

WEBSITE COPYWRITING

Conductive, Pre-cured Polyurethane Gasket Systems for Constructing, Maintaining, and Repairing Airplane Structures, Assemblies, and Systems.

The integrity of aircraft surfaces, joints, and assemblies are determined by design, as well as the protective or sealing measures used. Therefore, choosing appropriate industrial-grade gaskets is a key consideration for aircraft manufacturers, service organizations, and overhaul shops. In situations where inadequate sealants are used, corrosion and surface damage will occur. These factors negatively affect the structural integrity of an airplane and could lead to critical safety issues.

If the user requires a diverse range of gaskets to meet specific application needs, Av-DEC is the one-stop shop. Av-DEC flexible, pre-cured, and conductive polyurethane gaskets have been used by the majority of aerospace manufacturers, air carriers, and maintainers.

Av-DEC's versatile gasket systems have been successfully applied in the aviation industry for two decades. The reasons for their successful application by stakeholders are due to:

- Lightweight, low-density build which makes the gasket systems flexible for easy application.
- An eco-friendly, durable sealant which is non-hazardous when used.
- Simple, quick application which speeds up installation, as well as repair and maintenance procedures.
- Excellent cohesion which ensures complete protection of a component's surface.
- High-level protection from corrosive elements.
- Pre-cured "Apply and Fly"[™] gaskets - which ensures quick application and eliminates messiness.

[Learn More About How We Can Help with Your Sealing Challenges Today](#)

The Av-DEC inventory of gaskets consists of products that will satisfy your specific requirements. The gasket equipped with system features handles majority of gasket applications in aviation. These features are due to the use of polyurethane and the implementation of industry-specific standards when developing Av-DEC gasket systems. Av-DEC high-performing systems include:

- HI-TAK Conductive & Non-Conductive [Antenna Gaskets](#)
- HI-TAK [Specialty Gaskets](#)
- HI-TAK [Fuel Panel Gaskets](#)

Why Choose Polyurethane Gaskets?

Polyurethane serves as the base material for Av-DEC's gasket systems due to its inherent properties. The flexibility of polyurethane makes it easy to install Av-DEC gasket systems, which can be installed on metallic surfaces such as aluminum and steel alloys. The benefits gained from using an Av-DEC gasket made from polyurethane sealant include:

- High resistance to heat, abrasions, solvents, aviation fuel, and other environmental factors
- No messy greases

Electrically Conductive Gasket Systems

A conductive gasket must be used when maintaining the electrical conductivity of user assemblies which is critical for optimal function. Electrically conductive gaskets ensure excellent electrical continuity in aviation systems. The benefits of an electrically conductive gasket include:

- Ensures electrical continuity in assemblies, allowing the gaskets to transfer current as intended
- Provides conductive pathways for lightning strikes, to help protect assemblies from excessive electrical surges
- Enhances safe operation ensuring no negative effects on the normal function of the sealed surface

The Benefits of Pre-Cured Gasket Systems

Pre-cured gaskets eliminate the messiness that comes with using cure-in-place sealants. Av-DEC's pre-cured gaskets make use of compression when sealing a surface or the area of application. Some of the benefits of pre-cured gaskets include:

- A simple "Apply and Fly" installation process
- Applicable on both rigid and flexible assemblies
- Easy removal and no residue after removal
- Eliminates the waiting time associated with curing polysulfides

Pre-Cured Gaskets vs. Cure-in-place Gaskets

The deciding factor to consider when choosing between both options is the application. The surface or assembly the gasket is intended to protect plays an important role in the decision. Pre-cured gaskets are generally used when structural integrity and ease of use are the primary considerations. This is usually the case in the aviation industry.

Av-DEC conductive gasket systems are pre-cured, polyurethane gaskets that are electrically conductive. Depending on the user's application needs, one can choose the HI-TAK Polyurethane Conductive [Antenna Gasket](#), the HI-TAK Conductive [Specialty Gasket](#), or the HI-TAK [Panel Gaskets](#), [Conductive Fuel Access Panel Gasket](#).



