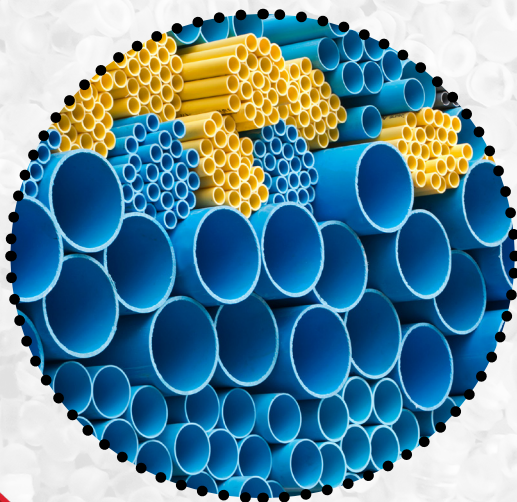
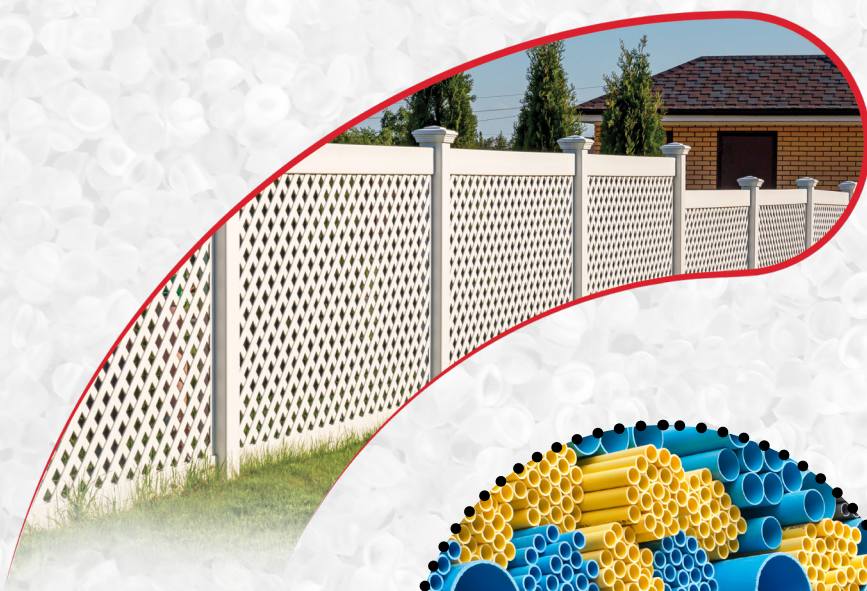


# FROM END-OF-LIFE TO ENDLESS POSSIBILITIES

Honeywell A-C® additives are enhancing recyclability to make plastics do more good



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**Did you know that every year, nearly 11 million metric tons of plastics enter our oceans, in addition to the estimated 200 million metric tons that currently circulate in our marine environment\*?**

As environmental concerns escalate, the plastic industry faces urgent pressure to shift towards sustainable practices. This shift is spurring innovations in specialty additives to enhance the durability, performance, and recyclability of plastics that meet environmental standards and responsibilities.

## RECYCLABILITY IN PLASTICS

Recyclability in plastics is essential for addressing environmental challenges, as it minimizes waste and supports the reduction of reliance on virgin plastic. On the other hand, improving durability ensures materials last longer and withstand harsh conditions, decreasing the frequency of product replacement and thus reducing waste.

However, developing sustainable plastics presents challenges, including the need to balance material performance with recyclability and to address cost barriers associated with advanced additives.

Looking ahead, the plastics industry is embracing specialty additives and functional polymers that enhance performance and degradability. There is also a growing emphasis on a circular economy, where plastic products are designed with recyclability in mind, fostering collaborations across industries to innovate closed-loop systems that further reduce reliance on virgin materials.



## HONEYWELL'S SPECIALTY ADDITIVES FOR PLASTICS RECYCLABILITY

Honeywell Specialty Additives is one of the world's first commercial producers of low molecular weight polyolefin-based additives and a leading innovator of formulated solutions for the PVC industry. Honeywell A-C® is one of the most recognized brands of performance additives, and the product line comprises homopolymers, copolymers - including their oxidized versions, ionomers and custom additive formulation. Honeywell A-C® additives play a key role in reshaping plastic recycling processes by unlocking new efficiencies:



### ENHANCED RECYCLING STREAMS

Traditional plastics often contain contaminants that hinder recyclability, complicating the recycling process. Honeywell's functional additives can help couple these contaminants into the polymer matrix, maintaining mechanical properties and end-application requirements.



