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ELTech™

MASTERBATCH SOLUTIONS FOR ELECTRICAL & ELECTRONICS

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Modern society lifestyle strongly rely on electricity and telecommunication, whether at home, at work, during transport as well as for leisure activities.

The Electrical & Electronic Equipment (E&E) segment is widely diversified and covers a broad array of applications, including:

- *Power and telecommunication cables to guarantee power transport and distribution as well as data transmission*
- *Connectors to inter-link cables and electronic equipment in various segments, including e-mobility*
- *Electrical boxes, casings, ducts and conduits*
- *Plugs, sockets & switches*
- *...*



Electrical & Electronic Equipment is typically made of different polymers:

- Polyolefins – Polyethylene (PE), Polypropylene (PP) and Ethylene-Vinyl Acetate (EVA)
- Engineering Polymers – Polybutylene Terephthalate (PBT), Polyamide (PA), Polycarbonate (PC)
- Styrenics – Acrylonitrile Butadiene Styrene (ABS), Medium and High Impact Polystyrene (MIPS & HIPS)



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Ampacet **ELTech™** masterbatches, based on various carrier resins – PE, EVA, PBT and Universal Carrier (UN) – are designed for coloring Wire & Cable jacketing, Connectors as well as some other E&E applications, following the RAL color standards:

Color References	RAL 1018	RAL 1021	RAL 2003	RAL 2008	RAL 3000	RAL 3015	RAL 3020	RAL 4005	RAL 4006	RAL 5005	RAL 5010	RAL 5015	RAL 5021	RAL 6016	RAL 6018	RAL 6027	RAL 6029	RAL 6037	RAL 7000	RAL 7001	RAL 7004	RAL 7012	RAL 7035	RAL 7036	RAL 8003	RAL 8012	RAL 8029	RAL 9003	RAL 9005	RAL 9010
PE Masterbatches																														
EVA Masterbatches																														
PBT Masterbatches																														
UN Masterbatches																														

Additional shades can be color-matched to answer brand-owners' and converters' specific color requests. Color masterbatches with built-in stabilizers (Antioxidants & Ultra-Violet Stabilizers), required for outdoor applications or critical conditions of use, as well as other functionalities (Metal deactivation, laser marking...) can also be developed upon request.

Use of other masterbatch carrier systems can be evaluated on a case-by-case, based on end-product technical requirements.



ELTech™ Polyethylene Masterbatches for Wire & Cables and other E&E applications:

Color	RAL Reference	Description	Code	Heat Resistance	Light Fastness
Yellow	RAL 1018	RAL 1018 YELLOW PE MB	1303176-E	280°C	7
Yellow	RAL 1021	RAL 1021 YELLOW PE MB	1303047-E	280°C	7
Orange	RAL 2003	RAL 2003 ORANGE PE MB	1401713-E	260°C	5
			1401562-E	290°C	7
Red	RAL 3000	RAL 3000 RED PE MB	1503505-E	290°C	7
Pink	RAL 3015	RAL 3015 PINK PE MB	1503506-E	290°C	8
Violet	RAL 4005	RAL 4005 VIOLET PE MB	1605923-E	290°C	8
Blue	RAL 5015	RAL 5015 BLUE PE MB	1605924-E	290°C	8
Green	RAL 6016	RAL 6016 GREEN PE MB	1703877-E	290°C	7
Green	RAL 6018	RAL 6018 GREEN PE MB	1704315-E	280°C	7
Turquoise	RAL 6027	RAL 6027 TURQUOISE PE MB	1703879-E	290°C	7
Grey	RAL 7000	RAL 7000 GREY PE MB	1202367-E	290°C	8
Grey	RAL 7001	RAL 7001 GREY PE MB	1202368-E	290°C	8
Brown	RAL 8003	RAL 8003 BROWN PE MB	1801981-E	280°C	7
White	RAL 9003	WHITE PE MB	111844	300° C	8
Black	RAL 9005	ONYX 0826HP	190826-HP	300° C	8
		ONYX 9673I	19673-I	300° C	8
		ONYX 9836I	19836-I	300° C	8
White	RAL 9010	RAL 9010 WHITE PE MB	1101412-E	300° C	8



ELTech™ EVA Masterbatches for Wire & Cables and other E&E applications:

