



**TECHNOKONTROL SAFETY  
TECHNOLOGY**



# THE CORPORATION

LA CORPORACIÓN / LA SOCIÉTÉ



Technokontrol is a market leader in the prevention of explosions and fires via developing several new product's which have been tried and tested within the industries of Military & Defence, Maritime, Transportation, Petroleum & Gas and last but not least, the Construction Industry.

In addition to providing our clients with the most effective & efficient anti explosive / fire proof product's on the market today. Technokontrol is also in contact with the largest insurance companies in the world so as to provide our clients with lower insurance premiums on their property, vehicles, boats and planes.

The directors of Technokontrol have over 20 years experience working within global expansion planning and investing within diverse industries such as Technology, Banking, Petroleum and Sciences. Our engineers, industrial and patent specialist also hold more than 15 years experience in all related industries.

Technokontrol is a member of the



**National Fire Protection Association**

The authority on fire, electrical, and building safety

Technokontrol es líder en el mercado de la prevención de explosiones y de incendios a través del desarrollo de varios nuevos productos que han sido probados en las industrias Militar y de Defensa, Marítima, de Transporte, de Petróleo y Gas y por último, pero no menos importante, la Industria de la Construcción.

Además de proporcionar a nuestros clientes el producto anti explosión / a prueba de incendios más eficaz y eficiente del mercado hoy en día, Technokontrol está también en contacto con las más grandes compañías de seguros del mundo para proporcionar a nuestros clientes las primas de seguros más económicas para sus bienes, vehículos, barcos y aviones.

Los directores de Technokontrol tienen más de 20 años de experiencia trabajando, planificando la expansión global e invirtiendo en diversos sectores como la Tecnología, la Banca, el Petróleo y las Ciencias. Nuestros ingenieros, especialistas en industria y en patentes, cuentan también con más de 15 años de experiencia en todas las industrias mencionadas

*Technokontrol est leader sur le marché de la prévention des explosions et des incendies au moyen du développement de nouveaux produits qui ont été essayés et testés au sein des Industries Militaire et de la Défense, Maritime, des Transports, Gazière et Pétrolière et finalement mais pas moins importante, l'Industrie de la Construction.*

*En outre la fourniture à nos clients de produits anti explosion et à l'épreuve d'incendies les plus efficaces sur le marché actuel, Technokontrol est aussi en contact avec les plus grandes compagnies d'assurance du monde entier afin de fournir à nos clients les primes d'assurances les plus économiques sur leurs biens, véhicules, bateaux et avions.*

*Les directeurs de Technokontrol comptent plus de 20 ans d'expérience de travail dans la planification de l'expansion globale, et d'investissement dans diverses industries comme la Technologie, La Banque, Le Pétrole et les Sciences. Nos ingénieurs, spécialistes en industrie et patentes ont également plus de 15 ans d'expérience dans toutes les industries citées antérieurement.*

# TECHNOLOGIES

TECNOLOGÍAS / TECHNOLOGIE

## TK-ENVIRONMENTAL TECHNOLOGY



## TK-SAFETY TECHNOLOGIES



## TK-ECO-ENERGY TECHNOLOGIES



## TK-AVIATION TECHNOLOGIES



## TK-MINING TECHNOLOGIES



## TK-MARITIME TECHNOLOGIES



## TK-PETROLEUM TECHNOLOGIES



## TK-INDUSTRIAL TECHNOLOGIES





### TK-TRANSPORTATION TECHNOLOGIES



### TK-CONSTRUCTION TECHNOLOGIES



### TK-GLOBAL FOOD TECHNOLOGIES



### TK-ELECTRONIC TECHNOLOGIES



### TK-MILITARY & SECURITY TECHNOLOGIES



### TK-LED LIGHTING TECHNOLOGIES



### TK-HOUSING TECHNOLOGIES



### TK-AUTO INDUSTRY TECHNOLOGIES



# INDUSTRIES

## INDUSTRIAS / INDUSTRIES

We at Techno Kontrol pride ourselves on being able to develop and provide new breakthrough technologies so as to improve the standard of safety against explosions & fires within the following industries.



### MILITARY & DEFENCE

Techno Kontrol is currently working alongside many of the world's leading military sectors so as to provide them with our specially designed anti explosive / fire proof products.



### PETROLEUM

Within the Petroleum Industry we are proud to announce that we are working alongside the current industry leaders in order to improve the safety standards that they provide to both their clients and their employees.



En Techno Kontrol, desarrollamos nuevas tecnologías revolucionarias para mejorar cualitativamente el nivel de seguridad contra las explosiones e incendios dentro de las siguientes industrias.

#### MILITAR Y DEFENSA

Techno Kontrol trabaja junto a muchos de los sectores militares líderes en el mundo para proporcionarles nuestros productos especialmente diseñados anti explosivos/ a prueba de incendios.

#### PETRÓLEO

Dentro de la Industria Petrolífera, trabajamos junto con los líderes de la industria actual con el propósito de mejorar los niveles de seguridad que proporcionan a la vez a sus clientes y a sus empleados.

*Chez Techno Kontrol, nous sommes capables de développer et de fournir de nouvelles technologies révolutionnaires pour améliorer le niveau de sécurité contre les explosions et les incendies dans les industries suivantes.*

#### MILITAIRE ET DE LA DÉFENSE

*Techno Kontrol travaille actuellement en collaboration avec beaucoup de secteurs militaires leaders dans le monde afin de leur fournir nos produits spécialement conçus anti explosifs / à l'épreuve d'incendies.*

#### PÉTROLE

*Dans l'industrie du Pétrole, nous sommes fiers d'annoncer que nous travaillons en collaboration avec les leaders de l'industrie actuelle dans le but d'améliorer les niveaux de sécurité qu'ils fournissent aussi bien à leurs clients qu'à leurs employés.*



### CONSTRUCTION

We are very proud to announce that we are able to provide one of the thinnest, safest and one of the most cost effective fire resistant boards / wall panels currently available in today's market. At present we are able to provide a panel which only measures 16mm (1.6cm) in width and that is able to withstand 1600C° for up to 3 hours. Our R&D team is working hard in order to improve both the thickness (i.e. make an even thinner panel) and to improve its durability (i.e. make our boards to be able to withstand an even higher temperature for a longer period of time)..