### ENERGY EFFICIENCY DURING PROCESSING

By improving the material's processability and allowing for lower processing temperatures, less friction, and faster cycles, Honeywell A-C® Additives help reduce energy consumption, across extrusion, molding, and compounding.



### IMPROVED MATERIAL PROPERTIES AND AESTHETIC QUALITY

Honeywell's range of functional additives optimizes surface finishes and mechanical robustness in recycled plastics. By dispersing pigments, reinforcers, and fillers uniformly, it ensures that plastics retain their premium attributes even after recycling.

# USE CASES FOR HONEYWELL A-C® ADDITIVES IN INDUSTRY APPLICATIONS

## RECYCLING MULTILAYER / BARRIER FILMS

Honeywell A-C® additives improve the compatibility of dissimilar polymers used in complex film structures which mitigates suboptimal sorting processes and prevents delamination of the goods made from these recycled streams. Honeywell A-C® 596P, used in a leading compatibilizer masterbatch, improved bonding of recycled nylon (PA6/EVOH) in polyethylene multi-layer barrier films.



## AUTOMOTIVE COMPONENTS WITH RECYCLED PC-ABS

A-C® 597P enhances compatibility and throughput of recycled reinforced PC-ABS blends for molded auto parts. This resulted in better melt flow, smoother surface finish, and higher impact strength—enabling recycled content in demanding automotive applications.

## CONSUMER THIN-WALLED PP PRODUCTS

A-C® Performance Additives improve melt flow of recycled polypropylene without compromising mechanical properties. This allowed the manufacturer to increase recycled content while maintaining durability and efficiency in injection molding.



## FOOD PACKAGING FILMS

A-C® Ethylene-Acrylic Acid (EAA) co-polymers, such as A-C® 540, enhance processing and compounding of recycled films in multilayer food packaging. These additives improve melt flow and uniformity, enabling recycled content incorporation in food film applications without sacrificing performance.

## OTHER BENEFITS OF HONEYWELL A-C® ADDITIVES

### Product design and process benefits

### End user advantages

#### Color Concentrates

- Improved output rates in comparison to control
- Reduced maintenance costs
- Higher pigment loading
- Various options of product forms
- Improved pigment dispersion
- Stronger chroma
- Broad resin compatibility

- Higher output
- Reduced pigment costs
- Improved pigment dispersion in film and fiber
- More pigments available for use in applications
- Greater flexibility in design of colored products
- Higher color strength

#### Plastics Compounding

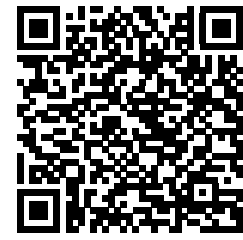
- Improved dispersion of fillers and impact modifiers
- Increased extrusion speeds leading to reduced power consumption
- Increased extrusion speeds
- Effective nucleating agent for expanded polystyrene

- Greater impact strength and dimensional stability
- Reduced operating costs
- Better aesthetics
- Improved release performance



## CONNECT WITH US

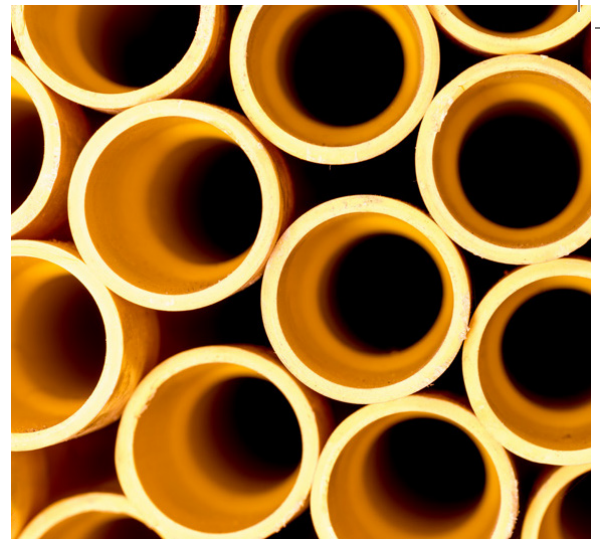
As Honeywell remains instrumental in redefining plastic sustainability, our A-C® additives are empowering industries to reduce waste, enhance recyclability, and create durable, high-quality products that align with the principles of a circular economy. We invite you to connect with our experts to learn more about Honeywell A-C® and embrace our innovative technology for a more sustainable future for the planet.



