

Performance Additives

Additives for Adhesives



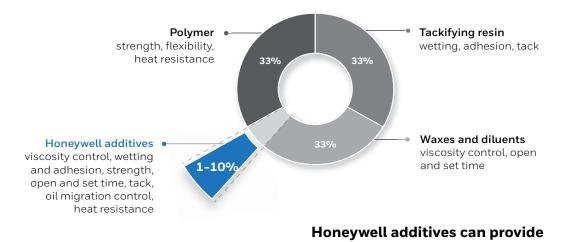
Honeywell Performance Additives for Adhesives

Enhance Performance. Improve Processing. Increase Value.

> Honeywell performance additives are designed to enhance performance, improve processing, and increase the value of your adhesives. Our A-C[®] and ACumist[®] brand polymers help to extend the range of your hot melt adhesives by influencing a variety of different properties, including cold temperature and low surface energy substrate adhesion, application temperature, high temperature resistance and oil migration control, which helps your

adhesives become more competitive. Each additive in our product line is backed by Honeywell's consistent quality, customer service, and reliable global supply network. And, as one of the world's leading manufacturers of low molecular weight polyethylene additives, Honeywell's technical support is prepared to help you identify and apply the additives you need for your specific application.

functionality to your formulation.



Hot Melt Adhesive Composition

2



Your search for the right product begins with the broad selection of additives Honeywell manufactures, and those products offer a variety of benefits for virtually any type of adhesive chemistry:

Ethylene vinyl acetate (EVA)

- Increased adhesion
- Reduced processing times
- Reduced set times
- Improved heat resistance
- Increased wetting

Metallocene polyolefins (MEO and MPP)

- Increased adhesion to low surface energy substrates
- Improved cold temperature adhesion
- Reduced set times
- Improved heat resistance

Amorphous poly-alpha-olefins (APAO)

- Increased adhesion to low surface energy substrates
- Reduced adhesive stringing
- Increased heat resistance
- Improved set speed

Styrenic block copolymers (SBC)

- Increased adhesion
- Oil migration control

Polyamides (PA)

- Reduced viscosity
- Improved set speed

Key Benefits of A-C® Performance Additives

Achieve Greater Adhesion

Even on dissimilar surfaces or low surface energy substrates, A-C performance additives help your hot melt formulation achieve greater adhesion strength. Whether the surface is polypropylene (PP), polycarbonate (PC), polyvinyl chloride (PVC), polyethylene (PE), polyethylene terephthalate (PET) or coated and uncoated kraft cardboard, A-C performance additives are designed to improve your product's ability to coat virtually any surface. These additives also reduce the viscosity of your formulation, which helps to improve adhesion



and wetting on the substrate. A-C performance additives even boost your hot melt's ability to adhere to substrates at freezer temperatures.

Reduce Processing and Set Times

With their ability to lower the viscosity of your formulation, A-C performance additives help to reduce your batch mixing times. They also decrease your product's set time, which means your customers can boost their productivity.

Lower Application Temperatures

By reducing the viscosity of your formulation, A-C performance polymers lower its application temperature, which improves application speed and reduces energy costs. This also improves the formulation's adhesion to heat sensitive substrates, such as plastic, without affecting its heat resistance performance. Improve Heat Resistance When your customers' specifications call for a heatresistant hot melt, A-C performance additives can be used to elevate the softening point of your formulation, helping to ensure your product can withstand higher temperatures.

Control Oil and Plasticizer Bleed

A-C performance additives feature a unique ability to hold oils that can bleed from your adhesive, which helps to maintain the strength of the adhesive and preserves the aesthetics of paper and labeling. They can also reduce plasticizer bleeding from PVC films, allowing the adhesive to attach more easily to the surface of the film.

Product Applications

From packaging to woodworking, A-C performance additives have been used to improve adhesives and sealants for more than five decades. When you use Honeywell A-C performance additives, you benefit from technical support specialists that understand your application. These specialists are experts in the chemical, physical and application-based properties of our additives, and can help you quickly identify the additives best suited for your needs. When you are seeking to improve your product's heat or aging resistance, or enhance its adhesion, Honeywell experts can find the right blend to improve your formulation.



