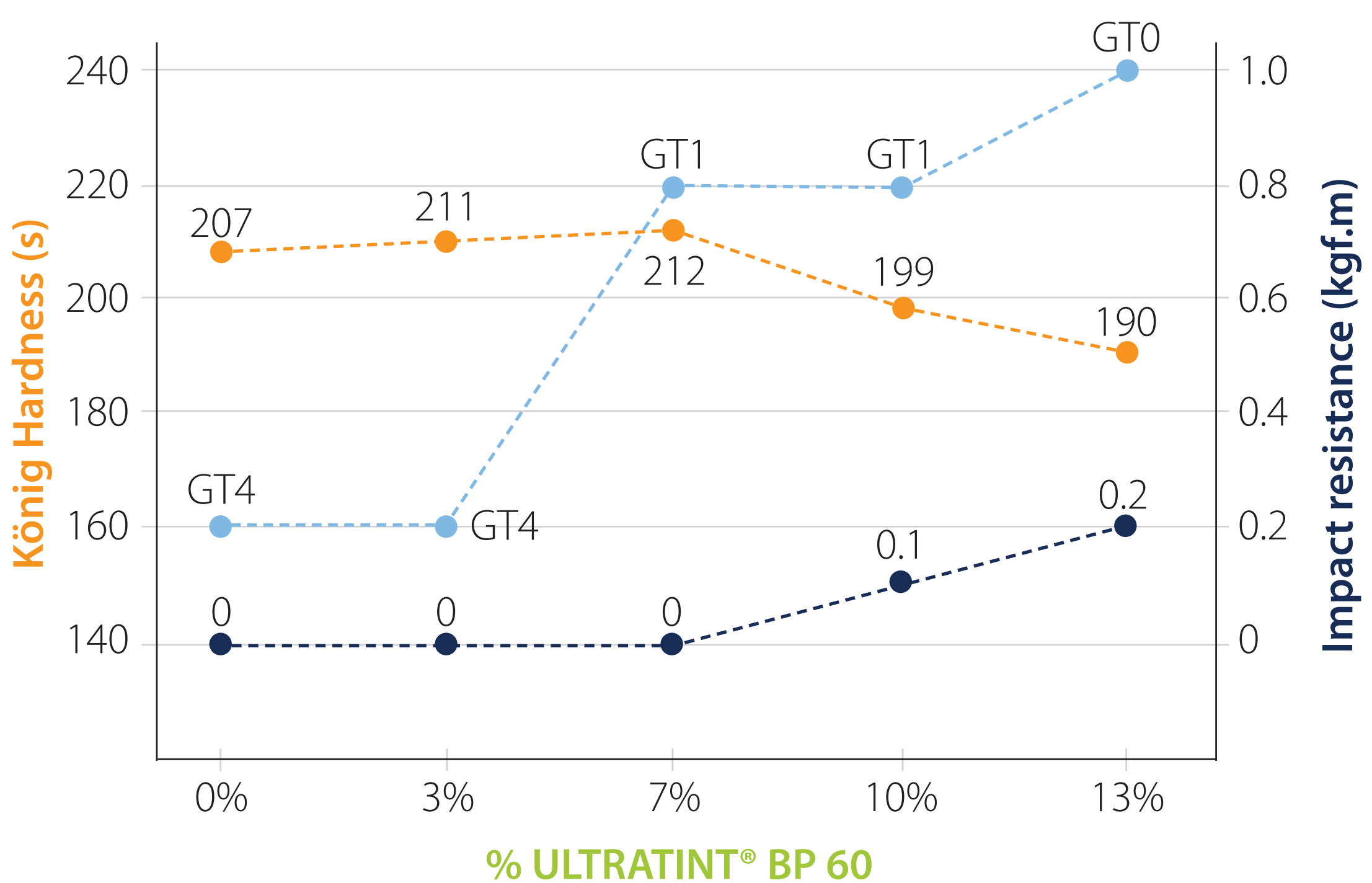
% ULTRATINT® TM 30	0%	3%	5%
Polyester	61%	55%	50%
Curing Agent	39%	42%	44%

The addition of 3 to 5% of ULTRATINT® TM 30 delivered the best balance of hardness and impact resistance for the system studied.



