

# OPEN LOOP COMPOUNDS

Sustainable, economical, high-quality



## **WIPAG Open Loop Compounds are high-quality recycled products with an attractive price-performance ratio.**

WIPAG uses post-consumer and post-industrial materials to create one-of-a-kind recycled compounds for use in a wide variety of applications. Our proprietary, patented, economically efficient recycling method allows us to process thermoplastic waste into exceptionally high-quality materials. This is possible thanks to our special technologies for composite separation, paint removal, and selective separation (density, optical and electrostatic separation, demetallization).

WIPAG Open Loop products make it possible to reduce or, in some cases, completely eliminate the use of new materials. This leads to cost savings on raw materials procurement. Along with lowering raw materials costs, these recycled products reduce users' CO<sub>2</sub> footprint. Using our WIPELAST can save up to 9 kg of CO<sub>2</sub>/kg compound compared to new materials. As such, our compounds make an excellent sustainable material solution. Even today, our products are already being used successfully in the automotive industry, which is known for having very high standards of quality. They are being used in other industries as well.

Our standard products currently include compounds based on PP, PP/EPDM, PA66, PA6, ABS and PC/ABS. Application-specific solutions based on other polymers or filler combinations can be developed as well. Our materials are already being used in:

- WIPAFLEX PP/PE/EPDM – wheel arch liners
- WIPAFLEX PP/PE/EPDM – drain gutters
- WIPELAST PP/EPDM – bumpers
- WIPELAST PP/EPDM – underbody cladding
- WIPELAST PP/EPDM – dividing walls for waste containers
- Altech ECO/IQ PP various – air flow guide elements
- Altech ECO/IQ PP – slide-in boxes
- Altech ECO/IQ PA6 – front ends
- Altech ECO/IQ PA66 – side mirror mounts

## **WIPAG Open Loop Compounds: Advantages at a glance**

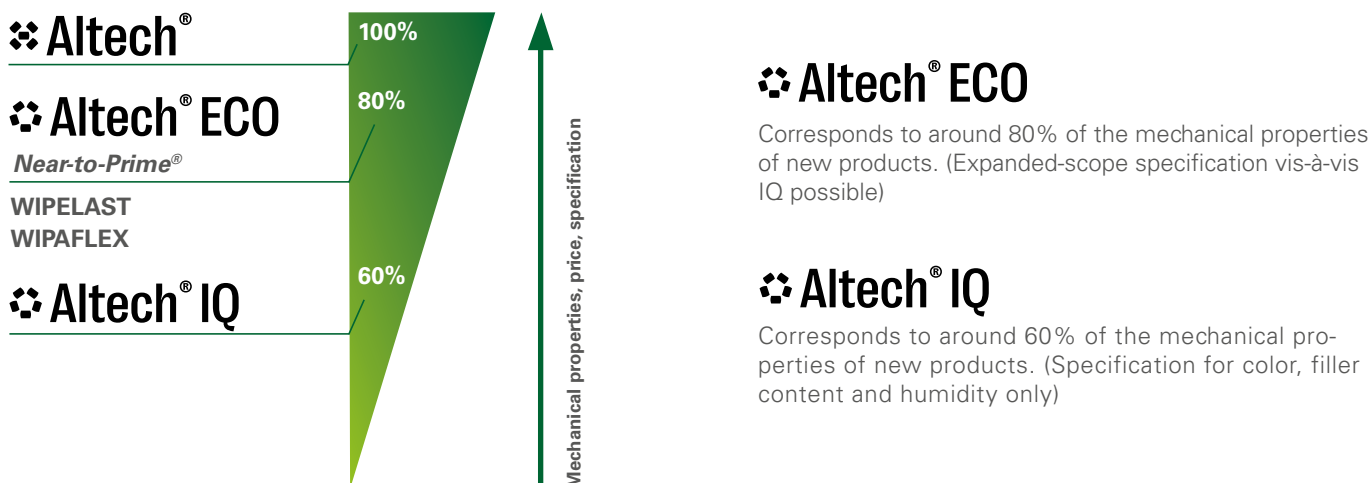
- Good mechanical properties
- Consistent quality
- No effect on subsequent paintability
- More cost-efficient than new-product compounds
- Sustainable material based on PCR and PIR raw materials

Material	Product Name	Filler content [%]	Density [g/cm <sup>3</sup> ] ISO 1183	Tensile modulus [MPa] ISO 527/31/32	Tensile strength [MPa] ISO 527-1/-2	Impact resistance 23°C [kJ/m <sup>2</sup> ] ISO 179/1eU	Charpy impact strength 23°C [kJ/m <sup>2</sup> ] ISO 179/1eA
PP/EPDM	WIPELAST TV10 BK	10	0,97	1.200	15	NB	40
	WIPELAST TV20 BK	20	1,04	1.700	17	105	35
	WIPELAST TV30 BK	30	1,13	2.000	16	40	11
PP/PE/EPDM	WIPAFLEX TV5 BK	5	0,96	1.100	20	110	20
	WIPAFLEX TV10 BK	10	0,98	1.200	15	95	25
PP GF	Altech PP IQ 2020/ W100 BK0002	20	1,04	3.500	50	40	7
	Altech PP IQ 2030/ W100 BK0002	30	1,12	4.400	55	35	7
PA6 GF	Altech PA6 ECO 2030/ W100 BK0002*	30	1,36	7.700	120	80	7
PA66 GF	Altech PA66 IQ 2030/ W100 BK0002*	30	1,37	8.000	125	50	4,5
	Altech PA66 IQ 2050/ W100 BK0002	50	1,55	12.500	140	54	7

\* freshly injected

Application specific solutions based on other polymers or filler combinations can be developed.

## Evaluation of Open Loop Compounds



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