

Honeywell Resins and Chemicals



**Continued Leadership.
Continued Innovation.**

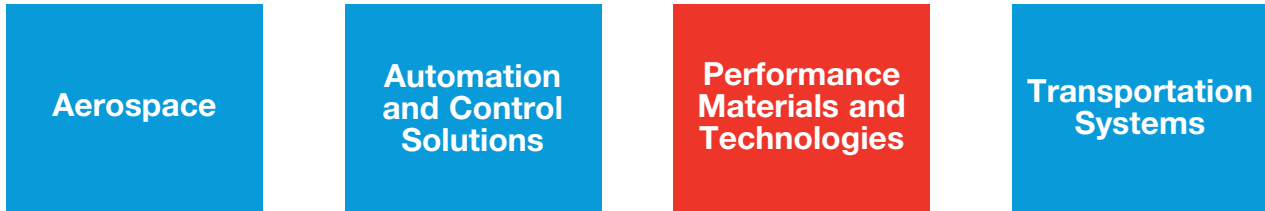
Honeywell

Helping To Make A Better World.

Honeywell International is a Fortune 100 technology and manufacturing leader that is focused on making our world safer and more secure, more comfortable and energy efficient, and more innovative and productive.

With approximately 130,000 employees worldwide, including more than 19,000 engineers and scientists, we have an unrelenting focus on quality, delivery, value, and technology in everything we make and do.

The Honeywell corporate family is comprised of four key business units:



Honeywell Resins and Chemicals is a fully-integrated manufacturer of nylon 6 resin that serves customers around the world. In addition to nylon 6, Honeywell manufactures a range of chemical intermediates, including caprolactam, phenol, cyclohexanone and acetone, as well as ammonium sulfate fertilizer. These materials are used to produce a variety of end products, including carpet, textiles, engineering plastics, films, industrial filament and high-value crops.

The business is part of the Honeywell Performance Materials and Technologies division, a global leader in supplying high-performance materials such as fluorocarbons, advanced fibers and composites, specialty additives and films, customized research chemicals, electronic materials and chemicals, technology and materials for petrochemical refining and process technologies. With these innovative tools, Honeywell empowers its customers to address tough challenges in the areas of energy production, safety and security.

A World Of Trust.

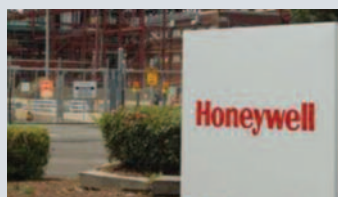
Customers around the globe trust Honeywell Resins and Chemicals not only for quality products, but also for quality solutions and support. Through a global team of chemical engineers, agronomists, logistics experts and more — all backed by multiple tech centers — Honeywell can respond quickly to customer needs. The integration between Honeywell plants further enhances product consistency and helps ensure ample product availability.

It all results in long-term customer relationships built on a foundation of trust and quality.

Firmly Planted.

There are plenty of nylon 6 manufacturers around the world. Honeywell is one of the few that are fully integrated – from phenol to resin. This integration is the backbone of our business, and the strength that our customers have relied on for decades.

Through our robust supply chain, world scale facilities and proven manufacturing processes, we ensure the highest levels of dependability and product quality. Our global presence enables us to serve customers nearly anywhere in the world, including emerging regions such as Asia and Latin America, with local sales and technical support focused on meeting customer needs. Our research and development efforts in North America, Asia and India are focused on developing innovative process technology and new products.



Frankford Plant

Many Honeywell chemical intermediates, including phenol, acetone, and alpha-methylstyrene (AMS), are produced in our modern Frankford, Pennsylvania, plant — one of the largest phenol plants in North America.



Hopewell Plant

The Honeywell facility in Hopewell, Virginia, is one of the world's largest single-site producers of caprolactam and ammonium sulfate, among other chemicals.



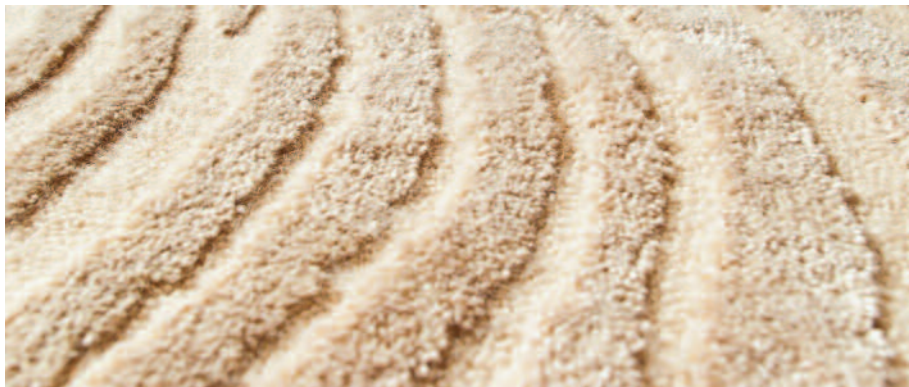
Chesterfield Plant

Honeywell's plant in Chesterfield, Virginia, is one of the largest producers of nylon 6 resin in the U.S.A. The high-tech facility and production processes are designed for quality assurance every step of the way.