### TRANSPORTATION

Apart from providing the Transport Industry with our improved specially designed safety products, we are currently working with the largest insurance companies around the world so as to provide our clients with the opportunity to save up to 30% on their insurance premiums.



## CONSTRUCCIÓN

Nuestra tecnología es capaz de suministrar a la industria de la Construcción con tecnologías revolucionarias en las que constantemente estamos estableciendo nuevos niveles de seguridad en el aprovisionamiento a la industria de productos anti explosión/ a prueba de incendios y resistentes al calor.

## TRANSPORTE

Aparte del aprovisionamiento de la Industria del Transporte con nuestros productos de seguridad especialmente diseñados, actualmente estamos trabajando con las compañías aseguradoras más importantes del mundo, para proporcionar a nuestros clientes la oportunidad de ahorrar hasta un 30 % en sus primas de seguro.

## CONSTRUCTION

*Nous sommes fiers d'être capables de fournir l'industrie de la Construction avec des technologies révolutionnaires dans lesquelles nous établissons continuellement de nouveaux niveaux de sécurité dans l'approvisionnement de produits anti explosion/ à l'épreuve d'incendies et résistants à la chaleur.*

## TRANSPORTS

*En dehors d'approvisionner l'Industrie des Transports avec nos produits améliorés de sécurité spécialement conçus, nous travaillons actuellement avec les compagnies d'assurance les plus grandes du monde afin de donner à nos clients l'occasion d'épargner jusqu'à 30 % de leurs primes d'assurance.*

# OUR PRODUCTS

NUESTROS PRODUCTOS / NOS PRODUCTOS



Technokontrol can currently provide over fifty different products in which we can guarantee are a 100% recyclable; anti explosive; fire proof and heat resistant (up to 1600°C for 3 hours). These products are currently being sold within the Petroleum/Gas, Maritime, Construction and Military Sectors however, in order to continue to evolve our R&D Department is currently working on a new anti explosive system in which we believe will redefine the current safety standards within the Aviation Industry. An example via our product range can be seen below.

We are currently providing an Anti Explosive/ Fire Proof / Heat Resistant product which is currently available within our; Wall/Ceiling & Duct Systems and our Board Panels & Collar Systems. These systems can withstand up to 1600°C for up to 3 hours within an industry where the current standard is 650 0C for up to 1 hour.

Our new gas bottles operate under all the new E-U. Regulations and they weigh up to 50% less than that of a traditional gas bottle. They also of-

Technokontrol puede actualmente proporcionar hasta 18 productos distintos, en los cuales podemos garantizar un producto 100% reciclable, anti explosivo, a prueba de incendio y resistente al calor (hasta 1600 °C durante 3 horas). Estos productos se utilizan actualmente dentro de los sectores del Petróleo, del Gas, Marítimo, de la Construcción y Militar. Sin embargo, con el propósito de seguir evolucionando, nuestro Departamento de Investigación y Desarrollo trabaja actualmente sobre un nuevo sistema anti explosivo en el cual creemos que serán redefinidos los estándares actuales de la Industria de la Aviación. Se puede observar un ejemplo de nuestra gama de productos más abajo.

Proporcionamos actualmente un producto Anti Explosivo / a prueba de incendios / Resistente al calor, el cual está actualmente disponible para el interior de Paredes / Techos y Sistemas de Conductos, y nuestros Paneles, Tableros y Sistemas de Anillo.

Estos sistemas pueden aguantar temperaturas de hasta 1600 °C durante 3 horas seguidas, en una industria en la que el estándar actual es de 650 °C durante una hora.

Nuestras nuevas bombonas de gas operan bajo todas las nuevas normas europeas y podemos garantizar los beneficios siguientes; pesan el 50% menos que las bombonas tradicionales; ofrecen un mayor nivel de resistencia (135 bares contra la norma industrial que es de sólo 80 bares) y jamás explotarán.

*Technokontrol peut actuellement fournir jusqu'à 10 produits différents dans lesquels nous pouvons garantir un produit recyclable à 100 %, anti explosif, à l'épreuve d'incendies et résistant à la chaleur (jusqu'à 1600 °C durant 3 heures). Ces produits sont actuellement vendus dans les Secteurs du Pétrole, du Gaz, Maritime, de la Construction et Militaire, cependant dans le but de continuer à évoluer, notre Service de Recherche et de Développement travaille actuellement sur un nouveau système anti explosif dans lequel nous croyons que les standards actuels de l'Industrie de l'Aviation seront redéfinis. On peut observer un exemple de notre gamme de produits ci-dessous.*

*Nous fournissons actuellement un produit Anti explosif / à l'épreuve d'incendies. Résistant à la chaleur, lequel est actuellement disponible pour l'intérieur des Murs / le Toit et les Systèmes de Conduits et nos panneaux et nos Systèmes de Colliers.*

*Ces systèmes peuvent supporter jusqu'à 1600 OC pendant 3 heures dans une industrie où le standard actuel est de 650 °C durant 1heure*



fer an increased resistance level (135 bars against an industry standard of only 100 bars) from that of a traditional gas bottle and we can 100% guarantee that our gas bottles will never and it will never explode.

Our new fuel valve system (FVS) can help to reduce discharge times of any vehicle by up to 50% and we can 100% guarantee that our FSV valve will stop any explosion occurring within any tank filled with a flammable gas or liquid such as diesel, gas or petrol.

