



Naqaa
Al-Tabiaa

COMPANY PROFILE

Product Overview

Exclusive Agent of **eXess® – EXplosion Elimination SystemS** in the Middle East

INTRODUCTION ABOUT OUR COMPANY

ABOUT US

NT Company (Naqaa Al-Tabiaa) is a regional leader in safety and environmental protection solutions, headquartered in Erbil, Iraq.

We specialize in providing advanced technologies that protect human lives, assets, and the environment, with a strong focus on the oil & gas, transportation, and industrial storage sectors.

OUR VISION

To become the most trusted provider of innovative safety and environmental protection solutions across the Middle East.

OUR MISSION

- Deliver life-saving and explosion prevention technologies
- Support environmental sustainability through clean solutions
- Build long-term partnerships based on trust and performance



INTRODUCTION

WHAT WE OFFER

ADVANCED SAFETY SOLUTIONS FOR HIGH-RISK ENVIRONMENTS

NT Company provides integrated safety and environmental protection solutions tailored for high-risk industries such as oil & gas, transportation, and industrial storage.

Our expertise focuses on explosion prevention, emission reduction, and safeguarding critical infrastructure through advanced and proven technologies.



OUR CORE SOLUTIONS

EXPLOSION PREVENTION SYSTEMS

Advanced solutions to eliminate explosions in fuel tanks and hazardous environments.

ENVIRONMENTAL PROTECTION SOLUTIONS

Reducing emissions and supporting sustainability in industrial operations.

Industrial Safety Technologies

Protecting human lives, assets, and critical infrastructure.



OIL & GAS SECTOR

Providing explosion elimination and safety solutions for refineries, fuel storage, tank farms, and fuel stations(petrol)

TRANSPORTATION & STORAGE

Enhancing safety in fuel transportation, logistics operations, and industrial storage facilities through explosion prevention technologies.

PRODUCTS & SOLUTIONS

OUR KEY PRODUCT

ABOUT THE PRODUCT

eXess® is a patented explosion elimination system manufactured in Austria by FUXS GmbH. It is a passive mechanical safety solution made of a special three-dimensional aluminum mesh.

The system is designed to prevent explosions, suppress fires, and significantly reduce emissions in tanks containing flammable liquids or gases, providing a high level of safety for industrial and hazardous environments.



NT Company – Exclusive Agent of eXess® in middle east



WHY eXess®

- Eliminates explosion risks at the source
- No moving parts – almost maintenance free
- Reduces fire, smoke, and harmful emissions
- Suitable for all types of fuels
- Long service life (20+ years)

THE RISK

Fuel storage tanks and industrial facilities are exposed to serious risks such as explosions, fire hazards, and vapor emissions, which can lead to loss of lives, environmental damage, and major financial losses.

THE SOLUTION

eXess® provides a reliable explosion elimination solution by preventing explosion in case of ignition occurrence and flame propagation inside tanks, ensuring maximum safety, environmental protection, and compliance with international safety standards.

PRODUCTS OVERVIEW

OUR SOLUTIONS & PRODUCTS

MMbags

eXess® in bags: Metal Mesh in Bags, eXess® MMBags



MMCB

- eXess® lose/bulk: Metal Mesh Cylindrical Bodies eXess® MMCB

MMR

- eXess® in rolls: Metal Mesh Rolls, eXess® MMR



01

Weight of eXess®
0,045 kg/liter (45 g/liter)

03

Loss of fuel volume
1.5 % by displacement

05

Resists all types of corrosion
including rust

02

Loss of volume by
negligible absorption of fuel

04

Fuel compatibility
compatible with all fuels

PRODUCT APPLICATION

eXess® FOR GAS STATIONS

GAS STATIONS

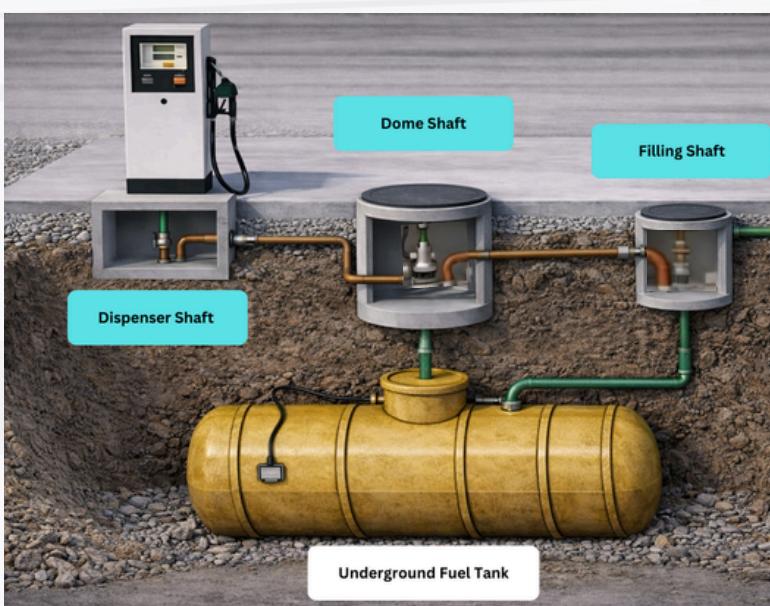
Explosion Protection in Hazardous Zones

- eXess® is a mechanical explosion prevention system designed to protect explosion-prone areas in gas stations.
- It is installed as a filling material in hazardous zones to suppress explosions, control fire propagation, and significantly reduce smoke development, providing enhanced safety for people, assets, and the environment.