Resin Solutions That Resonate.

For customers around the globe seeking a resin supply with superior quality and customer support, Honeywell Aegis® nylon resins are the ideal choice. Used in food and consumer packaging, mono/multifilament products, carpet fibers, automotive compounding and many other applications, Honeywell resins are available in a wide range of viscosities and additive packages to meet the exact needs of customers.

All Honeywell resins are supported by a global distribution network, diverse tech center locations, and a precision delivery and tracking system that ensures the consistent quality and supply needed to help customers achieve their optimum performance-cost ratio.



CARPET FIBERS

Carpet fiber producers rely on the superior quality and versatility of Honeywell's nylon resin, which contains additives that enable the manufacture of stain-resistant fiber.



ENGINEERING PLASTICS

For compounding applications, such as automotive parts, electronic components and wire and cable jackets, the consistent quality of Honeywell resins helps producers deliver the reliability their customers demand.



FILAMENTS

Honeywell nylon resins are available in multiple grades, with varying tenacity, softness and transparency characteristics to meet the needs of mono and multi-filament customers, such as fishnet manufacturers.



PACKAGING

Honeywell packaging resins are used to protect a variety of foods and products for consumer and industrial markets. For food packaging applications, Aegis® nylon resins provide excellent barrier properties to aroma and oxygen, helping to retain flavor and maintain product freshness.

Reliably Supplying Caprolactam to the World.

Honeywell caprolactam is a merchant-grade, nylon 6 intermediate used in a range of applications, including carpet, textiles, engineering plastics, packaging resins and industrial filaments. The Honeywell plant in Hopewell, Virginia, is one of the world's largest single-site producers of caprolactam. It is sold globally, and shipped in molten or

flake form to a variety of downstream customers. Honeywell caprolactam is produced using stringent manufacturing processes to ensure quality, and its industry-leading consistency has made it the first choice of many customers for 60 years.



Honeywell has a global caprolactam sales team, which helps to ensure customers receive superior service anywhere in the world.



Increasing Crop Yields. And Bottom Lines.

Honeywell is known for helping businesses grow, and Honeywell ammonium sulfate fertilizers take that role literally. Research-tested and on-farm proven Honeywell Sulf-N® ammonium sulfate fertilizer is a vital component for growing healthy plants. Sulf-N® fertilizers supply an efficient source of nitrogen and satisfy the ever-growing need for sulfur due to antipollution initiatives and higher yielding crop genetics.

As the world's largest single-site producer of ammonium sulfate fertilizer for more than 85 years, Honeywell is able to keep customers supplied. Just as important is how Honeywell backs its fertilizer products with a dedicated marketing and sales team to help promote added value, and agronomists to provide customized technical support. The result is high-quality products and customer assistance, leading to high yields and quality crops.

Honeywell is committed to continued innovation and is the industry leader in funding ammonium sulfate research at land-grant universities and private research centers.



Chemistry and Technical Support That Delivers.

Honeywell reliably provides a wide range of world-class chemical intermediates backed by services tailored to meet customer needs. From ongoing research and technology development to global distribution to a staff committed to building long-term customer relationships, Honeywell chemical solutions deliver quality in every aspect.



Acetone

Acetone is a versatile, VOC-exempt solvent that is a key ingredient in a wide range of products, including paints, inks, coatings and polyvinyl chloride (PVC) cement. It is also a key raw material used in the production of bisphenol-A, methyl methacrylate, isophorone, isopropanol, and methyl isobutyl ketone. Honeywell offers several grades, including a certified National Formulary (NF) grade, and has a long track record of high quality and reliably supplying its customers.



Alpha-Methylstyrene (AMS)

AMS is used in a variety of resin systems to enhance their functionality, including improvements in strength, appearance and processability. In acrylonitrile butadiene styrene (ABS) plastics, it improves heat stability and impact resistance. For pure monomer tackifying resins, AMS helps them maintain superior color and low odor. It also enhances pigment dispersion, gloss and resolubility in water-based styrene acrylic inks.



Methyl Ethyl Ketoxime (MEKO)

MEKO is a high-efficiency antiskinning agent used for air-drying paints, inks and coatings. MEKO-based silane crosslinkers enhance the shelf life of silicone sealants and adhesives. It may also be formulated to make blocked isocyanates in polyurethane coatings for coils, automotive coatings and other industrial coatings. Honeywell MEKO is produced to meet the low moisture and high assay standards that formulators require.