Our new specially designed LPG fuel tank is the first fuel tank of its kind which can guarantee that it is 100% anti explosive and fire proof. We also believe that our product can help you lower your insurance costs by as much as 20% and your daily fuel costs. In addition to this using our LPG fuel tank will mean that your vehicle will be cleaner, more reliable and will extend its lifespan by as much as 30%.

Our new specially designed Hydrogen tank can provide you with enhanced mileage (61 miles or 100 kilometres can be covered with just 8 ounces of hydrogen gas); cheaper and cleaner fuel whilst ensuring that your fuel tank will not explode.

Nuestro nuevo sistema de válvula de combustible (FVS) ofrece los beneficios siguientes: Reducirá el tiempo de repostaje de cualquier depósito hasta un 50%; podemos garantizar al 100% que nuestra válvula impedirá cualquier explosión que se esté produciendo en cualquier depósito lleno de diesel, gas, petróleo o cualquier otro líquido o gas inflamable.

Nuestro depósito LPG especialmente diseñado es el primer depósito de combustible de su especie que puede garantizar que es 100% anti explosión y a prueba de incendios. Nuestro producto puede ayudarle a reducir sus costes de seguro de hasta un 20% así como sus consumos de combustible. Además de eso, cuando use su depósito de combustible LPG esto significará que su vehículo será más limpio, más fiable, y su período de vida se alargará hasta un 30 %.

Nuestro nuevo tanque de hidrógeno, diseñado especialmente, puede abastecerle para un mayor número de kilómetros (será capaz de recorrer 100 km o 61 millas con tan sólo 8 onzas de gas hidrógeno); un combustible más económico y más limpio, que asegura a la vez que su depósito de combustible no explotará.

*Nos nouvelles bombonnes de gaz opèrent sous toutes les nouvelles normes européennes et nous pouvons garantir les bénéfices suivants: elles pèsent 50% de moins que les bombonnes traditionnelles; elles offrent un plus haut niveau de résistance (135 bars contre la norme industrielle qui est seulement de 100 bars) et n'exploreront jamais.*

*Notre nouveau système de robinet de carburant (FVS) offre les bénéfices suivants: il réduira le temps de ravitaillement de n'importe quel véhicule jusqu'à 50%; nous pouvons garantir à 100% que notre robinet arrêtera n'importe quelle explosion en train de se produire dans n'importe quel réservoir rempli de; diesel, gaz, pétrole ou n'importe quel autre liquide ou gaz inflammable.*

*Notre réservoir LPG spécialement conçu est le premier réservoir de carburant de son espèce qui peut garantir être 100 % anti explosion et à l'épreuve d'incendies. Notre produit peut vous aider à réduire vos coûts d'assurance jusqu'à 20% ainsi que vos frais quotidiens de carburant. De plus, lorsque vous utiliserez votre réservoir de carburant LPG cela signifiera que votre véhicule sera plus propre, plus fiable et sa durée de vie sera jusqu'à 30% plus longue.*



Within the aviation industry we are currently producing a special light weight material which when installed into the planes fuel tank will not only enable our product to take away any threat of an explosion and fire, but it will also reduce the aircrafts annual running costs. In addition to this our FVS system will reduce the time it takes to fuel the plane thus reducing turnaround times by as much as 50%.

Within the maritime industry our specially designed light weight anti slosh material is currently being used within the respective navy forces around the world and helps stops the fuel sloshing from side to side thus reducing the damage caused to the internal part of the fuel tank. In addition to this we are currently producing our gas bottles which are 100% anti explosive and fire proof and via our Anti Blast systems such as our wall ceiling and board panelling we can stop internal fires from occurring within the boat/ship or tanker.

Para el sector de la Aviación producimos un material especialmente ligero, el cual cuando se instale en el depósito de combustible del avión, no sólo permitirá que nuestro producto elimine cualquier amenaza de explosión o de incendio, sino que reducirá también los costes de funcionamiento anuales del avión. Además de eso, nuestro sistema FVS reducirá el tiempo de repostaje, acortando así los plazos de ejecución hasta un 50%.

En la Industria marítima, nuestro material ligero anti golpe de ariete especialmente diseñado, se usa actualmente en fuerzas de Marina en el mundo entero y ayuda a impedir el golpe del combustible de un lado a otro, reduciendo por consiguiente los daños causados en la parte interna del depósito de combustible. Además, producimos actualmente nuestras bombonas de gas, las cuales son 100 % anti explosivas y a prueba de incendios, y a través de nuestros sistemas anti explosión tales como paredes, techos y paneles, podemos impedir que se produzcan incendios internos en el barco / buque o camión cisterna.

*Notre nouveau réservoir d'hydrogène, conçu spécialement peut vous approvisionner pour un kilométrage plus élevé (100 Km ou 61 miles peuvent être effectués avec juste 8 onces de gaz hydrogène); un carburant plus économique y plus propre qui assure en même temps que votre réservoir de carburant n'explosera pas.*

*Dans le secteur de l'Aviation, nous produisons un matériau particulièrement léger lequel, lorsqu'il sera installé dans le réservoir de carburant de l'avion, non seulement permettra à notre produit d'éliminer toute menace d'explosion ou d'incendie mais réduira aussi les coûts de fonctionnement annuels de l'avion. En outre, notre système FVS réduira le temps de ravitaillement et par conséquent écourtera aussi les délais d'exécution de jusqu'à 50%.*

*Dans l'Industrie maritime, notre matériau léger spécialement conçu anti ballonnement est utilisé dans les forces respectives de la Marine dans le monde entier et aide à empêcher le ballonnement du carburant d'un côté à l'autre, réduisant par conséquent les dommages causés dans la partie interne du réservoir du carburant. En outre, nous produisons actuellement nos bombonnes de gaz qui sont 100 % anti explosives et à l'épreuve d'incendie et au travers de nos systèmes anti explosion telles que nos murs et plafonds et panneaux, nous pouvons empêcher les incendies internes de se produire dans le bateau/navire ou camion-citerne.*

# RESEARCH & DEVELOPMENT

INVESTIGACIÓN Y DESARROLLO

We at Technokontrol believe that in order for our corporation to continue to grow and evolve it is vital that we keep investing resources into our technology programs so as to allow our scientists to constantly investigate new ways in which we can bring ground breaking technologies to the market place.