PERFORMANCE TESTS

Balancing Hardness, Impact Resistance and Adhesion – ULTRATINT® BP



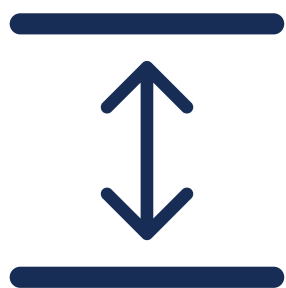
● Adhesion (Carbon Steel)

Polyester Resin (%NV = 60.0%, IOH = 5.0%) + ULTRATINT® BP 60. Curing Agent: Methylated Melamine (160g/eq). R (Melamine/OH) = 1.0. Methods: ASTM D4366, ASTM D6905 and ASTM D3359 (X Cut).

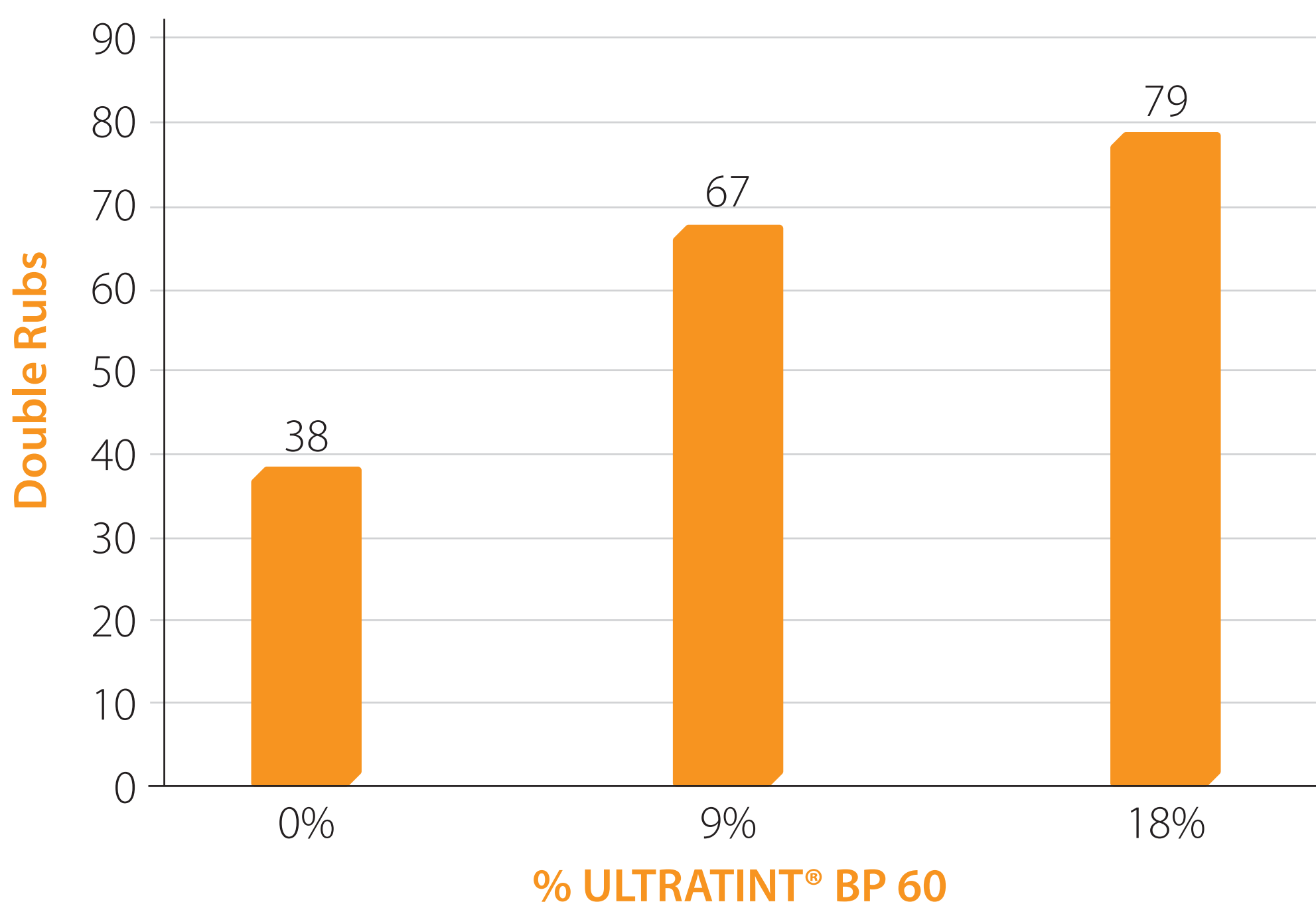
Total binder composition in solids (% w/w)

% ULTRATINT® BP 60	0%	3%	7%	10%	13%
Polyester	68%	64%	60%	57%	53%
Curing Agent	32%	33%	33%	33%	34%

The addition of 7% of ULTRATINT® BP 60 improved the adhesion of the polymer to Carbon Steel. The range between 10 - 13% delivered the best balance of hardness and impact resistance in addition to the gain in adhesion.