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# PRODUCT SELECTION GUIDE

Innovative and customized solutions  
that meet your needs

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# HONEYWELL SPECIALTY ADDITIVES PRODUCT LIST

GRADE	PROPERTIES						
	TYPICAL PROPERTIES OF A-C® POLYETHYLENES & COPOLYMERS	METTLER DROP POINT (ASTM D-3954)	HARDNESS DMM (ASTM D-5)	DENSITY G/CC (ASTM D-1505)	VISCOSITY CPS @ 140°C (BROOKFIELD)	ACID NUMBER MG KOH/G (ASTM D-1386)	PHYSICAL FORM
	HOMOPOLYMERS						
	A-C 3A	112°C 234°F	2.0	0.92	450	Nil	Powder
	A-C 6, 6A	106°C 223°F	4.0	0.92	375	Nil	Prills, Powder
	A-C 8, 8A	113°C 235°F	1.0	0.93	450	Nil	Prills, Powder
	A-C 9, 9A	115°C 239°F	0.5	0.93	450	Nil	Prills, Powder
	A-C 16, 16A	102°C 216°F	5.5	0.91	525	Nil	Prills, Powder
	A-C 617, 617A	101°C 214°F	7.0	0.91	180	Nil	Prills, Powder
	A-C 820A	126°C 259°F	<0.5	0.96	80	Nil	Powder
	A-C 725P	110°C 230°F	3.5	0.92	1400	Nil	Pastilles
	A-C 1702	90°C 194°F	98.0 <sup>(1)</sup>	0.88	30	Nil	Grease-like, Slab
	A-C 1375	106°C 223°F	3 - 5	0.92	375	Nil	Prills
	OXIDIZED HOMOPOLYMERS						
	A-C 629, 629A	101°C 214°F	5.5	0.93	200	15	Prills, Powder
	A-C 656	98°C 208°F	9.0	0.92	185	15	Prills
	A-C 680, 680A	108°C 226°F	1.5	0.93	250	16	Prills, Powder
	A-C 6702P	88°C 190°F	90.0 <sup>(1)</sup>	0.85	35	15	Grease-like
	HIGH-DENSITY OXIDIZED HOMOPOLYMERS						
	A-C 307, 307A	140°C 284°F	<0.5	0.98	85000 <sup>(2)</sup>	7	Granule, Powder
	A-C 316, 316A	140°C 284°F	<0.5	0.98	8500 <sup>(2)</sup>	16	Granule, Powder
	A-C 325	136°C 277°F	<0.5	0.99	4400 <sup>(2)</sup>	25	Granule
	A-C 330	137°C 279°F	<0.5	0.99	3600 <sup>(2)</sup>	30	Granule
	A-C 392	138°C 280°F	<0.5	0.99	4500 <sup>(2)</sup>	30	Granule
	COPOLYMERS/ ETHYLENE-ACRYLIC ACID						
	A-C 540, 540A	105°C 221°F	2.0	0.93	575	40	Prills, Powder
	A-C 580	95°C 203°F	4.0	0.94	650	75	Prills
	A-C 5120	92°C 198°F	8.0	0.94	650	120	Prills
	COPOLYMERS/ETHYLENE-VINYL ACETATE						
	A-C 400, 400A	92°C 198°F	9.5	0.92	595	13% Vinyl Acetate	Prills, Powder
	A-C 405M	100°C 212°F	5.0	0.92	600	8.5% Vinyl Acetate	Prills
	A-C 405T	102°C 216°F	4.0	0.92	600	6% Vinyl Acetate	Prills
OXIDIZED COPOLYMER							
A-C 645P	100°C 212°F	5.0	0.94	375	13 (SAP=56) <sup>(3)</sup>	Pastilles	

GRADE	PROPERTIES					
	ACLYN® LOW MOLECULAR WEIGHT IONOMERS	MELTING POINT <sup>(4)</sup>	CATION TYPE	ACID NUMBER MG KOH/G (ASTM D-1386)	VISCOSITY CPS @190°C (BROOKFIELD)	PHYSICAL FORM
	HOMOPOLYMERS					
	AClyn 285P*	82°C 180°F	Na	20	80000	Granule
	AClyn 295P* 295A*	99°C 210°F	Zn	Nil	4500	Granule, Powder