## Cooling Towers Systems

Sistemas de Enfriamiento de Centrales de Energia



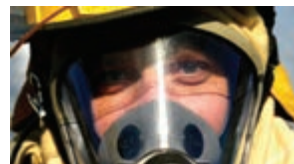
## Auto LPG & Hydrogen Fuel Tank Safety

Seguridad en autos de gas e hidrógeno



## Heat Resistant Clothing

Ropa resistente al fuego





En Technokontrol creemos que para que nuestra corporación continúe creciendo y desarrollándose, es vital invertir suficientes recursos en nuestros científicos y programas de investigación, para seguir avanzando, y así romper las barreras tecnológicas e introducir estas nuevas tecnologías en el mercado.

### Solar Heating

Paneles solares



### Airship R&D Technology

I+D Tecnología de aeronaves



### Chimney Filtering Systems CO<sub>2</sub> Reduction

Sistemas de filtro en chimeneas para reducir CO<sub>2</sub>



### Maritime Research & Development

I+D Industrias marítimas



### AeroSpace Industries

Industrias aeronáuticas



### Health & Safety Industries

Industrias de prevención de accidentes





# CERTIFICATES & ASSOCIATIONS

CERTIFICADOS / CERTIFICATS



**National Fire Protection Association**  
The authority on fire, electrical, and building safety

Additional Certificates Due in 2016-17  
Certificados adicionales en 2016-17  
*Certificats supplémentaires en 2016-17*



# QUESTIONS & ANSWERS

TECHNOKONTROL SAFETY  
TECHNOLOGY

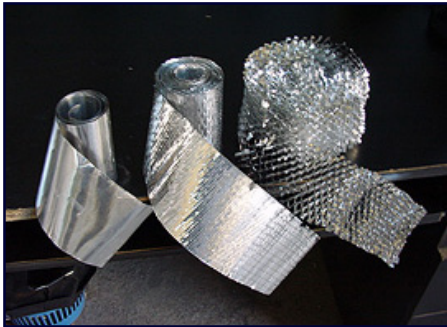


## QUESTIONS

- 1 What is Technokontrol?
- 2 How do Technokontrol Safety Products work?
- 3 What are the principal benefits of using Technokontrol Safety Products?
- 4 What are the main benefits of using Technokontrol Safety Products?
- 5 What other additional benefits can TechnoKontrol Safety Products offer us?
- 6 What formats and where can Technokontrol Safety Products be applied?
- 7 Where are Technokontrol Safety Products more commonly used?
8. Are TechnoKontrol Safety Products tested and validated under International Safety & Quality Standards?
- 9 Why does Technokontrol Technology work?
- 10 How does an explosion develop?
- 11 What is a B.L.E.V.E. explosion?
- 12 Does Technokontrol have an engineering team on hand for large or complex global installations?

# ANSWERS

## 1. What is Technokontrol?



In simple terms Technokontrol is an alloy based product in which (amongst other components) we multiply the natural effect of alloy the by 3,000% so as to be able to avoid explosions and fires from occurring within the industries mentioned above.

A more technical explanation is that Technokontrol Safety Products are a unique non-combustible mixture of materials and alloys consisting of a specially designed product which is mechanically produced via a patented three dimensional production system.

Due to our continuous R&D program which began over 17 years ago we have been able to advance our initial technology and today we are producing our VI Generation Safety Alloy which is the most advanced and resistant anti explosive material currently available (especially within gas related environments).

As Technokontrol is a corporation that constantly tries to evolve our R&D team are currently working on generating a VII Generation alloy in which we are in the final stages of testing. This alloy will be specially designed and prepared for the aviation and aerospace industries.



## **2. How do Technokontrol Safety Products work?**

TechnoKontrol Safety Technology alloys, panels and safety technology systems are comprised of a patented alloy material which is manufactured in a three dimensional manner and is mechanically produced into a mesh, ball or textile format so as to form a unique non-combustible material that is fire, blast, moisture, corrosion, heat proof and is also both sound and electromagnetic wave resistant depending on what its final usage will be. In the case of blast, fire, heat or explosions TechnoKontrol Safety Technology Systems will perform as no other product which is currently available in the market, especially within in the oil-gas-chemical and construction industries.

## **3. What are the principal benefits of using Technokontrol Safety Products?**

As mentioned above, the TechnoKontrol Safety Technology Alloy helps to stop an explosion or prevent a fire from occurring within any tank filled with gasoline, diesel, gas, petroleum or any other type of flammable, gaseous or liquid substance.

In addition our TechnoKontrol Alloy only occupies a minimum volume of 1% of the overall tanks capacity when using our alloy net and 1.5% when using the balls. Therefore, if a 100 litres tank is filled with our alloy net, the tank has a capacity of 99 liters, and if filled with the balls, it has a capacity of 98.5 litres. Thus our TechnoKontrol Safety Alloy completely avoids the oxidation within the interior part of the tank, (if tank is new or stops increasing oxidation if it is a used tank) and in turn stops explosions from occurring a 100% of the time.



#### 4. What are the main benefits of using Technokontrol Safety Products?

##### TK-Safety Technology Alloy Main Benefits:

- Anti-Explosive
- Anti-B.L.E.V.E.
- Anti-Slosh.
- Anti-Oxidation
- Reduces vaporization of fuels
- Light weight (up to 50% lighter than normal products)
- Easy to apply & use (can be applied into a 60 litre fuel tank within one minute).
- Eco-Friendly & 100% recyclable.
- Product longevity (is valid for over 10 years)
- Used with any types of fuels & Home-DIY chemicals such as: (gasolines, kerosene, alcohols, cleaning chemicals, etc.)
- No maintenance (minimum supervision is required).
- Manufactured under full EU Quality & Safety Standards and Guidelines.