Packaging



Enhance the adhesion and set times of your formulation in coated and uncoated carton applications. For materials that must endure hot and cold temperatures, A-C performance additives provide the cold temperature performance and heat resistance you need to ensure your formulation maintains strong adhesion throughout the lifecycle of the product.

Bookbinding



Help your hot melt reach the level of strength, flexibility and durability bookbinding requires. A-C performance additives help to promote adhesion over the lifetime of a bind, while offering greater processing speeds on your customer's production lines. Woodworking



The difficulty of adhering PVC or PP foils to wood can be overcome with the help of an additive that works with your formulation to reduce stringing and resist heat. With the help of A-C performance additives, you can increase adhesive strength in extreme temperatures while optimizing the set time of your adhesive to the wood substrate.

Hygienic



A-C performance additives reduce the viscosity and lower the application temperature of your formulation in hygienic applications, such as diapers. Your customers will benefit from improved wetting and the ability to apply your product at higher line speeds.

Tape and Label



Boost adhesion strength on the low surface energy substrates often encountered in tape and label applications. A-C performance additives also help to stabilize the oils that can bleed into paper, ensuring the aesthetic appeal of your customer's product is maintained.

Specialty Applications



A-C and ACumist performance additives are used in many specialty applications, including adhesive pellet detackification and the extension of Fischer-Tropsch waxes. Contact our technical support team today to learn how we can meet the needs of your specific application.

Recommended Products for Adhesion Enhancement by Substrate and Adhesive Chemistry*

| | | Adhesive Chemistry | | | | |
|-----------|------------------------|-----------------------------------|-------------------------------|---------------------------------|------------|------------------------------|
| | | Styrenic Block Copolymers | Metallocene Polyolefins | Amorphous Poly-Alpha-Olefins | Polyamides | Ethylene Vinyl Acetate |
| Substrate | Kraft or Coated Carton | A-C EVA, A-C MAPP | A-C PE, A-C MAPE, A-C MAPP | A-C MAPE, A-C MAPP, A-C PP | A-C EAA | A-C PE, A-C EVA, A-C MAPP |
| | Polyethylene | A-C EVA, A-C MAPP, A-C MAPE | A-C MAPE, A-C MAPP, A-C PP | A-C MAPE, A-C MAPP, A-C PP | A-C EAA | A-C PE, A-C EVA, A-C MAPP |
| | Polypropylene | A-C EVA, A-C MAPP, A-C MAPE | A-C MAPE, A-C MAPP, A-C PP | A-C MAPE, A-C MAPP, A-C PP A | A-C EAA | A-C PE, A-C EVA, A-C MAPP |
| | PVC | A-C EAA | A-C EAA | A-C EAA | A-C EAA | A-C EAA |

*Contact Honeywell for specific product recommendations.

A Global Commitment to Technical Support

Every day, Honeywell A-C performance additives are helping to improve the performance of products around the world. More than five decades of expertise in the development of low-molecular-weight polyethylene polymers is at your fingertips through Honeywell's technical support services, with specialists who understand your application. Contact us today to learn more about what we can do for your products.



Product Lines

Honeywell offers several different lines of A-C performance additives to fit your specific application:

| Product | Major Benefits | | |
|--|--|--|--|
| A-C PE Homopolymers | Viscosity control/reduced processing time Application at low temperatures Increased heat resistance Reduce oil migration | | |
| A-C High-Density Oxidized PE Homopolymers | Increased heat resistance Reduce oil migration Improved adhesion | | |
| A-C EAA Copolymers | Reduce plasticizer migration Application at low temperatures Compatibilizer | | |
| A-C EVA Copolymers | Viscosity control/reduced processing time Improved wetting Compatibilizer | | |
| A-C Ethylene Maleic Anhydride Copolymers (MAPE) | Increased adhesion at cold temperatures Increased adhesion to low surface energy substrates Compatibilizer | | |
| A-C PP Maleic Anhydride Copolymers (MAPP) | Increased heat resistance Increased adhesion at cold temperatures Increased adhesion to low surface energy substrates Compatibilizer | | |
| A-C PP Homopolymers | Increased heat resistance Control set time | | |

For additional information or to contact us , please visit: honeywell-additives.com All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee, warranty or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement, and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated, or that measures may not be required.



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