\* Make to Order Product



GRADE	PROPERTIES						
	ACUMIST® MICRONIZED POLYOLEFIN WAXES	METTLER DROP POINT (ASTM D-3954)	HARDNESS DMM (ASTM D-5)	DENSITY G/CC (ASTM D-1505)	AVERAGE PARTICLE SIZE MICRONS	ACID NUMBER MG KOH/G (ASTM D-1386)	PHYSICAL FORM
	PE MICRONIZED WAXES						
	ACumist A-6*	137°C 279°F	<0.5	0.99	6	26-40	Micronized Powder
	ACumist A-12	137°C 279°F	<0.5	0.99	12	26-40	Micronized Powder
	ACumist A18	137°C 279°F	<0.5	0.99	18	26-40	Micronized Powder
	ACumist A-45*	137°C 279°F	<0.5	0.99	30	26-40	Micronized Powder
	ACumist B-6	126°C 259°F	<0.5	0.96	6	Nil	Micronized Powder
	ACumist B-12	126°C 259°F	<0.5	0.96	12	Nil	Micronized Powder
	ACumist B-18*	126°C 259°F	<0.5	0.96	18	Nil	Micronized Powder
	ACumist D-6*	118°C 244°F	1.5	0.95	6	Nil	Micronized Powder
	ACumist D-9	118°C 244°F	1.5	0.95	9	Nil	Micronized Powder
	ACumist P-5*	145°C 293°F	<0.5	0.91	5	Nil	Micronized Powder

\* Make to Order Product

GRADE	PROPERTIES						
	MODIFIED OLEFIN PRODUCTS	METTLER DROP POINT (ASTM D-3954)	HARDNESS DMM (ASTM D-5)	DENSITY G/CC (ASTM D-1505)	VISCOSITY CPS @ 190°C (BROOKFIELD)	SAPONIFICATION NUMBER MG KOH/G	PHYSICAL FORM
	ETHYLENE MALEIC ANHYDRIDE COPOLYMERS						
	A-C 573A, 573P	106°C 223°F	4.5	0.92	600 @ 140°C	5	Powder, Pastilles
	PROPYLENE MALEIC ANHYDRIDE COPOLYMERS						
	A-C 596P	143°C 290°F	<0.5	0.94	150 @ 190°C	43	Pastilles
	A-C 597P	143°C 290°F	<0.5	0.94	350 @ 190°C	80	Pastilles
	A-C 950P	153°C 307°F	<0.5	0.93	2000 @ 190°C	43	Pastilles
	A-C 907P	152°C 306°F	<0.5	0.93	350 @ 190°C	87	Pastilles
	A-C 1325P	149°C 300°F	<0.5	0.92	1600 @ 190°C	18	Pastilles

GRADE	PROPERTIES						
	POLYPROPYLENE HOMOPOLYMERS	METTLER DROP POINT (ASTM D-3954)	HARDNESS DMM (ASTM D-5)	DENSITY G/CC (ASTM D-1505)	VISCOSITY CPS @ 140°C (BROOKFIELD)	SAPONIFICATION NUMBER MG KOH/G	PHYSICAL FORM
	A-C 1754	163°C	0.5	0.89	750	Nil	Powder

#### Notes:

- (1) ASTM D-1321
- (2) Measured at 150°C
- (3) Saponification No.. mg KOH/g
- (4) Determined by Differential Scanning Calorimetry.

## ENVIRONMENTAL CONSIDERATIONS

A-C polyethylenes and specialty additives are essentially inert and insoluble in water. Materials may be disposed of as non-hazardous solid organic waste. Spillage is not expected to cause adverse environmental effects.

## SAFETY PRECAUTIONS

A-C polyethylenes and specialty additives are non-hazardous at ambient temperatures. Consult Material Safety Data Sheets for complete information.

## PACKAGING/SHIPPING

A-C polyethylenes and specialty additives are normally supplied in 25 kg four-ply kraft paper bags, 25 kg polyethylene plastic bags, or 50 kg drums depending on the product. Products in bags are shipped on pallets. 40 bags to a pallet, net weight 1,000 kgs, and stretched-wrapped. Pallet loads are approximately 129.54 cm long, 111.76 cm wide, and up to 144.78 cm high, depending on product and bulk density. Bulk bags are available in a variety of sizes to meet customer requirements.

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# A-C® WAXES FOR PVC PROFILE EXTRUSION

In profile extrusion, A-C® polyethylene waxes can provide increased output rates, reduced calibration plate-out, controlled fusion maintaining physical properties and enhanced surface quality.