MEK RESISTANCE

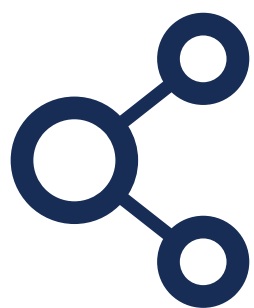


Polyester Resin (%NV = 60.0%, IOH = 5.0%) + ULTRATINT® BP 60. Curing Agent: Methylated Melamine (160g/eq). **R (Melamine/OH) = 5.4**. Method: ASTM D5402.

Total binder composition in solids (% w/w)

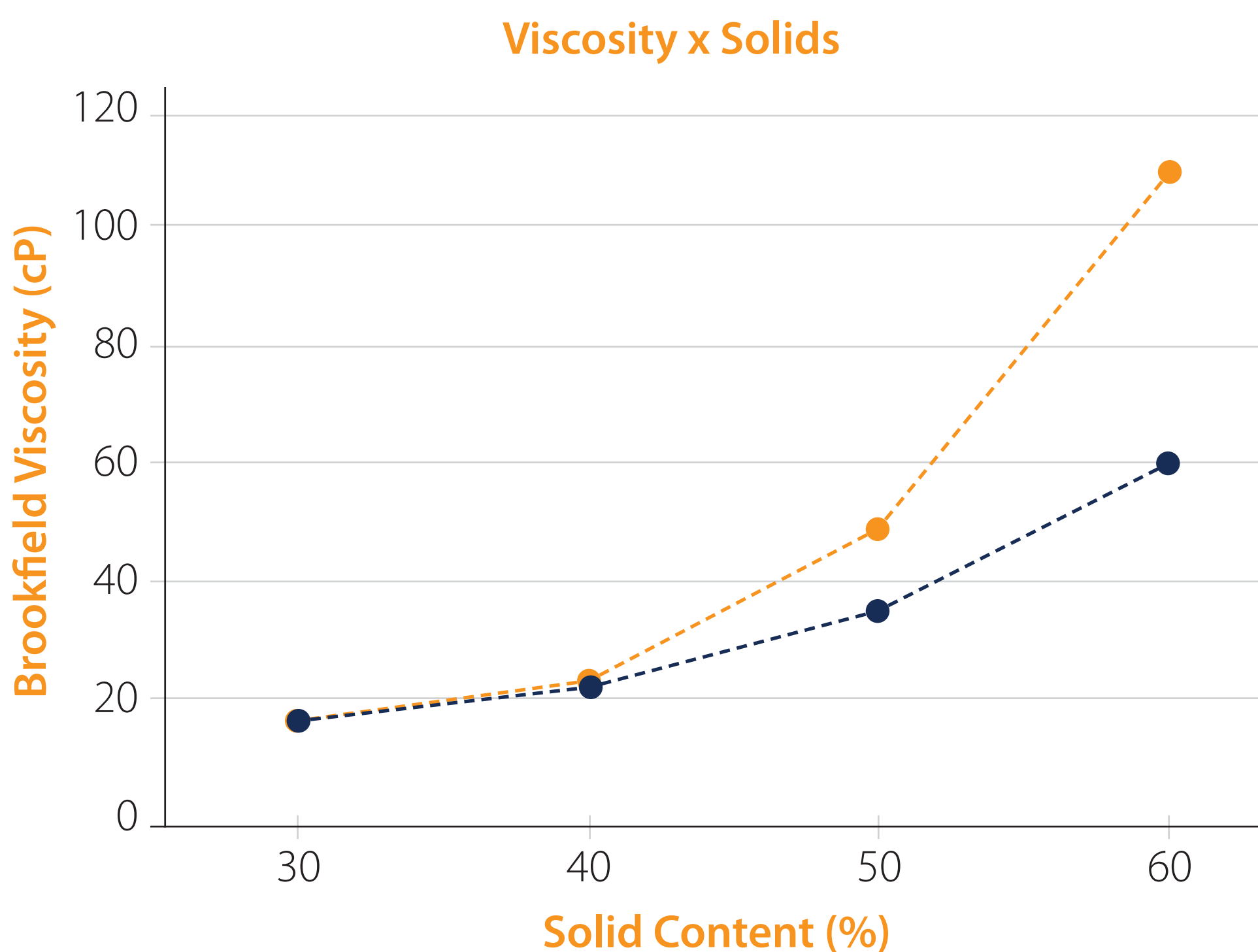
% ULTRATINT® BP 60	0%	9%	18%
Polyester	92%	83%	73%
Curing Agent	8%	8%	9%

ULTRATINT® BP 60 can improve the chemical resistance of the final polymer. The addition of 9 to 18% of ULTRATINT® BP 60 in a polyester melamine system can double the cycles to failure in the MEK resistance test.