Color	RAL Reference	Description	Code	Heat Resistance	Light Fastness
Yellow	RAL 1021	RAL 1021 YELLOW EVA MB	1303062-E	220°C	7
Orange	RAL 2003	RAL 2003 ORANGE EVA MB	1401786-E	220°C	7
Red	RAL 3000	RAL 3000 RED EVA MB	1503893-E	220°C	5
			1503894-E	220°C	7
Blue	RAL 5010	RAL 5010 BLUE EVA MB	1606555-E	220°C	7
Blue	RAL 5015	RAL 5015 BLUE EVA MB	1606871-E	220°C	7
Green	RAL 6018	RAL 6018 GREEN EVA MB	1704542-E	220°C	7
Green	RAL 6037	RAL 6037 GREEN EVA MB	1704316-E	220°C	7
Grey	RAL 7000	RAL 7000 GREY EVA MB	1202735-E	220°C	7
Grey	RAL 7001	RAL 7001 GREY EVA MB	1202606-E	220°C	7
Grey	RAL 7035	RAL 7035 GREY EVA MB	1202736-E	220°C	7
Brown	RAL 8003	RAL 8003 BROWN EVA MB	1802094-E	220°C	7
White	RAL 9003	WHITE EVA MB	1101185-E	220°C	8
Black	RAL 9005	ONYX COP 9258A	19258-A	220°C	8

ELTech™ Universal Carrier Masterbatches:

Color	RAL Reference	Description	Code	Heat Resistance	Light Fastness
Yellow	RAL 1018	YELLOW COP MB	1303119-E	280°C	7
White	RAL 9003	WHITE COP MB	11200	280°C	7
Black	RAL 9005	ONYX COP 0132	1900132-E	280°C	7



ELTech™ PBT Masterbatches for connectors and other E&E applications:

Color	RAL Reference	Description	Code	Heat Resistance	Light Fastness
Yellow	RAL 1018	RAL 1018 YELLOW PBT MB	7300361-E	280°C	7
Yellow	RAL 1021	RAL 1021 YELLOW PBT MB	7300400-E	280°C	7
Orange	RAL 2003	RAL 2003 ORANGE PBT MB	7400269-E	280°C	4
Orange	RAL 2008	RAL 2008 ORANGE PBT MB	7400294-E	280°C	7
Red	RAL 3000	RAL 3000 RED PBT MB	7500673-E	280°C	4
Pink	RAL 3015	RAL 3015 PINK PBT MB	7500740-E	280°C	7
Red	RAL 3020	RAL 3020 RED PBT MB	7500681-E	280°C	7
Violet	RAL 4005	RAL 4005 PURPLE PBT MB	7600880-E	280°C	7
Violet	RAL 4006	RAL 4006 PURPLE PBT MB	7500653-E	280°C	6
Blue	RAL 5005	RAL 5005 BLUE PBT MB	7600868-E	280°C	7
Blue	RAL 5021	RAL 5021 BLUE PBT MB	7600840-E	280°C	7
Turquoise	RAL 6027	RAL 6027 TURQUOISE PBT MB	7700594-E	280°C	7
Green	RAL 6029	RAL 6029 GREEN PBT MB	7700545-E	280°C	7
Light Grey	RAL 7004	RAL 7004 LIGHT GREY PBT MB	7200259-E	280°C	7
Grey	RAL 7012	RAL 7012 GREY PBT MB	7200270-E	280°C	7
Grey	RAL 7036	RAL 7036 GREY PBT MB	7200260-E	280°C	7
Brown	RAL 8003	RAL 8003 BROWN PBT MB	7800325-E	280°C	7
Brown	RAL 8012	RAL 8012 BROWN PBT MB	7800319-E	280°C	7
Brown	RAL 8029	RAL 8029 BROWN PBT MB	7800349-E	280°C	7
White	RAL 9003	WHITE PBT MB	7100238-E	280°C	7
Black	RAL 9005	DEEP REC-NIR-BLACK 135	7900135-E	280°C	7
		RAL 9005 BLACK PBT MB	7900180-E	280°C	7
White	RAL 9010	RAL 9010 WHITE PBT MB	7100333-E	280°C	7