## PROPERTIES

PRODUCT	A-C 6A	A-C 617A	A-C 629A	A-C 680A	A-C 316A	A-C 400A
Type of polyethylene wax	Low density homopolymers		Oxidized low density homopolymers		Oxidized high density homopolymers	Ethylene vinyl acetate copolymer
Drop point (°C)	106	102	101	108	140	92
Viscosity (cps 140°C)	375	180	200	250	8500 (150 °C)	595
Acid number (mg KOH/g)	0	0	15	16	16	13% vinyl acetate
Density (g/cm <sup>3</sup> )	0.92	0.91	0.93	0.93	0.98	0.92
Dosage (phr)	0.1 - 0.4		0.1 - 0.4		0.05 - 0.2	0.1 - 0.4

## BENEFITS

PRODUCT	PERFORMANCE IN PVC PIPE EXTRUSION
A-C 6A A-C 617A	Excellent external lubrication providing enhanced gloss and surface quality; delay fusion
A-C 629A A-C 680A	Best combination of external lubrication and fusion control, providing metal release
A-C 316A	Superior additives for metal release; highly efficient fusion promoter enabling controlled pressure build up in the extruder; excellent distribution of additives resulting in increased melt homogeneity; reduced gloss
A-C 400A	Excellent external lubrication providing enhanced gloss and surface quality; relatively neutral to fusion. Reduce chattering in calibration unit and reduce melt pressure

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# A-C® ADDITIVES FOR MASTERBATCHES

Polyethylene Waxes provide an improved dispersion of organic and inorganic colorants, enhanced colorant strength and higher pigment loading. They also enhance compatibility with polyolefins and conventional and engineering thermoplastics.

PRODUCT	POLYMER / PIGMENT TYPE	KEY BENEFITS
Polyethylene Homopolymers: A-C 617A, 6A, 16A	Polyolefins mainly	Generally used for injection molding, extrusion, fiber, films
Oxidized Homopolymers: A-C 629A	Polar pigments	Excellent dispersion, wetting of polar pigments
Oxidized HD Homopolymers: A-C 316A	Acetals	Better pigment dispersion and wider compatibility
Ethylene Vinyl-Acetate Copolymers: A-C 400A	Polyolefins, Styrenics, PVC Carbon black	Better pigment dispersion and wider compatibility
Ethylene Acrylic Copolymers: A-C 540A	Acrylics, Nylon, ABS, PC	Better pigment dispersion and wider compatibility
Maleic Anhydride Grafted Copolymers: A-C 573A	Polyolefins, Nylons, Fluorescent MB	Excellent compatibilization, affinity to rutile TiO2
Ionomers: AClyn 295A, 201A	Universal MB, Engineering Plastics (PET, PBT, Acrylics, PC, Nylon, Acetals )	Color Enhancer, Compatibilization



## COLOR STRENGTH WITH ACLYN® FOR PHTHALOCYANINEBLUE IN LDPE MASTERBATCH

FORMULATION	AI	BI	CI	AII	BII	CII
<b>Pigment</b>	30	30	30	40	40	40
<b>LDPE</b>	70	60	60	60	50	50
<b>AClyn 295A</b>	–	–	2	–	–	4
<b>Color strength</b>	75	105	120	65	100	120



PE  
Homopolymer  
+ PE Polar



PE  
Homopolymer



No Wax

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# A-C® ADDITIVES FOR CONVENTIONAL AND ENGINEERING POLYMERS

Polyethylene waxes enhance plastics processing by:

- Providing better flow;
- Offering better mold release;
- Improving the lubricating effect;
- Bettering the dispersion of pigments and fillers;
- Increasing the compatibility of resins;
- Providing nucleation and a higher degree of crystallinity.

This leads to shorter cycle time, increased gloss and improved clarity in films.