VOC REDUCTION

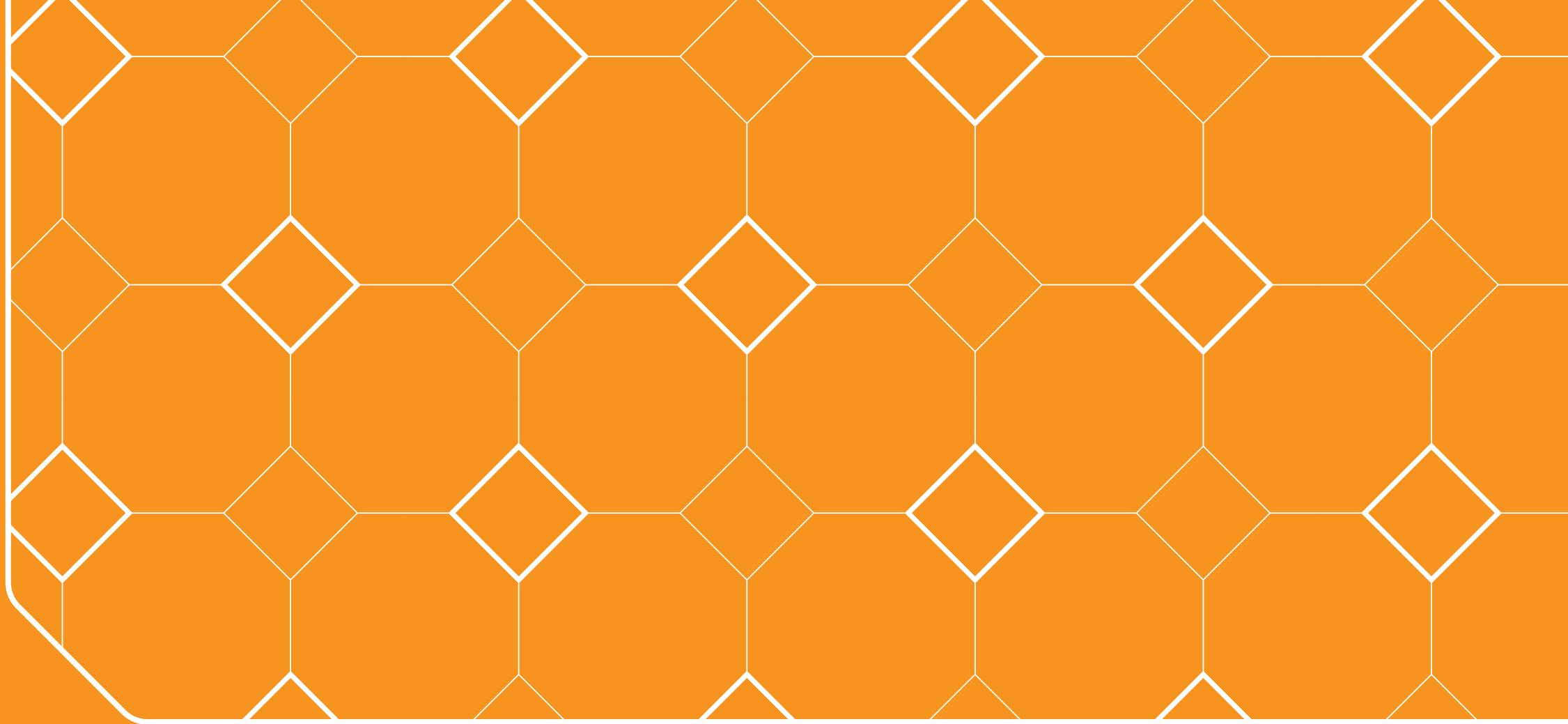
High Solids Systems



Orange line: Viscosity of a Polyol-Melamine mixture in different dilutions.

Blue line: Viscosity of the Polyol-Melamine mixture but with the partial replacement of the polyol by 15% of ULTRATINT® BP 60 in different dilutions.

Alkoxylated polyols can help formulators to adjust the solids x viscosity relation in solventborne systems, as showed in the graph.



If you have to fine-tune the
performance of your coating
ULTRATINT® SERIES is what you need!
Contact us and request a sample.



oxiteno.com/us/en/contact/



Evolution by chemistry