

# Advanced materials for aircraft maintenance and repair



## Main Business Activities of our Company

The main specialization of FLYTECHGROUP LLC is delivery of the special certified materials and components, for airlines, railway transportation companies, the defense industry complex enterprises. The quality system of our company conforms to the European standards that is confirmed with ISO 9001:2008 certificate. In 2012 we obtained the license of the Ministry of Industry and Trade of the Russian Federation for activity implementation on ATP (aviation technical property) deliveries. Since then we can claim that to FLYTECHGROUP LLC became the first licensed supplier of ATP in the territory of Russia. Receiving similar the license isn't the obligatory requirement for suppliers of ATP, but for our Customers, it is the additional guarantor of high standards in the field of quality, which our company steadily adheres.

### Our Certificates



## Our Clients

For operating time our company proved as the reliable partner who is strictly meeting conditions of cooperation. We value our Customers, among which:



“Every Client for us - He’s the only one”

# Flame Retardant Velcro tape KLETTOSTAR and other Binder Band materials, satisfies the requirements of FAR/JAR/CS25.853 (a) APP F Part I(a)(1)(ii)/ABD0031



“In 2012 the FLYTECHGROUP LLC became the exclusive Partner of **Gottlieb Binder GmbH** in advance and realization of the aviation flame retardant products which are using in an interior of aircrafts, and also in cars of railway transport. In an interior of airliners, for sewing of seat covers, are widely used a flame retardant product - the velcro tape Klettostar Hook and Loop delivered in various options of execution (including with a adhesive basis).

## Velcro tape Hook and Loop KLETTOSTAR (Flame retardant)



In an interior of airliners, when tailoring the covers for chairs, are widely used a flame retardant product – the velcro tape Klettostar Hook and Loop



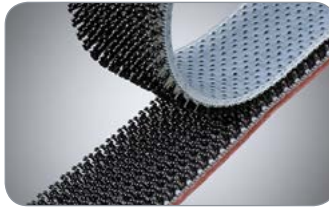
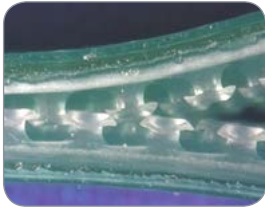
Velcro tape KLETTOSTAR satisfies the requirements of FAR/JAR/CS25.853 (a) APP F Part I(a)(1)(ii)/ABD0031

# A SELF-INTERLOCKING MUSHROOM FASTENER DUOTEC®

DUOTEC® fastener is applied to reliable fastening of elements of an interior of aircrafts, autos and railway transport. The fastener has mushroom structure, and she is available with three types of a adhesive basis:

1. Art. 75763–H1 with adhesive H1, on the basis of synthetic rubber
2. Art. 75763–32 with adhesive 32, on the basis of acrylic foam
3. Art. 75763–33 with adhesive 33, on the basis of acrylic foam

The tape DUOTEC® is made in standard width 25 mm. Due to its unique properties DUOTEC fastener provides a highly reliable and convenient



The tape DUOTEC® with adhesive type 32 on the basis of acrylic foam satisfies requirements of FAR25.853(a) App.F, Part I, (a) (1)(v)



## Industrial sewing threads AMANN GROUP

During the tailoring and repair of covers for the passenger seats equipment, for sewing of curtains, and specialized bags of crews and ground technical services, for overlock a carpet, special threads of the highest quality are used. We offer the best products for realization of these tasks – special technical threads.

Threads of a technical rank include fire retardant self-fading sewing threads, and also threads steady against chemical reagents and the mechanical influences, made of aramids, PEEK and ePTFE.

The technical textiles become more and more popular around the world, more and more replace traditional materials in the most difficult areas of production. Therefore the need for the threads which quality corresponds to a used material more and more increases.



## Industrial sewing threads COATS, flame retardant.

Industrial sewing threads COATS, does not support combustion, such as Firefly, Flame Master, Protos is a staple spun 100% meta-aramid sewing thread that offers outstanding resistance against heat up to flame temperatures of 371°C. Fire retardant protective garments require the highest level of security and durability to protect fire fighters, industrial workers and military combat personnel. This sewing thread is used in a variety of protective wear applications such as fire fighters clothing, work wear uniforms and army combat suits and is certified to meet all safety regulatory standards like NFPA, EN and military specifications.