PRODUCT			POLYMER	KEY BENEFITS	
A-C 6A A-C 8A A-C 629A	A-C 680A A-C 400A A-C 573P	A-C 950P	PE, PP	<ul style="list-style-type: none"> <li>• Efficient flow modifiers</li> <li>• Enhanced wetting and dispersibility of pigments and fillers</li> <li>• Improved glass fibers bond and compatibility in GFPP</li> </ul>	
A-C 6A A-C 617A A-C 400A	A-C 629A A-C 680A	A-C 316A A-C 16A		<ul style="list-style-type: none"> <li>• Efficient external lubrication</li> <li>• Fusion control</li> <li>• Anti-sticking and reduced plate-out</li> </ul>	<ul style="list-style-type: none"> <li>• Gloss control</li> <li>• Control of mold release</li> </ul>
A-C 400A			EVA	<ul style="list-style-type: none"> <li>• Improved processing and flow</li> </ul>	
A-C 316A			ABS, SAN, PC, PC/ABS	<ul style="list-style-type: none"> <li>• Efficient flow modifier</li> <li>• Enhanced weld line strength</li> <li>• Strong mold release</li> </ul>	<ul style="list-style-type: none"> <li>• Efficient compatibilizer</li> </ul>
A-C 540A (0.01-0.5 phr)	AClyn® 295A		PA6 and PA66	<ul style="list-style-type: none"> <li>• Enhanced processing and flow aid</li> <li>• Improved appearance and physical properties of injected molded parts</li> <li>• Improved extrusion</li> <li>• Better clarity in films</li> <li>• Decreased power consumption</li> <li>• Improve dispersion</li> </ul>	
A-C 316A			POM	<ul style="list-style-type: none"> <li>• Improved processing and flow</li> </ul>	
A-C 629A	A-C 316A		TPU	<ul style="list-style-type: none"> <li>• Improved processing and flow</li> </ul>	<ul style="list-style-type: none"> <li>• External lubricant</li> </ul>
A-C 316A			PBT/PET GR	<ul style="list-style-type: none"> <li>• Efficient release agent</li> </ul>	
AClyn 285A				<ul style="list-style-type: none"> <li>• Highly efficient nucleating agent and flow enhancer</li> </ul>	
A-C 3A	ACumist® B6 (0.5 phr)		EPS	<ul style="list-style-type: none"> <li>• Highly efficient nucleating agent</li> </ul>	<ul style="list-style-type: none"> <li>• Short cycle time in molding</li> </ul>

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# A-C® ADDITIVES FOR PVC INJECTION MOLDING

In PVC injection molding, polyethylene waxes can provide controlled melt viscosity and optimized melt flow; improved color stability; superior gloss and surface aspect; improved mold and runner release performance; and improved weld line strength.



## PROPERTIES

PRODUCT	A-C 6A	A-C 617A	A-C 629A	A-C 680A	A-C 316A
Type of polyethylene wax	Low density homopolymers		Oxidized low density homopolymers		Oxidized high density homopolymers
Drop point (°C)	106	102	104	108	140
Viscosity (cps 140°)	375	180	200	250	8500 (150 °C)
Acid number (mg KOH/g)	0	0	16	16	16
Density (g/cm³)	0.92	0.91	0.93	0.93	0.98
Dosage (phr)	0.1 - 0.6		0.1 - 0.6		0.05 - 0.2

## BENEFITS

PRODUCT	BENEFITS
A-C 6A A-C 617A	<ul style="list-style-type: none"><li>• Increased plasticizing time</li><li>• Reduced torque</li><li>• Enhanced physical and aesthetic properties of the finished article</li></ul>
A-C 629A A-C 680A	<ul style="list-style-type: none"><li>• Good mold filling properties in combination with excellent surface properties</li></ul>
A-C 316A	<ul style="list-style-type: none"><li>• Accelerates PVC fusion</li><li>• Increases melt homogeneity</li></ul> (Typically applied in combination with external lubricants like A-C 6A or A-C 617A)

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# A-C® ADDITIVES FOR PVC PIPE EXTRUSION

In pipe extrusion, A-C® polyethylene waxes can provide increased output rates, reduced plate-out and an increased filler level, maintaining physical properties and enhanced surface quality.



## PROPERTIES

PRODUCT	A-C 6A	A-C 16A	A-C 617A	A-C 629A	A-C 680A	A-C 316A	A-C 400A
Type of polyethylene wax	Low density homopolymers			Oxidized low density homopolymers		Oxidized high density homopolymers	Ethylene vinyl acetate copolymer
Drop point (°C)	106	102	102	104	108	140	92
Viscosity (cps 140°)	375	525	180	200	250	8500 (150 °C)	595
Acid number (mg KOH/g)	0	0	0	16	16	16	13% vinyl acetate
Density (g/cm³)	0.92	0.91	0.91	0.93	0.93	0.98	0.92
Dosage (phr)	0.1 - 0.4			0.1 - 0.4		0.05 - 0.2	0.1 - 0.4

## BENEFITS

PRODUCT	PERFORMANCE IN PVC PIPE EXTRUSION
A-C 6A A-C 16A A-C 617A	Excellent external lubrication leading to high output rates and enhanced gloss and surface quality; delay fusion
A-C 629A A-C 680A	Optimal combination of external lubrication, metal release, and gloss. Slightly improve fusion
A-C 316A	Superior additives for metal release. Very effective fusion acceleration enables controlled pressure build-up in the extruder; excellent distribution of filler in the melt; increased melt homogeneity; reduced gloss
A-C 400A	Reduce melt pressure, improve filler dispersion

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# A-C® PERFORMANCE ADDITIVES IN CABLE MANUFACTURING

A-C® performance additives – low molecular weight polymers – are used as processing aids in polyethylene cable manufacturing. Their unique combination of low melting point and low viscosity, coupled with excellent electrical properties and general chemical inertness, help dispersion filler, help flame retardant dispersion, enhance flow and leads to enhanced cable properties.