Nadone® Cyclohexanone

Nadone® is an excellent ketone solvent well suited for PVC cement, pesticide, paint and printing ink formulations. It is also used as a raw material in the production of caprolactam, caprolactone, adipic acid, cyclohexylamine derivatives and pharmaceutical chemical intermediates. It offers uniform evaporation, minimal moisture content and a low toxicity, ecotoxicity and VOC profile.



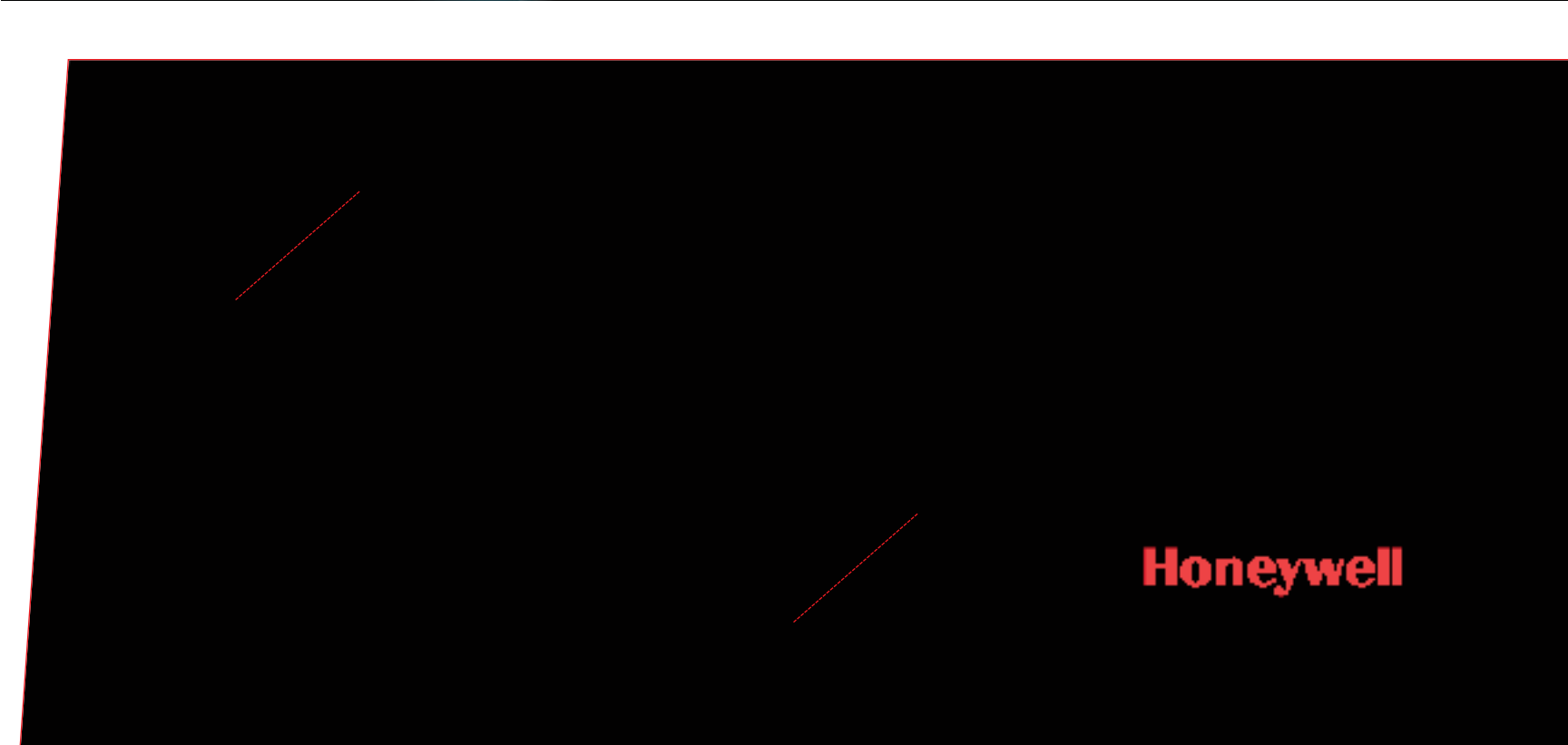
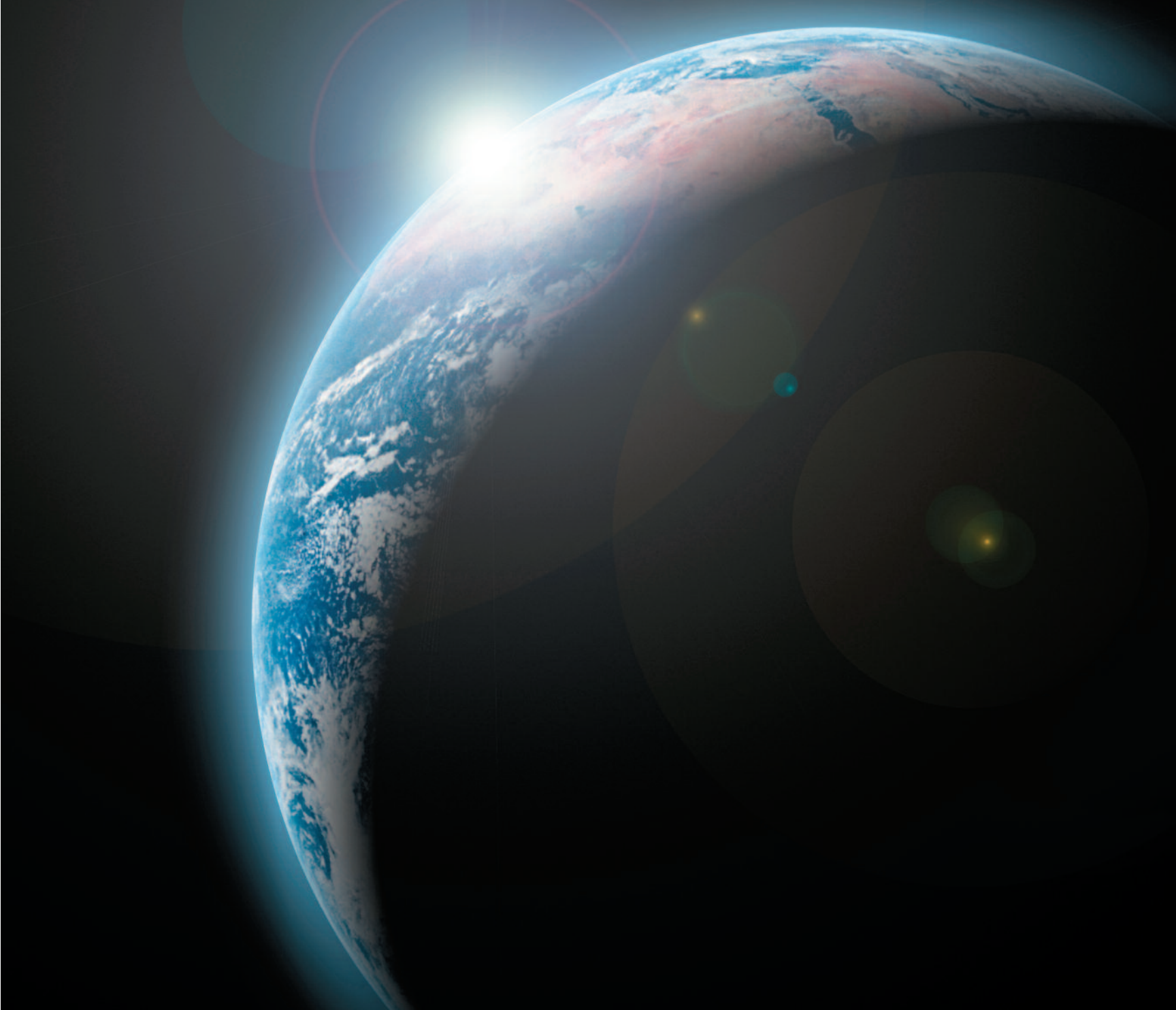
Naxol® Cyclohexanol

Naxol® is typically used as a cosolvent for lacquers, shellacs, varnishes, textile dyes, soaps and detergents. It may also be used in the production of agricultural chemical intermediates, adipic acid, cyclohexylamine, cyclohexyl mercaptan and phthalate plasticizers. It has a low toxicity and ecotoxicity profile, and is produced to low moisture standards.

Phenol

Honeywell high-purity phenol is used in applications requiring superior purity, quality and consistency. Phenol is used in the production of bisphenol-A, phenol-formaldehyde resins, phenol-styrene resin tackifiers, caprolactam, 2,6-xyleneol, adipic acid, para-nonyl, para-dodecyl, para-cumyl and other alkylphenol derivatives. Honeywell offers a variety of handling and storage options to meet customer requirements.





Honeywell



www.honeywell-nylon6.com



www.sulfn.com



www.honeywell-chemicalintermediates.com



www.honeywell-caprolactam.com

Learn More

For more information on Honeywell Resins and Chemicals, visit www.honeywell.com or call 877-370-7007.

Honeywell Performance Materials and Technologies

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