Av-DEC® Success Stories on Various Product Uses

U.S. Navy Prevents Corrosion by Adopting Av-DEC Gaskets

To reduce the effects of corrosion on aircraft parts and components, maintenance and repair departments perform routine inspections. The standard procedure for one of Navy aviation customers was to inspect lower antennas on aircraft every 28 days and all other antennas every 56 days for signs of corrosion. The inspection process was time-consuming. It involved removing the antenna, conducting the inspection, treating corrosion, reinstalling the antenna and finally, resealing the perimeter. The resealing process generally took more than a day because the sealant required 24 hours to cure.

Upon discovering and applying Av-DEC gaskets, the customer found that there were no signs of corrosion during their regularly scheduled inspections. This led to a re-evaluation of their inspection schedule and a new 90-day interval being adopted. During the rescheduled inspection the antenna interfaces remained free of corrosion and further re-evaluations using data collected thereafter eventually allowed for an inspection schedule to be set for every 546 days.

With Av-DEC gaskets our customer exponentially improved inspection timelines. This caught the attention of the Original Equipment Manufacturer (OEM). Today, the OEM makes use of Av-DEC gaskets in the building and assembling of its military products.

The Benefits in Detail:

- Lower maintenance and replacement cost.
- Increased inspection interval
- Complete sealing against corrosion for the long-term
- Increase in the lifespan of the associated equipment

Successfully Preventing Corrosion on the High Seas

The sea provides a harsh environment for ships, barges, oil rigs, and other equipment. This environment produces corrosive agents that negatively affect the structure and components of ships. To prevent corrosion of ship antennas, Naval Sea Systems Command (NAVSEA) sought the aid of Av-DEC gaskets and performed an experiment to determine the effectiveness of the gaskets. The experiment involved installing Av-DEC gaskets on antennas on one side of a ship while the current approved method was installed on the other side. Three ships were outfitted in this configuration for a fifteen-month test.

At the end of the test, a comprehensive inspection discovered that Av-DEC gaskets completely protected the antennas from corrosion for the full fifteen-months. On the other side, the antennas had succumbed to corrosion and needed either refurbishment or replacement. As a result, NAVSEA approved Av-DEC gaskets to prevent corrosion on ships.

The Benefits in Detail:

- Prevention of corrosion in extreme environments
- Drastic reduction in costs associated with antenna refurbishment and replacement

A Bespoke Corrosion Prevention Solution That Saved Time

The installation of aircraft electrically bonded connectors has always been a painstaking and time-consuming exercise. Our customer was installing 40 connectors on a pressure bulkhead, making the process even more taxing. Av-DEC was approached by an Original Equipment Manufacturer (OEM) to develop a faster installation solution for connectors on the pressure bulkhead. The installation process included sealing the perimeter to ensure the connectors were airtight and electrically bonded. Previously, the OEM had used conductive polysulfide to accomplish this task, which was extremely time consuming.

On assessing the difficulties the OEM faced, Av-DEC designed and built a customized gasket for this particular project. The gasket was designed for easy installation while simultaneously eliminating cure times. On application, the custom connector gasket ensured the OEM's needs were met in record time. The quick installation time cut 48 hours of labor down to 6 hours for the entire installation.

The Benefits in Detail:

- Quick application with no cure time to plan for
- Easy application which reduces labor during difficult installation tasks

An Inquiry Leads to Preventing Corrosion in 3D Printed Components

As with most sales cycles, this started with a call. The call was from a customer looking for a sprayable sealant which could be applied on 3D-printed aircraft components. After an internal consultation to determine which sealant would work best, TufStuff® (TSI228) was recommended to the customer for testing. Weeks later, the customer confirmed that the TSI228 had been successfully applied to the 3D-printed component and met the performance specifications they required from the seal. This meant the seal would continuously be used alongside the 3D printed component as needed.

The Benefits in Detail:

- Av-DEC sealants can be used to prevent corrosion in 3D printed aircraft components
- Av-DEC offers diverse products with a wide application range

The Referral That Solved Multiple Corrosion Challenges

The success of Av-DEC sealants or products when used by Original Equipment Manufacturers (OEM) and larger aviation service bureaus has been covered in great detail. Small- to medium-sized businesses have also taken advantage of the corrosion-prevention features of Av-DEC products. A perfect example was the application of HI-TAK Polyurethane Rolled Sealant (PRS®) (HT3935), Thixoflex® Gray (TG8498), and Thixoflex® Black (TG3212) products to fix corrosion on an aircraft's windshield. In this case, the customer was a small charter company and the application was made with great success.