PROPERTIES	A-C® 6A HOMOPOLYMER	A-C® 400A EVA COPOLYMER
Dielectric Constant (60 Hertz)	2.38	2.70
Dielectric Constant (1 mega Hertz)	2.24	3.00
Dissipation Factor (60 Hertz)	0.0005	0.0020
Dissipation Factor (1 mega Hertz)	0.0006	0.0120
Loss Factor (60 Hertz)	0.0012	0.0054
Loss Factor (1 mega Hertz)	0.0013	0.0360
Volume Resistivity (at 765 Volts DC in Ohm-meter)	$1.4 \times 10^{12}$	$7.0 \times 10^{12}$

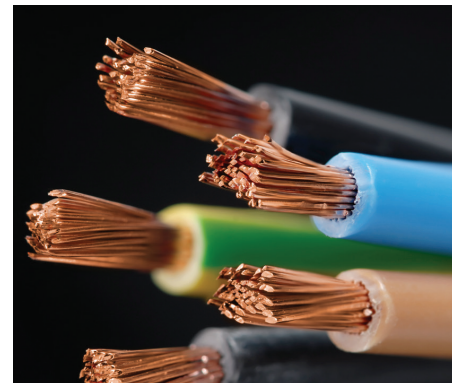
Determinations made at 23.5°C (70°F) and 30% relative humidity.

## A-C® 6A BENEFITS BY APPLICATION

- **Telecom Foam:** Better and more regular dispersion of the blowing agent, at a dosage level of around 1%. Reduced melt sticking. This results in increased output rates with less mechanical effort and can result in significant cost savings. Improved gloss properties.
- **Telecom Jacketing:** Improved dispersion of additives, such as aluminium trihydrate. Improved additives dispersion, i.e. the filler ATH. Better incorporation and dispersion of the additive, which results in a better overall processing.
- **Strippable semi-conductor:** Improved stripping force of the compound.
- **Fully bonded semi-conductors:** Reduced dye-drool, lower viscosity and improved smoothness of the interface between the conductor and the dielectric.

## A-C® RECOMMENDED DOSAGE LEVEL (%)

APPLICATIONS	A-C 6A	A-C 400A	MAH
Semicon	1-2	1-2	
LLDPE	1-2	1-2	
HFFR	1-2	2-4	4-7
Telecom: LDPE		3-5	
LLDPE		3-5	
MD/HD	1-2	3-5	
Cellulaire	0.5-2		
HFFR	1-2	2-4	4-7



## A-C® 400A BENEFITS BY APPLICATION

- **Medium Voltage Cable:** Improved dispersion of Carbon Black. This minimizes batch to batch fluctuation of the dielectric constant.
- **LDPE Jacketing:** Reduced stress cracking. Lowers the viscosity, which boosts the process, flow and gloss properties.
- **EVA/PE Cable:** Improved dispersion of high dosage ATH per:
  - 1-2% for new generation
  - 1-2% for new ATH high flowability generation
  - 2-4% for standard ATH

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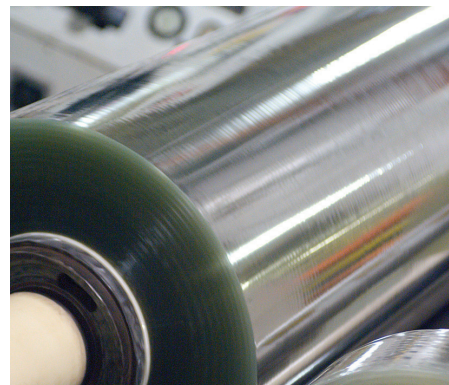
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# A-C® ADDITIVES FOR PVC FILM AND SHEET EXTRUSION AND CALENDERING

In calendering of rigid PVC films, A-C® polyethylene waxes act as efficient release agents. In flat die extrusion they provide an improved anti-sticking behavior.