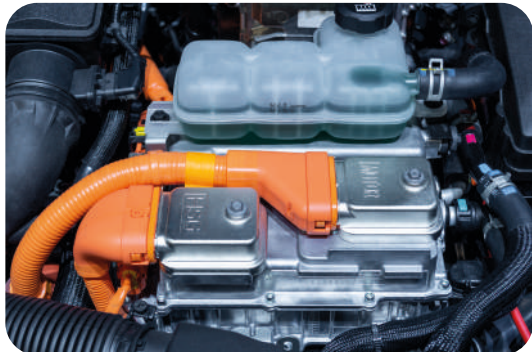


For proper functionality and operability, E&E applications may require the addition of **advanced additive masterbatches**:

Functionality	Target Polymer	Description	Code	Carrier Resin	Comment
Laser Marking	PE	LaserMarkFlex 1135	1001135-E	LLDPE	Antimony-free laser marking solutions designed for use with NdYAG laser technology.
	PP	LaserMarkFlex 452	4000452-E	PP	
Metal Deactivator	PE	Metal Deactivator PE MB	1001269-E	LLDPE	10% Metal deactivator.
UV Stabilizer	PE	UV PE MB	10478-A	LDPE	10% General purpose HALS UV Stabilizer.
	PE	UV PE MB	10407-E	LDPE	10% High performance HALS UV Stabilizer.
	PE	UV PE MB	10561	LDPE	20% High performance HALS UV Stabilizer.
	PE	UVProtect 1248 PE	1001248-E	LD/LLDPE	New generation long lasting UV stabilizer, designed to extend service shelflife of durable outdoor plastic articles.
	PP	UVProtect 1248 PP	4001248-E	PP	
Flame Retardant	PE	HALOFREE 709	1000709-E	LDPE	Proprietary halogen-free flame retradant masterbatch, efficient at low addition rate.
	PP	HALOFREE 229	4000229-E	PP	
	PE	FR PE CMPD	102684	LLDPE	Halogen-free metal hydrate (Magnesium hydroxide) flame retardant compound.
	PE	FR PE MB	101185	LD/LLDPE	Halogenated flame retardant masterbatch. Does not produce dioxine during combustion.
Slip & Release	PE	SLIP PE MB	101724	LDPE	Non-migrating solution for high surface slip performance & easy mold release properties.

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Functionality	Target Polymer	Description	Code	Carrier Resin	Comment
Antimicrobial	PE / PP / ABS	GERMSCLEAN 684	1000684-E	Universal	Protect plastics from proliferation of bacteria leading to hygienic & germs-free surfaces.
Scratch Resistance	PE	ScratchShield 617	1000617-E	LLDPE	Protect plastic surface from abrasion, scratches and mar.
	PP	ScratchShield 395	4000395-E	PP	
	ABS	ScratchShield 47	6000047-E	SAN	
	ABS	ScratchShield 56	6000056-E	SAN	
Odor Absorber	PE	OdorClear 1222	1001222-E	LLDPE	High performance wide spectrum odor absorbing solutions designed for reducing perception of smell from mechanically recycled plastics.
	PP	OdorClear 0333	4000333-E	PP	
	PBT	OdorClear 0102	7000102-E	PBT	
Process Stabilizer	PE	ThermProtect PE 900	100900-E	LLDPE	High performance process stabilizer allowing higher use of reprocesses material.
Process Aid	PE	ProFlow 700	103700	LLDPE	Fluorinated processing aid, to be used up to 240°C.
	PE	ProFlow 654	103654	LLDPE	High heat resistant fluorinated processing aid, to be used up to 300°C.
Shrink & Warpage Reduction	PE	ShrinkLess 470	1000470-E	HDPE	Minimize shrinkage & Warpage.
	PP	ShrinkLess 106	4000106-E	PP	





Within its ELTech™ offering, other Ampacet capabilities can be beneficial to the E&E market segment:

- Electro semi-conductive black masterbatches & compounds
 - Solutions to support circular economy in the plastic industry
 - Laboratory accelerated die-drool testing
 - Accelerated weatherability testing (bandol wheel, weather-o-meter)
 - UL94 (V-0, V-2, VTM-0, VTM-2) and DIN4102 (B2) laboratory testing capabilities
 - Global presence with possibility to transfer masterbatch formulations between regions
- offering one single solution for global customers



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