LATTIX

BY ENERAQ · ANTI-BLEVE PROTECTION

PASSIVE PROTECTION · EUROPEAN TECHNOLOGY

A fuel tank should not be a bomb waiting to happen. Lattix prevents it — by geometry, not electronics, not extinguishing agents, no moving parts.

×4000
INTERNAL HEAT-CAPTURE SURFACE AREA

THE PROBLEM

A BLEVE (*Boiling Liquid Expanding Vapor Explosion*) releases the energy of approximately **7 kg of TNT per cubic meter** of overheated fuel. It is triggered by localised tank overheating — adjacent fire, ballistic impact, hot work, valve failure — and it gives no warning. Conventional safeguards (pressure-relief valves, foam systems, water deluge) respond *after* the pressure wave has formed. Lattix acts **before**: it disperses the heat across the full mass of the vessel wall before a hot spot can form.

THE SOLUTION — FOUR PILLARS

Dissipate
3D aluminium-alloy mesh, 238 W/m·°C thermal conductivity. Spreads heat across the entire tank wall in seconds.

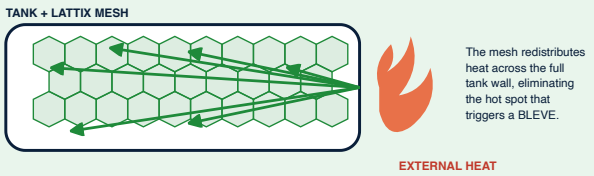
Quench
Hex-cell interior walls act as flame arrestors — they cool the flame below its propagation temperature.

Contain
Pressure waves from an internal ignition cancel out against calibrated irregular geometries.

Seal
The same lattice, embedded in fireproof panels (plaster, concrete, Kevlar or other structural carriers), blocks fire propagation in industrial compartments.

> *Lattix changes the physical conditions inside the tank without adding additives or modifying the fuel.*

HOW IT WORKS



Embedded 3D hexagonal geometry — no moving parts, no maintenance, no power.

APPLICATIONS

- Service stations & LPG storage
- Refineries & petrochemicals
- Hydrogen storage
- Fuel transport (tankers, rail)
- Maritime, shipping & FPSO
- Airport refuelling
- Military vehicles & field tanks
- Data centers (backup diesel tanks)
- Residential butane cylinders
- Fireproof compartmentation (plaster, concrete, Kevlar or other panels)

TECHNICAL SPECIFICATION

Material	Aluminium alloy, 238 W/m·°C thermal conductivity
Geometry	3D hexagonal cells, calibrated irregular lattice
Internal surface increase	×4 000 (LPG cylinder); ×3 000 (sheet form)
Validated fuels	LPG / butane / propane / Jet A1 / JP-8 / kerosene / gasoline / autogas / **hydrogen**
Thermal performance	Wall with embedded mesh: structural integrity at 1 200 °C; plate: certified test at 1 470 °C (carriers: plaster, concrete, Kevlar or other)
Maintenance	None · no moving parts · no power required
Installation	Embedded in new vessel or retrofit through manhole

INDEPENDENT VALIDATION

CERTIFICATIONS

Bureau Veritas · no-BLEVE large-tank tests · cylinder test at +1 000 °C (Madrid) · welding without degassing
German government (BAN report) · **University of Castilla-La Mancha** (wave inhibitor) · **CNPIC Spain** (critical infrastructure) · **European Commission** (EEC Security Committee)

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