### Main Uses

- Flame retardant and protective wear
- Textile parts of aircrafts interiors and passenger cars railway transport
- Heat insulation
- Industrial gloves
- Safety jackets

## Elastic cords

In our warehouse we constantly support a stock of elastic cords (a depreciation cord) different diameter from 2 to 12 mm.

Cover is made from 100% high tenacity polyester, and parallel rubber core inside. Elastic cord is a highly flexible rubber cord, which has a number of boat applications. The cover has excellent abrasion and UV resistance. This combination makes the cord compact, stable and durable. Elastic cords are used for trailers, for tents, for billboards and outdoor signs statement, in water sport and as auxiliary cord for hobbies. Every yachtmen will appreciate the wide colour range.



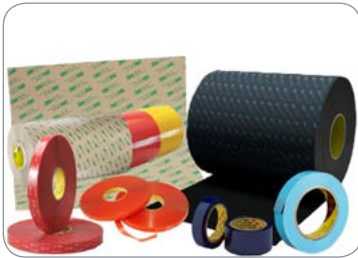
### Main Properties:

- sink in water
- diameters from 2mm-12mm
- high UV resistance
- very high elongation
- standard colour: white, black (other colour is on customer's request)



# Special products 3M AEROSPACE for maintenance and repair of aircrafts

The catalog 3M AEROSPACE is quite extensive, and includes the big range of the specialized technical chemistry used for service and repair of aircrafts. Also this catalog included special sticky tapes, polyurethane films for protection of a surface, the abrasive and masking materials used at coloring, primers and cleaners of a surface, a means of communication and individual protection for workers of the aviation industry.



## Henkel – Aerospace

Henkel is a leader in structural assembly and metal surface treatment solutions.

Structural assembly portfolio of products provides structural adhesives and resins for the fabrication of metal, composite and honeycomb structures. Henkel comprehensive portfolio of surface treatment products provides solutions for the cleaning and maintenance of all aircraft metals ranging from landing gear to jet engines. Henkel products and solutions are used on commercial aircraft, regional jets, business aircraft, jet engines and nacelles, space and defense, helicopter and airline refurbishment and overhaul operations. Henkel products have served the aerospace market for over 40 years and are known under the **Hysol** structural adhesive brand, the **Turco** paint stripping and cleaning brand, the **Frekote** mold releases and the **Alodine** conversion coatings.

**Hysol**®



(((FREKOTE®

**LOCTITE**®

In 2013 the **FLYTECHGROUP LLC** became the partner of **UNIT MARK PRO JSC** – the General distributor of **WEICON** in Russia and received the certificate of the dealer. Since 1947 WEICON has stood for the highest quality – even under the most extreme conditions. Worldwide WEICON develops, produces and sells special adhesives and sealants, technical aerosols and high-performance assembly pastes and greases for all areas from production, repair and maintenance to servicing.

The main positions of the WEICON catalog realized by our company:



*Allround Lubricant*



*Epoxy Adhesives*



*Two-component Adhesives*



*Elastic Adhesives and Sealants*



*Technikal Sprays/Aerosols*



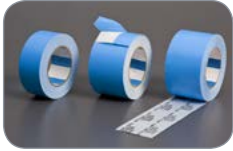
*High-performance Assembly Pastes  
and Sprays (Anti-Seize)*



*Technical Liquids / Fluids*

## The certified tapes NITTO DENKO / PERMACEL

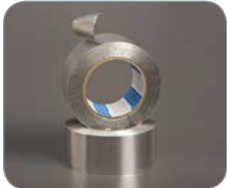
We offer the special tapes Nitto Denko/Permacel applied at service and repair of aircrafts. These types of tapes meet FAR25.853 requirements, and also the Boeing and Airbus specifications.



Tapes **P-629**. Cargo pit seam tape. P-629 is a modified acrylic, flame retardant single sided glass cloth tape that is primarily used in the aerospace markets.