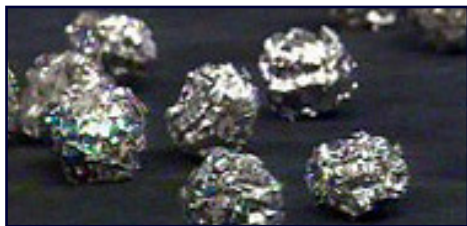


## 5. What other additional benefits can Technokontrol Safety Products offer us?

Techno-Kontrol Alloy stabilises the liquid in moving tanks (such as Ships or Transport Trucks) and in doing so, helps to stop any damage to the interior part of the tank i.e. helps to avoid sloshing within fuel tanks. Among other vehicles, this product is currently being used within high speed navy boats and its standard is mandatory within the FIM-World International Motorbike Federation, WPPA-World Professional Power Boat Association, etc.

Technokontrol alloy is compatible with all types of comustibles and does not need to change or alter any of the chemical properties of the respective combustibles in order to be effective. Techno-Kontrol Alloys also cancels out electrostatic charges.

## 6. What formats and where can Technokontrol Safety Products be applied?



Technokontrol Safety Alloy Products can be purchased in either ball or mesh format, however, for easy application we recommend the use of our TK-Ball format as its much easier, quicker and applicable than our TK-Mesh format. The TK-Ball format can be

introduced into any fuel can, fuel powered motor engine fuel deposit (motorbikes, motorboats, light aircraft, grass cutters, tree cutters, etc...), by hand. (Please refer to and be sure to study all Health & Safety instructions before use).

Technokontrol Safety Alloy Technology is lightweight, flexible and a 100% recyclable.



## 7. Where can Technokontrol Safety Products be more commonly used?

- Gas and Petroleum Industries
- The construction of fire and blast resistant barriers
- Pipelines within the gas and petroleum industries
- Military installations
- Airline Industry
- Fuel based enclosures
- Fuel cans & tankers
- Engineering
- Gardening & D.I.Y.
- Cable tray & security vaults enclosures



- High voltage electrical equipment enclosures
- Compressor tankers
- Dust collector
- Chemical storage
- Production of Gas bottles/cylinders and their storage facilities
- Blast enclosures
- Spray Booths
- Stairwell and Escalator enclosures
- Transformer



Our TechnoKontrol Alloy TK-Ball & TK-Mesh is exceptionally flexible, resistant to heat and once installed requires very little maintenance even within the most aggressive of atmospheres.

As per our Mission Statement, at Technokontrol we are constantly reinvesting into our Research; Development and Investigation departments so as to be able to adapt our patented alloy and manufacturing systems in order to continually expand our product lines. The following are just six examples of where you can find our specially designed products today;

- Gas Bottles, Gas GNV Auto conversion Kits gas-fuel tanks
- Fire prevention within Wall Panelling, Boards and Duct Systems
- Anti-explosion manhole and petrol stations infrastructures
- Electro-magnetic and sound proof construction panels
- Industrial air filter chimney systems to reduce CO2 and other types of pollution
- Revolutionary clothing applications which are currently being tested within Fire Fighters Helmets, Gloves and other Equipment.

In the case of fire prevention and explosions please read the Physical and Chemical Characteristics of Technokontrol which can be found within the "How Technokontrol Works Section" of our web site.

## 8. Are TechnoKontrol Safety Products tested and validated under International Safety & Quality Standards?

Technokontrol Manufactures, Designs & Researches its safety products within the European Union and under the highest possible International Accident, Health & Safety standards. In fact in many cases we surpass the present regulations set out by the organizations below.



**National Fire Protection Association**

The authority on fire, electrical, and building safety

US NFPA-69-2008-Standards on Explosion preventing Systems



UK- SI 1982/630- Petroleum Spirit for use in motor vehicles & keeping in plastic containers



EU- ADR Directive 1999/36-CE



ISO 9000-ISO14000-ISO18000-ISO23000(2012)

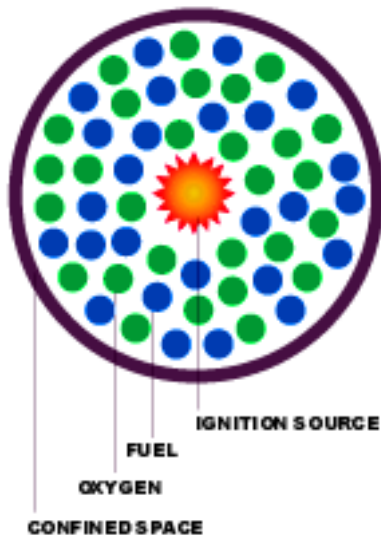


CE Certified Manufacturer (2012)

Technokontrol Safety Technology Products and Systems are used, recommended or obligatory in many sectors:

- Government Fire & Accident Authorities.
- UK Health & Safety Authorities.
- Petroleum Industry.
- International Motor Racing.(F.I.M.-International Motorbike World Championship Federation)
- International Power Boat Racing.(WPPA-World Professional Powerboat Association)

## 9. Why does Technokontrol Technology work?



Why does an explosion occur? In order for a deflagration explosion to occur four elements are required. These are; Fuel, Oxygen, An ignition source and a confined space.

The element of "Fuel" can come from a bulk material that produces dust clouds, a flammable gas or a volatile chemical that creates vapours. The element of "Oxygen" is readily available in almost all plant processes. The source of "ignition" element may be generated by a fire, a flame, a welding arc, a spontaneous combustion, frictional sparks or electrostatic hazards. Finally practically all the plant processes provide the element of "enclosed volumes". Once the above four elements are together, the potential for an explosion exists.

## 10. How does an explosion develop?

Technically an explosion is a freely propagating combustion wave, or deflagration, moving at less than the speed of sound. Unconfined, this flame front travels initially at slow speeds, but normally the flame increases in velocity shortly after ignition to form a high pressure wave.

