DETO-STOP METAL JERRY CANS

The DETO-STOP® Explosion Prevention System™ relies on a precision engineered proprietary aluminium alloy mesh to provide extraordinary protection from explosive combustion in fuel tanks and other vessels containing flammable liquids and gases. The DETO-STOP® special aluminium alloy has been developed to provide rapid thermal conductivity, rigid mesh structure, crush strength and superior corrosion resistance. This proprietary alloy is then custom machined in patented equipment to create an extraordinarily lightweight aluminium alloy mesh which, when installed in a fuel tank or other vessel containing flammable liquids or gases, will prevent explosive combustion.

The DETO-STOP® Explosion Prevention System is the result of over fifteen years of research, development and engineering in Germany and has been conclusively demonstrated to prevent explosive combustion in fuel tanks and other vessels containing flammable liquids and gases.

GENERAL DESCRIPTION

DETO-STOP® is the result of more than 10 years of research and development to achieve the optimum shape and material configuration, and has been developed by TEXOGA GmbH, Munich, Germany. The product, production process and machinery are protected internationally by patents.

DETO-STOP® is manufactured as a mesh roll. In its mesh roll form, it is installed in the metal jerry cans during fabrication and is assembled together with the other product components.

The innovative character of DETO-STOP® is not limited to its shape, but is also a proprietary aluminium alloy constituted from titanium, magnesium, manganese, silicon and other materials that were developed as prime material for the mesh to achieve the desired performance. The special aluminium alloy used in the DETO-STOP® has been developed to provide rapid thermal conductivity, rigid mesh structure, enormous crush strength and superior corrosion resistance.

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PRODUCT CHARACTERISTICS

The use of DETO-STOP® to suppress fires and explosions has been successfully demonstrated in liquid fuels and gases. The mesh, when installed in containers containing volatile fuels (hydrocarbons or oxygenates), prevents the explosion or detonation of the fuel and greatly reduces hydrodynamic ram effect from ballistic penetrations. This has been made possible where, by reducing the mesh diameter, there is an increased tendency to extinguish the fire. This rule seems to be independent of the fuels and depends mainly on the type of mesh installed.

DETO-STOP® SPECIFICATIONS

The DETO-STOP® Explosion Prevention System™ has been conclusively demonstrated to prevent explosive combustion in fuel tanks and other vessels containing flammable liquids and gasses. Until recently, DETO-STOP® was used exclusively by the European military - installed in over 1,000 tanks and armored personnel carriers in over seven countries.

We are now bringing this technology to other markets.

DETO-STOP® works by <u>three mechanisms:</u>

1. The high thermal capacity alloy acts as a heat sink
2. The mesh design separates the flame into smaller burners
3. The mesh acts as a physical barrier to the traveling flame front.

Some of the revolutionary operational features and advantages of the DETO-STOP® Explosion Prevention System™ are as follows:

- Prevents the detonation of flammable liquids and gases in containers
- Limits and delays spread of fire
- Has no life limit. This means, reliable permanent safety and protection
- Only displaces approximately 1 to 3% of the total volume of the can
- Has no effect on the flow rate of fuel
- Reduces evaporation of fuel by 60% at 100°F (37.8°C)
- Is indifferent to non-polar chemical compounds
- Does not affect the physio-chemical properties of the fuel or the container
- Is lightweight, therefore does not increase the weight of a metal jerry can by a significant amount.

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