Tapes **P-306/P306L** (with additional liner). P-306 is a heavy-duty, lead free, PVC film tape engineered specifically for the corrosion resistant covering of pipes and conduits installed either above or below ground making this product ideal for use in various aerospace, industrial, housing and construction markets.



Tapes **P-11**. P-11 is a solvent resistant, dead soft aluminum foil tape with a high performance acrylic adhesive engineered for a wide range of aerospace and industrial applications.



Tapes **P-55/P-55B**. P-55 is a high performance flame retardant double coated cloth backed tape. It was engineered as a highly conformable carpet installation tape that maintains both Airbus and Boeing QPL approvals.

# Special tapes SCAPA Aerospace

## The catalog of the tapes Scapa Aerospace include:

- Flame Retardant Permanent/Removable Tape
- Double Coated Cloth Tape
- Waterproof Cloth Tapes
- Duct Tapes
- Flash Tapes
- Aluminum Foil Tapes
- Edge Protection Films
- Wire Harness Wraps
- Acrylic Foam Tapes (AFT)
- FR Coating Capabilities



## Key Applications

**Carpet installation and repair** – Double coated permanent / removable rubber based adhesive constructions for the installation and repair of aircraft cabin floorings, carpets and galley mats.

**Cargo area applications** – Fire retardant duct tapes for seam sealing compartment liners and other splicing, insulating, reinforcing and holding applications.

**Attachment of interior trim** – Acrylic, double-sided PET tapes used for the attachment of interior trim.

**Chemical / paint masking** – Self-wound aluminum foil tape for specialty masking applications during painting and chemical stripping processes.

**Corrosion protection** – Tough acrylic adhesive PU erosion protection films for leading edges on wings, fuselages and propellers.

**General wire wrapping and identification** – Strong, flexible and conformable PVC tapes are available in a variety of colors for marking branches and identifying connections in wiring harness construction.

**Permanent bonding** – Acrylic Foam Tapes for the permanent bonding of materials when fastener and hardware reduction is desired.

**Flashing** – Non-silicone, nylon film tape with rubber adhesive for flash breaking applications where silicone contamination is a concern. Product can also withstand high temperatures up to 350°F.

**Textile coating and laminating** – Textile coating and laminating capabilities for the manufacture and refinishing of airline seating and other interior cosmetic fixtures. Treatments include FR adhesives, waterproofing and antimicrobial treatments.



## Special carpet protection films

Protective films for carpets are used at work on cleaning and service aircrafts, for the purpose of protection of surfaces of carpets against pollution and damage. These films differ on the properties (to density, a kind of a adhesive basis). The adhesive layer doesn't leave traces at dismantle of films after the end of repair work. Width of a film can be various, is made or cut by request.



## Protection covers for aircraft engines

Protection covers are intended for protection of aircraft engines against hit of foreign subjects when parking and aircraft towage. Covers are made of PVC fabric of production of Belgium, Germany, Korea and have the wide temperature range of use from -54 to +110 °C. Color of covers gets out at the request of the Customer. Each cover is supplied by 4 holders from dense slings which are attached to the rubber shock-absorber located on perimeter of a cover, intended for decrease in loads of cowl edges in windy weather. Holders to edges of a cowl of the engine fasten by means of the high-strength plastic elements which aren't damaging coating of the engine.

**Covers of engines, for convenience of storage and transportation, are completed with special bags.**



The materials used at production of protection covers, are heat resisting, and have the corresponding certificates. Production of products from the facilitated heat resisting materials NOMEX is possible

## Doors for protection of salon of the aircraft during parking and maintenance

Doors are intended for protection of salon of the aircraft against a frost in a cold season, and also for protection of salon a from an atmospheric precipitation during parking and aircraft maintenance. For convenience of use of a door are supplied with two zippers, the observation port executed from soft high-strength polyurethane, and it is completed with a cover wardrobe trunk. Doors are executed from the most modern nonflammable materials which are completely providing its safe use and storage aboard.