As most industrial processes usually are not designed to withstand such a wave, the pressure develops into an explosion, a rupture occurs releasing a destructive pressure shock wave and flame.




## 11. What is a B.L.E.V.E. explosion?

Technokontrol works exclusively mechanically and without altering the chemical properties of the fuel.

Its geometry in form of polyhedral mesh fulfils the following assignments:

- The kinetic energy of gases is restrained in its radial advance from the starting point of inflammation. So the progression in spherical layers (known in the technical field as "onion layers") is destroyed.
- The calorific energy that contributes to the chain reaction is cushioned by the great heat absorption that offers the surface of the mesh.



In order to obtain this effect we need to ensure that the relation of increased surface, by volume treated [in the order of 3000 centimetres square per litre] as well as the minimum thickness of the mesh settling down in 0.06 mm.

The surface of the material determines the speed of absorption of calories but it is also necessary to ensure that the material has the sufficient volume, so that the heat capacity is enough to admit the initial calories (Energy of Activation) and the subsequent chain reaction is avoided. Actually these objectives are obtained by giving a thickness to the raw material of 0.06 mm.

It is important to emphasize that as previously described this is only valid for the initial moment where the objective is to avoid the chain reaction. Just after the inflammation, the material and the fuel equals the temperature to ensure that the gradient becomes zero and therefore, there is no longer a heat accumulation; the gas locked up in the deposit moves away from the stoichiometric mixture and when the air becomes scarce, the danger of an explosion completely disappears.

It arrives then, to a permanent regime in which the product works in analogous form similar to the one of a "wick", which allows that the gas only becomes inflamed in the fuel filling mouths, as well as in the possible fissures that could cause a hypothetical accident or shock, overpressure, fatigue or overheat. As the





gas is consumed in its combustion, the liquid evaporates and the gas is consumed until it reaches total extinction.

In addition to the above, the following benefits may be added:

- Due to the potential of oxidation of the aluminium mesh of 1.66 volts, opposed to 0.763 volts of zinc, this material becomes a very effective anode protection that guarantees no electro corrosion of the deposit.
- Then the mesh constitutes in itself a set of screens that helps to avoid the fast movements of the liquids, water hammers (violent movements of the liquid in the deposit) and also the accumulation of static loads, thus being able to therefore recalculate the thicknesses, as much as, the corresponding reinforcements in tanks with the consequent reduction in price of cost in its construction.
- Reduces the evaporation in the fuel tanks as normally when the fuel within the tank evaporates it produces a change of state which in turn generates a decrease of temperature within the boundary layer. This decrease of temperature is lead quickly from the surface of the liquid, through to the alloy of the Aluminium mesh which with its great heat conductivity (208 Wativos/m °C) means that the steam is condensed even further thus helping to reduce evaporation of the most volatile but powerful components and also the most poisonous of organic fuels.

**12. Does Technokontrol have an engineering team on hand for large or complex global installations?**

**Technokontrol Engineering- Global TK-Engineering Team.**

Technokontrol only employs the best engineers throughout the world in order to undertake its industrial orders and we ensure that we provide the best training in order to ensure that our engineers keep up to date with both current and future technologies.



A photograph showing two people in business attire working at a desk. One person is pointing at a laptop screen displaying a bar chart, while the other is typing on the keyboard. There are papers and a coffee cup on the desk.

# ENGINEERING

## GLOBAL ENGINEERING TEAM

### **TK-GLOBAL ENGINEERING TEAM**

In order to ensure that our clients receive the best service possible, through both our product range and our manufacturing facilities we have managed to entice and train one of the most qualified engineering teams available throughout the world today and with their help we are able to complete both our individual and industrial orders accordingly.

We also understand that stress, torque, fire, heat, material, tension, flexibility, nano-technology, textile and construction testing are all critical parts of Technokontrols engineering process and we therefore have provided our engineers with such facilities as a fully integrated 3D computer aided design / computer aided manufacturing (CAD/CAM) system along with many more testing technology aids (i.e. fire, heat, blast and metal stress testing technology) so as to ensure that our clients receive the best service available within the market today.

As per above, Technokontrol also manufactures all of its products to the highest possible international standards to which we are proud to state that we not only comply but in many cases we surpass the requirements needed in order to receive these international quality certificates.

## **TK QUALITY ASSURANCE**



A company-wide quality program, called the Technkontrol Quality System (TKQS), was developed specifically to meet the requirements of our business and our customers. A major ingredient of TKQS is that every employee is responsible for the end quality of our product. In addition, the Quality Assurance Department is trained and knowledgeable of industry requirements and is capable of providing all documentation for initial sample review, production, and post-production support. They are solely committed to maintaining quality throughout the life of the product, and are experienced in problem prevention, analysis and solution techniques. The department is sufficiently staffed to insure total care, attention to detail and high quality levels.

TECHNOKONTROL LABORATORY FACILITIES INCLUDE:

## TK METALLURGICAL LAB TESTING



The analysis of raw materials before production is conducted here so as to be certain that it meets Technokontrols strict chemistry-alloys specifications, as well as metallurgical analysis of completed parts. We only purchase and develop exclusive & home patented alloys for each type of product and then prepare them for their future use. We have been able to develop and use all six of our TK-Generation alloys for distinct industries with our latest TK-VI Generation alloy being obviously the most advanced. Our VI Generation alloy has been developed especially for all gas related fuel based products whilst our new VII Generation Aerospace alloy is currently being developed and will be shortly available under the TK-Alloy Portfolio of Safety Technologies.

## TK ALLOY & DESIGN LAB TESTING



Here our product manufacturing processes are monitored and material manufacturing thicknesses, quality and design are verified. Every product has been designed for a specific industrial sector and our laboratories continuously test and verify that the correct type of materials are used. We strive to use superior exclusive and patented materials to surpass all quality and safety controls in all of our products and technologies in order to increase our product portfolio.