The engineers at the hangar next door noticed the success achieved with Av-DEC products and proceeded to use it as a sealant on their own aircraft. Once again, the TG3212 delivered and was referred to another engineering outfit that repaired rotorcraft. Av-DEC TG3212 was applied as a sealant in the rotorcraft to even greater success and since then, the series of hangars have continued to use Av-DEC corrosion prevention products.

The Benefits in Detail:

- A durable sealant that can be used for diverse applications to prevent corrosion
- A simple application procedure that helps engineers solve their sealing challenges

Reducing Flight Deck Window Removal Rate by Applying Av-DEC Thixoflex® Black

A commercial airline had a high flight deck window removal rate because of the environment its aircraft operated under. The airline installed new flight deck windows and used sealants to help prevent corrosion and keep the installation in place. The sealant they used had to be covered with speed tape until the sealant gelled. The process was time-consuming and ineffective in the long run as the high removal rate remained.

The customer chose to try Thixoflex Black (TG3212) and conducted tests to determine its effectiveness as a sealant. After the tests, the commercial airliner submitted a request to the aircraft manufacturer to use the Av-DEC sealant. The request was granted and after a year its success was so encouraging that the TG3212 was applied across the airline's fleet whenever installing flight deck windows.

The Benefits in Detail:

- Fast gel times allow the dispatch of aircraft 30 minutes after application
- Less downtime when replacement flight deck windows need to be installed
- Clean and easy sealant removal with almost no residuals to clean up, unlike polysulfide sealants
- A durable bond that experiences no visible corrosion, shrinkage, or cracking in extreme conditions

 Aviation Devices & Electronic Components, LLC
3215 West Loop 820 South
Fort Worth, Texas 76116

AS9100 Certified
Terms & Conditions
Site Map

Tel: (817) 738-9161
Fax: (817) 738-9163
Email: info@avdec.com



Copyright © 2000-2020 Av-DEC® - All rights reserved.

Av-DEC® Company History



The Av-DEC Story

Av-DEC - The World Leader in the Science of Corrosion Prevention.

Preventing aircraft corrosion is what Av-DEC does. The prevention of corrosion can be done using non-hazardous, durable, and easily applied products. This is the reason the company's engineers have continuously sought out better solutions to ensure corrosion is comprehensively eliminated and the aircraft is protected for the long haul. The Av-DEC story is one of constant improvement to help the aviation industry enhance aircraft safety through corrosion prevention.

Av-DEC Founding

1997 was the year that two engineers in Fort Worth, Texas, came together to start a great journey. The goal was to help the commercial & defense aerospace industry discover and eliminate corrosion challenges regardless of their complexity. This led to the design and development of the HI-TAK Antenna Gasket, which became the first Av-DEC commercial product for corrosion prevention. Since the beginning, a culture of staying close to the customer and showing up has been ingrained into the organization.

What's in a Name?

Av-DEC is an acronym for Aviation Devices & Electronic Components, a name that showcases the initial intent of the company's founders. Today, Av-DEC provides corrosion-prevention products and devices built for the aviation industry. The name Av-DEC highlights a commitment and dedication to the continuous development and improvement of corrosion-prevention solutions specifically for aircraft structures and components.

Early Growth & Developing New Products

Breakthroughs come with great effort. The wide-scale adoption of the Av-DEC antenna gasket by a major airline was a sign of things to come. The experience gained from viewing and understanding the corrosion problems the airline faced sent Av-DEC back to the lab. The result was the design and development of the HI-TAK polyurethane rolled sealants, a product the aviation industry greatly needed. These products helped original equipment manufacturers, airlines, and aircraft operators address level-2 corrosion problems underneath galleys, lavatories, and cargo areas.

An Expected Journey

Success, they say, begets success, and the adoption of early Av-DEC products led to the creation of more custom solutions to meet other corrosion-related challenges. Today, Av-DEC has thousands of antenna gaskets, polyurethane rolled sealants, injectable sealants, and sprayable sealant-solutions in its product catalog. Av-DEC products have been used to prevent corrosion on all types of aircraft across commercial, defense, and corporate aviation.