**The door easily is established by one person on 6-10 clamps - clips aboard a doorway of the plane and as easily acts.**



*View of the installed door*



*Picture of a closed door installed on the plane*



*The door in packaged form*



*Fastening elements*



*View installed doors from the inside*



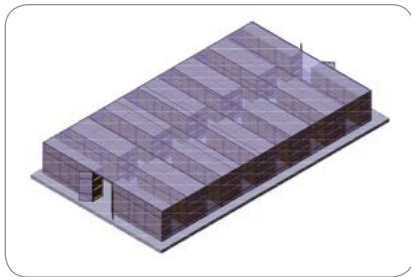
*The door is installed*



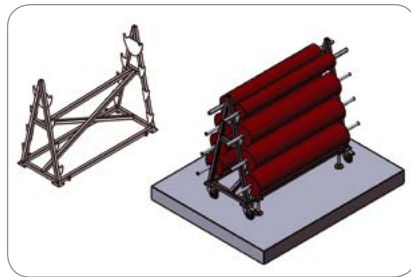
*View of the open door, installed on an aircraft.*

The materials used at production of protection covers, are heat resisting, and have the corresponding certificates.

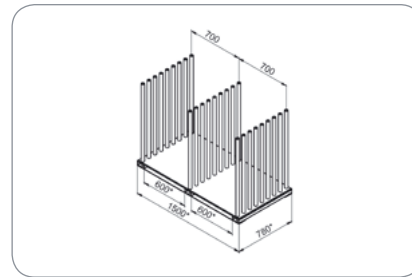
The wide range of delivered production and company specialization on complex decisions on supply of the air-transport enterprises, allows us to offer the clients all range of services since deliveries of expendables and finishing development of decisions on the equipment of service stations and repair of aircrafts.



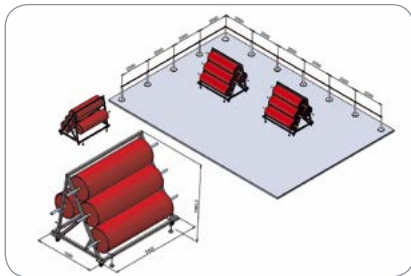
*Organization of a zone of storage of the interior equipment*



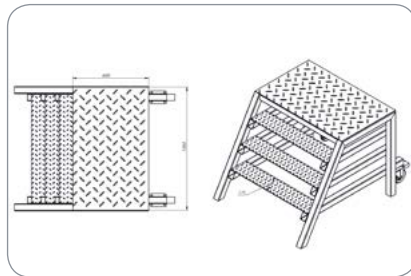
*Warehouse rack for storage of materials in rolls*



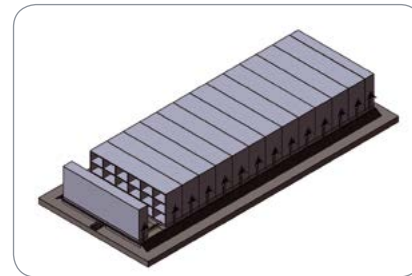
*Rack for sheet materials*



*Zone assembly for works with a aircraft carpet*



*Special step-ladder*



*Assembly of a zone of storage in a hangar*

## Production of safety vests

For production of safety vests, we use the checked alarm fabrics and the materials meeting the requirements of the international standards. All production is constantly tested that allows to avoid change of its quality from party to party. All safety vests are certified, conform to the European standard EN 471, ГОСТ P – 12.4.219-99 and belong to the 2<sup>nd</sup> class of protection. At the request of the customer we are ready to make vests according to individual requirements, vest equipment by a pocket under a handheld transceiver or a transparent pocket for the admission, drawing an individual logo of your enterprise is possible.





## Our partners

We evolve and together with this development are strengthening our partnerships with renowned manufacturers of materials for maintenance and repair of aviation equipment, occupying leading positions on the world market.





**PROFESSIONAL APPROACH**  
**QUALITY CONTROL**

**INTEGRITY**

**TRADITION**

**MANAGEMENT**

**COMMUNICATION**

**HONESTY**

**STRATEGY**

**RESPONSIBILITY**

**COMMAND**

**TRUST**

**RESPECT**

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