## TK CORROSION, DURABILITY & STRESS LAB TESTING



Our corrosion, durability & stress labs ensure that the final product meets and in some cases exceeds our customers specifications as well as Technkontrol's own stringent requirements.

Other tests used by the Quality Department are hardness, tensile and proof-load, as well as non-destructive methods of testing. Our optical comparator is used for more accurate measuring and dimensional verification for critical situations where conventional methods are inappropriate or incapable. Electro-magnetic, acoustic, heat and stress levels are performed at the highest international testing levels including sharing many of the unique testing technologies created at Technkontrol with Tech-Universities or third party research programs in technological joint-ventures.

Statistical Process Control (SPC) & On Sight Historical Quality Control (OHQC) is an important aspect of problem prediction and on going control before and after production. Areas such as alloy quality, piece hardness, mass, flexibility, weather, chemical corrosion, sabotage, accidental and dimensional control are monitored. Reproducibility and Repeatability (R&R) studies, and process/machine capability studies are also an integral part of the statistical quality assurance process.



## TK MANUFACTURING

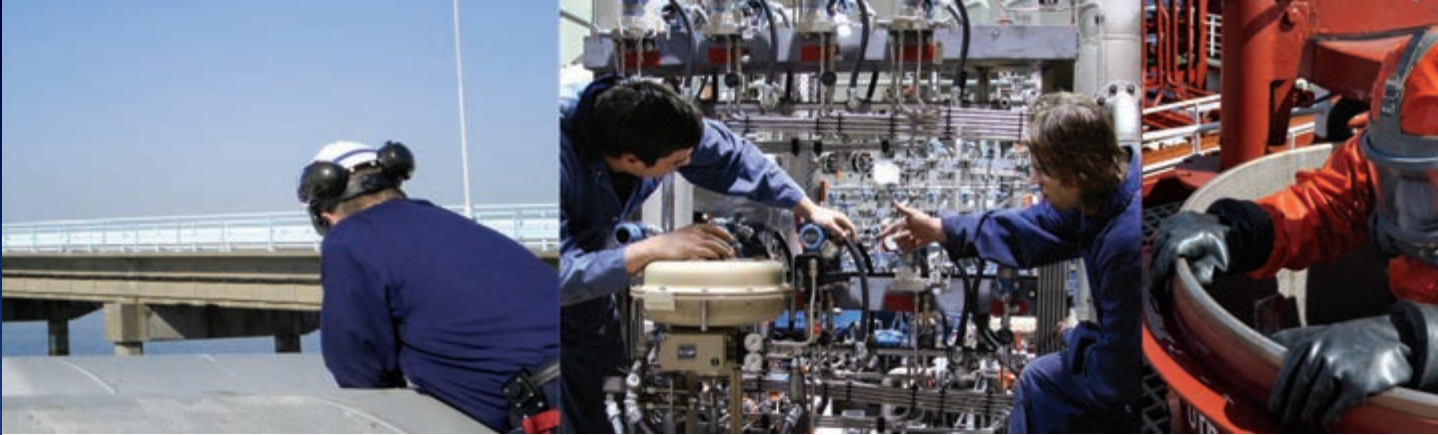
Our manufacturing equipment and machinery is custom made exclusively for Technokontrol and is not available on the general market thus allowing us to create new technologies and to adapt swiftly to any new industry requirements.

This exclusive technology allows us to be independent and ensure that no other possible future competitor may appear on the market, thus allowing us long term product and technological exclusivity. General purpose automated multi-stations, packaging and other machinery complete our assortment our machinery portfolio. We offer vacuum, air-tight and atmospheric heat treatment, vacuum and atmospheric annealing, induction hardening and induction tempering. Fully-automated or semi-automated machines are used, depending on the volume requirements of our customer. Finishing equipment is specially designed for Technokontrol's unique products.

Our tool room and grinding facility fully supports manufacturing as well as production of any necessary prototype hardware requirements we may have both now and in the future.

Technokontrol uses state-of-the-art technology and highly experienced personnel for the manufacturing of all of its products. Our complete in-house capabilities provide total control of the manufacturing process ensuring quality results. Our manufacturing system is designed for flexibility in choice of products without a loss of production efficiency. Computer-controlled cycle parameters maintain consistent quality control. A computer data base closely monitors part number, surface areas, volume, packaging and part weight to ensure uniform product quality and delivery.





## TK GLOBAL ENGINEERING TEAM

*Excellence is the unlimited ability to keep improving on the quality of what you have to offer*

Technokontrol has a large portfolio of products and services which depending on the product and its use in many occasions it can be directly purchased through our retail division ready for use as our TK-Anti Explosion Safety Fuel Cans and in many other applications can be simply applied as the TK-Anti Explosion Alloys for Home/DIY/Private/Motorsport use by following the incorporated instruction and safety manuals which do not require high levels of technical backup for its use or application, even though we at Technokontrol are available for our clients needs to advise in the event of any possible issues with regards to our products use or application. "Safety is paramount and any question is better answered than a mistake occurring for not asking".

On the other hand many other of our products and services due to their industrial and specialist application are complex and require high levels of technological knowledge with regards of the manu-



facturing and of their application and installation. We at Technokontrol believe that an essential part of the Technokontrol experience is the "Key in Hand" option and we strive to give our client's the option of a 100% hassle free experience anywhere in the world. If our client requires us to travel to supervise, verify and to apply any of our products or services from a motor yacht in the Caribbean, to a private plane in the USA or to a Speed boat in the UAE we will be available on hand at an obvious extra cost. Due to the availability of global communications the TK-Engineering Team can via conference call, telephone or other possible means of communication offer advice minute by minute and even view if possible the correct installation or answer in-situ with any queries without travelling and without any additional expense to the client other than the purchase of the respective product.