To Infinity and Beyond

For two decades and counting, Av-DEC has been making dramatic improvements to its diverse product line and adding new products to its ever-expanding catalog. The future of Av-DEC will be defined by its passion to understand the science of corrosion and to perfect high-performing corrosion-prevention solutions for the most complex of corrosion challenges.

Interested in the Latest Innovations?

[Learn More About Av-DEC Products](#)

Aviation Devices & Electronic Components, LLC
3215 West Loop 820 South
Fort Worth, Texas 76116

AS9100 Certified
Terms & Conditions
Site Map

Tel: (817) 738-9161
Fax: (817) 738-9163
Email: info@avdec.com





Av-DEC Offers Many Training Options

From installation guides to on-site training, Av-DEC will provide the information and support needed from the Av-DEC Training Center to start using sealants, gaskets, and Polyurethane Rolled Sealants to their greatest potential.

Av-DEC Training Center offers access to all the resources needed to get started with our corrosion-inhibiting technologies. The provided resources come in different formats to ensure maintenance, repair and operations (MRO) service providers, original equipment manufacturers (OEMs), and third-party installers are all properly informed on how to get the best out of every Av-DEC corrosion prevention solution.

Av-DEC Training Formats

Av-DEC training programs are diverse and are delivered using different mediums. Choose from the following options to best fit your organization's needs.

Classroom Training

Learn how to install sealants, gaskets, and PRS on realistic models of aircraft components and assemblies. In Classroom Training, mock-ups of aviation components – seat tracks, panels, antennas, etc. – are used to give engineers and technicians a detailed, practical simulation of every installation procedure. Along the way we provide guidance and answers to common challenges our clients face while installing Av-DEC solutions.

On-Site Training

Av-DEC offers on-site training to MROs and OEMs interested in educating their in-house engineers and maintenance technicians on the use of Av-DEC sealants, gaskets, and PRS. As part of this training we instruct mechanics on the installation of Av-DEC solutions on-site, on your own aircraft, to ensure knowledge is transferred in real time without interrupting the production flow.

On-Line Training

The Av-DEC virtual training platform makes use of visual instructions, PowerPoint slides, and online computer based training (CBT), developed for interactive eLearning to train mechanics on installation procedures and common installation challenges. The videos use mockups and models of a physical hangar floor for demonstrations.

Av-DEC Training and Certifications

Certifications are a great way for aviation engineers and mechanics to highlight their ability to prevent corrosion before it becomes a problem. Av-DEC certifications test a candidate's understanding of Av-DEC products and sealing solutions, as well as the ways they should be applied. The certification program provides prospective candidates with learning resources and computer-based tests to determine the candidate's readiness level. Organizations may also use these resources to create internal review systems or tests for engineers.

Av-DEC Training Resources Are Free

Av-DEC offers these training resources for free. The instructions and learning resources attached to training programs may be downloaded at no cost. Av-DEC educators are available on a flexible schedule to best meet your organizations unique scheduling requirements.

Contact us Today for Your Free Training Resources

 Aviation Devices & Electronic Components, LLC
3215 West Loop 820 South
Fort Worth, Texas 76116

AS9100 Certified
Terms & Conditions
Site Map

Tel: (817) 738-9161
Fax: (817) 738-9163
Email: info@avdec.com



Self-Leveling® Green (HT3326-5) and Self-Leveling® Green FR (HT3326-5FR)



- Two-component fast-cure polyurethane material that applies easily and self-levels while curing for use as a watertight, flexible sealant
- Fills gaps and voids between surfaces to create a flexible, watertight environmental seal
- Removes easily and with no residue thanks to excellent cohesion
- Aviation industry's benchmark for protecting surface, voids, and connector backshells from corrosion.
- FR formulation passes 12-second Vertical Burn Test per 14 CFR, PART 25-Subpart D, § 25.853 Compartment interiors & § 25.855 Cargo or baggage compartments Appendix F, Part I, (a)(1)(ii) (12 sec vertical test)

COMMON USES: • Antenna Connector Base • Seat Tracks • Wet Areas • Lavatories Areas • Galleys • Cargo Bays • Electrical Connector Backshells • Nutplates

[Request a Sample or On-Site Demo Today](#)

Two-component self-leveling sealant for waterproofing and sealing aviation components and surfaces from corrosion and abrasions.