FILM TYPE	PRODUCT	DOSAGE, PHR	KEY BENEFITS
Rigid PVC film calendering	A-C 316A	up to 0.1	<ul style="list-style-type: none"><li>• Excellent release from calender rolls</li><li>• High output</li><li>• Perfect surface</li></ul>
Rigid transparent PVC film: flat die extrusion	A-C 316A	0.2 – 0.4	<ul style="list-style-type: none"><li>• Good anti-sticking properties lead to uniform film quality</li></ul>
Plasticized transparent PVC film extrusion	A-C 629A	0.3 – 0.4	<ul style="list-style-type: none"><li>• Anti-sticking agent with moderate fusion accelerating</li></ul>
Non-transparent PVC film extrusion (both rigid and plasticized)	A-C 617A	0.2 – 0.3	<ul style="list-style-type: none"><li>• Enhanced surface quality</li><li>• Excellent filler distribution in the melt</li></ul>

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# A-C® WAXES FOR RUBBER PROCESSING

PE waxes have following features

- Excellent metal release properties from Banbury, mill, and calender rolls.
- No adverse effect on scorch, cure rate, or general physical properties (tensile strength, elongation, hardness).
- No blooming or bleeding in either green or cured stocks.
- Improved filler dispersion, particularly carbon blacks.
- Improved mold flow and mold release.
- Increased extrusion rates and improved surface finish
- Compatible with all elastomers.
- Excellent chemical and oxidation resistance.
- Excellent electrical properties.
- Disperse readily in the temperature range of 75-95°C and above.



RUBBER TYPE	A-C® GRADE	BENEFIT	DOSAGE
Neoprene	A-C 617A	Improved processing characteristics such as mold flow and mill release; reduced die swell; improved extrudate finish; non-bleeding; does not adversely affect physical properties and adhesion characteristics; allows formulators to replace a portion of elastomer without detracting from cure rate and physical properties; preferred product due to combination of lower melting point and viscosity	2-6 phr
EPDM	A-C 617A	Reduced Mooney viscosity and mill tackiness; improved mold flow, mold release and building tack with no sacrifice in cure rate or physical properties	4-6 phrs
Nitrile Rubber	A-C 617A	Very effective processing aid for nitrile rubber compounds; milled stocks sheet faster and smoother; lower viscosities; decreased scorch sensitivity; reduced nerve and shrinkage contributing to better calendering and extrusion properties; improved mold flow and mold release	3-5 phr
SBR	A-C 617A	Reduced viscosity and scorch sensitivity; improved mold flow and mold release; the non-blooming characteristic leads to no decrease in green tack or adhesive qualities necessary for roll covering, belting and shoe sole applications; improved abrasion and cut-growth	2-5 phr
Hypalon	A-C 617A	Shortened mixing cycles; decreased viscosity; reduced shrinkage and scorch sensitivity; improved mold flow, mold release, and abrasion and crack-growth resistance; provides excellent handling characteristics during mill and calender operations	3-5 phr
Viton	A-C 617A	Better mold flow and mold release with no change in cure rate; improved surface quality of both extruded and molded parts; no negative effect on original or ageing properties, as well as green tack and adhesion properties	3-5 phr
Rubber Mixing Aid	A-C 6 A-C 617A A-C 629	Great improvements in Banbury mixing and mill handling with the smooth release of the stock; improved release; reduced viscosity; increased extrusion rates	3-4 phr
Carbon Black Dispersion	A-C 617A A-C 400A	Greatly improving carbon black dispersion with subsequent increase in tensile strength and hardness	5 phr
Tire Applications	A-C 6A A-C 617A	Excellent internal lubrication for the compound; facilitates calender release; improves the surface smoothness of the finished sheet; no interfering with building tack or other physical properties; modest improvement in air holding properties; improved extrusion characteristics (rate, finish, shrinkage); improved dispersions of fillers, zinc and titanium oxides; better mold and mold release for thread designs; reduced processing temperatures for mixing and extrusion; excellent scorch safety	n/a
Thermoplastic Rubber for Shoe Soles	A-C 400A	Extremely efficient flow aid greatly assisting injection at low pressure; reduced tackiness of compound; fewer flow marks; reduction in "white spots"; reduction in cycle time; permitting greater use of radial polymers for better abrasion; no interfering with adhesion or lacquering; no negative effect on physical properties	0.5-1 phr



## For more information:

to contact us, please visit:

<https://industrial.honeywell.com/us/en/applications/specialty-additives>

## Honeywell Additives

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