TK-Global Engineering Team can also be part of any short, mid or even long term product safety program for which we will be on hand through any type of installation program before, during and even after the installation process for any government or corpo-



rate operation has been achieved, from an Auto GNV program to the complete installation within refineries, pipelines, jumbo tanks or petrochemical industrial units. Once the client has defined the installation program they require, we will both together decide whether or not to take a full TK-Global Engineering Team or to create a new National TK-Engineering Team on location of the respective installation program under a full time based TK-Global Engineer Monitor whom will prepare, train and supervise the clients staff or employees. Normally, due to costs and due to installations programs being over several months or possibly years a based TK-Global Engineer Monitor is the best option due to reducing costs and also to preparing a National TK-Engineering team whom then can continue to use their knowledge, education and knowhow within other fields of application under new installation programs in the area or region for Technokontrol or their present or past employer.



In the case of Mid-Long term installation programs the TK-Global Engineering Team Director will prepare a full vocational-education program in which once passed the employee will obtain a certification to be allowed to install the Technokontrol technology upto those approved sectors/sections and this would also apply to all levels including management and directors levels.

## LEGAL NOTICE

Copyrights Techno Kontrol Exco S.L. All Rights Reserved. The text, images, graphics, sound files, animation files, video files and their arrangement on Techno Kontrol Exco S.L. Internet sites are all subject to Copyright and other intellectual property protection. These objects may not be copied for commercial use or distribution, nor may these objects be modified or reposted to other sites. Some Technokontrol Internet sites also contain material that is subject to the copyright rights of their providers. All modifications of the web or publicity can be done as the corporation requires. All web and publicity information is not contractual but only information.

Product variations. Some of the product information, illustrations and images contained on this Internet site or all types of publicity may have been prepared for generic use on Technokontrol Internet sites maintained in different countries around the world. Consequently, some of the information and/or accessories which are not available in some countries or which, in order to satisfy local market demand or regulatory controls in such countries, may only be available in different specifications or configurations.

If you are interested in any product, alloy, services, options or accessory shown on the Internet site or publicity and are unsure of its availability or specification in your locality, you should contact Techno Kontrol Exco S.L. and/or a local authorized dealer for the relevant product, for information of current details in your locality.

### Disclaimer

We do not make representation that information and materials on this website and corporate publicity are appropriate for use in all jurisdictions available on the web, or that transactions, securities, products, instruments or services offered on this website or publicity are available or indeed appropriate for sale or use in all jurisdictions, or by all investors or other potential clients. Those who access this website or publicity do so on their own initiative, and are therefore responsible for compliance with applicable local laws and regulations. By accessing each site, the entrant has agreed that he/she has reviewed the website or publicity in its entirety including any legal or regulatory terms.

# AVISO LEGAL

## Propiedad Industrial e Intelectual

Estos textos e imágenes, así como todo tipo de publicidad en cualquier formato es propiedad de Techno Kontrol Exco SL. Los derechos de Propiedad Intelectual y derechos de explotación y reproducción de esta Web y publicidad, de sus páginas, pantallas, la información que contienen, su apariencia y diseño, así como los vínculos ("hiperlinks") que se establezcan desde ella a otras páginas web de cualquier sociedad perteneciente al Grupo, son propiedad exclusiva de éste salvo que se especifique otra cosa. Todas las denominaciones, diseños y/o logotipos que componen esta página son marcas debidamente registradas. Cualquier uso indebido de las mismas por persona diferente de su legítimo titular podrá ser perseguido de conformidad con la legislación vigente. Los derechos de propiedad intelectual y marcas de terceros están destacados convenientemente y deben ser respetados por todo aquel que acceda a la Web y los folletos informativos. Solo para uso personal y privado se permite descargar los contenidos, copiar o imprimir cualquier página de esta Web. Queda prohibido reproducir, transmitir, modificar o suprimir la información, contenido o

advertencias de esta Web sin la previa autorización escrita de Techno kontrol Exco S.L. Toda la información expuesta en la pagina web o en cualquier tipo de formato publicitario es únicamente informativo y no constituye ninguna obligación contractual.

## DROITS D'AUTEUR

*Copyright Techno Kontrol Exco S.L.. Tous droits réservés. Tous les textes, images, graphiques, sons, vidéo et animations ainsi que leur arrangement ou disposition sont protégés au titre du droit d'auteur et aux autres lois relatives à la protection de la propriété intellectuelle. Ils ne peuvent être ni modifiés, ni copiés à des fins commerciales ou à des fins de reproduction, ni utilisés sur d'autres sites web.*

*Marques commerciales. En l'absence d'indication contraire, toutes les marques mentionnées sur les pages internet de Technokontrol. sont des marques déposées par Techno Kontrol Exco S.L. et protégées sur un plan légal. Cela concerne en particulier les noms de produits ou services ainsi que tous les logos et emblèmes du groupe Techno Kontrol Exco .S.L.*



**TechnoKontrol™**  
WHERE YOUR SAFETY IS OUR PRIORITY

### **TECHNOKONTROL GLOBAL SALES HEADQUARTERS**

Ms. L. Cañada

GLOBAL SALES

TECHNOKONTROL

[lcanada@technokontrol.com](mailto:lcanada@technokontrol.com)

+34 698 893 269

Mr. D. Doyle

GLOBAL SALES

TECHNOKONTROL

[ddoyle@technokontrol.com](mailto:ddoyle@technokontrol.com)

+34 653 722 055

Contact by phone/fax

Tel

+34 902 002 805

Fax

+34 902 002 806

Mobile

+34 698 893 269

Email

[sales@technokontrol.com](mailto:sales@technokontrol.com)

[info@technokontrol.com](mailto:info@technokontrol.com)

### **EUROPEAN FACTORY HEADQUARTERS**

Pol. Ind. Viñas de la Vega

16770, Cuenca

San Lorenzo de la Parrilla

Spain

[www.technokontrol.com](http://www.technokontrol.com)