Av-DEC Self-Leveling Green is formulated for sealing surfaces from moisture and electrolytes that cause corrosion. Self-Leveling Green integrates a self-leveling two-part corrosion-inhibiting formula that serves as the optimal environmental seal when applied. The application process ensures a semi-solid seal that is impervious to moisture, water, and humidity. Self-Leveling Green can also be used to complement Av-DEC gasket systems to provide a complete environmental seal. This combination is great for waterproofing and preventing corrosion, and it can be installed during aircraft production or during regular maintenance and repair activities.

The user can apply this two-part corrosion inhibitor for the following purposes:

- To protect avionics and aircraft surfaces from corrosive agents.
- To protect commercial and military aircraft from moisture which can degrade internal structures.
- As a complementary sealant to secure the voids and spaces left after applying a gasket for all-around protection.
- To protect surfaces and assemblies from the expected wear and tear that comes with constant use.
- As a quick, environmental sealing solution when immediate repairs must be performed.

[Contact us to Find out More on Self-Leveling Green](#)

A High-Performance Injectable Sealant for Quick Applications

Av-DEC Self-Leveling Green injectable sealant was formulated to handle the speedy maintenance and repair tasks that occur before take-off. The gel forms the required semi-solid environmental seal within 10 to 15 minutes of application. The Self-Leveling Green application technique is straightforward:

1. For proper application, follow the installation instructions included with the delivered product.
2. During application, the two-component gel is thoroughly mixed in the mixing straw delivered with the product.
3. Apply Self-Leveling Green to surfaces or assemblies. The Self-Leveling Green can be injected into voids or brushed onto surfaces.
4. Wait for 10 to 15 minutes and the semi-solid environmental seal will be formed.

The advantages of using Av-DEC Self-Leveling Green are:

- Its quick cure rate speedily protects application surfaces, helping to both speed production rates and reduce maintenance downtime.
- Self-Leveling Green can be easily removed when real-time repairs are needed.

A Waterproof Polyurethane Two-Component Corrosion Inhibitor

Av-DEC Self-Leveling Green is a polyurethane-based formulation which offers the advantage of the flexibility and durability of its base material. On proper application, Self-Leveling Green will provide a moisture-free environment under varying degrees of pressure and temperature. The benefits from using this two-component polyurethane corrosion-inhibiting sealant include:

- A non-hazardous sealant which eliminates the possibility of volatile organic compounds (VOCs) emissions which means the sealant is always safe to use.
- Eliminating the need for hazardous materials paperwork for transportation, storage, or use of the sealant because Self-Leveling Green is non-hazardous.
- A flexible environmental seal.
- Easy to remove when the need arises.
- An aesthetic green-colored gloss which is pleasant to look at when applied.

A Two-Part Polyurethane Formula for Diverse Applications

Av-DEC Self-Leveling Green is designed for diverse applications within the aviation industry. Self-Leveling Green will protect the following components from the long-term effects of moisture:

- Antenna Connector Bases
- Seat Tracks
- Galleys and Cargo Bays
- Electrical Connector Assemblies
- Voids and Spaces
- Nut and Bolt or Fastening Systems

The wide range of applications is the reason why Av-DEC Self-Leveling Green can be used in other industries outside aviation. The two-component corrosion-inhibiting sealant is provided in the standard 50cc cartridge and a larger 200cc cartridge. Click FREE SAMPLE below and leave contact details if you would like to receive a 50cc cartridge of Self-Leveling Green to evaluate this fantastic product absolutely free-of-charge.

[Try a Self-Leveling Green Sample Today](#)

 Aviation Devices & Electronic Components, LLC
3215 West Loop 820 South
Fort Worth, Texas 76116

AS9100 Certified
[Terms & Conditions](#)
[Site Map](#)

Tel: (817) 738-9161
Fax: (817) 738-9163
Email: info@avdec.com