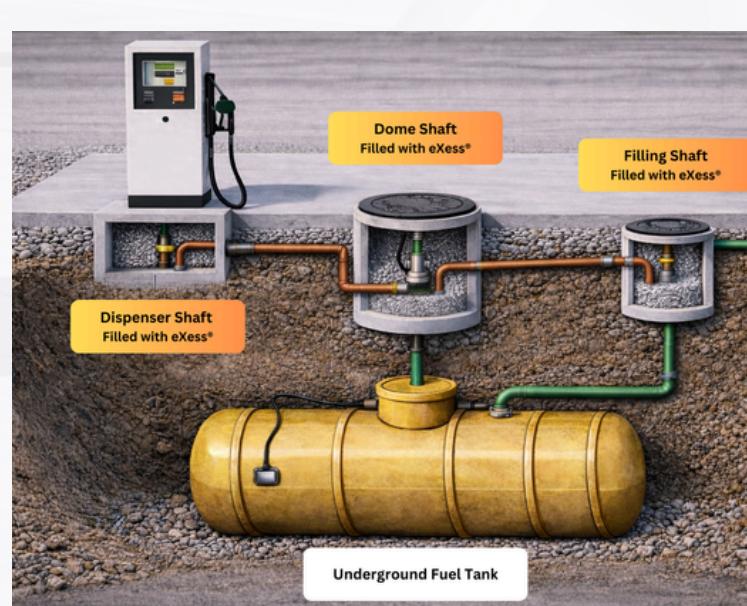
Where eXess® is Installed in Gas Stations

- Dome Shafts
- Dispenser shafts
- Filling Shafts

VISUAL COMPARISON



Before eXess® – Increased explosion and fire risk



After eXess® – Explosion suppressed and safety enhanced

PRODUCT APPLICATION

eXess® FOR FLOATING ROOF TANKS

Rim Seal Explosion Protection

- Floating roof tanks are highly exposed to ignition risks, particularly in the sensitive rim seal area where hydrocarbon vapors accumulate.
- In case of assembly in the sensitive rim-seal area around the tank; suppresses the explosion, holds fire under control, and provider UV protection for the rim-seal.

THE RISK

Lightning strikes are the most common ignition source for floating roof tanks. In the rim seal area, hydrocarbons escape and accumulate, creating a high-risk environment where ignition can lead to deflagration, fire, heavy smoke, and operational shutdowns, causing safety, environmental, financial, and regulatory issues.

THE SOLUTION

The system keeps fire under control, reduces smoke to nearly zero in the protected area, and minimizes operational and environmental impact, providing a reliable solution for fuel storage facilities.

Key Benefits of eXess® for Floating Roof Tanks

01

Suppresses
explosion pressure

02

Keeps fire under
control

03

Smoke development
greatly reduced

04

UV protection for
rim seal systems

05

Extends
service life of
rim seals

06

Reduction of air-gas
convection in rim
seal areas

07

Can be integrated into
existing extinguishing
systems

08

Electrostatic
discharge within
the eXess® volume

09

Almost
maintenance free

VISUAL COMPARISON

FLOATING ROOF TANK – WITH & WITHOUT eXess®

RIM SEAL FIRE & EXPLOSION SCENARIO

This visual comparison demonstrates the critical difference between an unprotected floating roof tank and a tank protected with eXess® installed in the rim seal area.

The images highlight how ignition, flame spread, smoke generation, and operational impact are significantly reduced when eXess® is applied.

WITHOUT eXess®

HIGH RISK

In conventional floating roof tanks without eXess®, hydrocarbon vapors accumulate in the rim seal area.

When exposed to ignition sources such as lightning or electrostatic discharge (spark), uncontrolled fires may lead to explosion, causing shutdowns, safety risks, and environmental damage.



WITH eXess®

Low Risk

This prevents explosion pressure buildup, keeps fire under control, and reduces smoke development to nearly zero, ensuring safer operation and environmental protection, and extends fire extinguishing period.



PRODUCT APPLICATION

eXess® FOR TANKER TRUCKS (SECURED CARGO)

Safety in transportation is critical, especially when transporting flammable or hazardous liquids. Tanker truck accidents can result in severe damage, loss of life, and environmental pollution. eXess® provides an effective mechanical solution that significantly improves transport safety and stability.

THE CHALLENGE / THE RISK

- During transportation, liquid cargo inside tanker trucks is exposed to strong sloshing forces. These forces cause unstable driving behavior, increase the risk of rollover accidents, and intensify the consequences of crashes, fires, and explosions.

THE SOLUTION - eXess® Secured Cargo

- eXess® is installed inside the tanker as a filling material. It reduces dangerous sloshing forces by up to 80%, stabilizing the vehicle during transport and significantly lowering accident risks.

KEY BENEFITS OF eXess® FOR TANKER TRUCKS

- Reduces sloshing forces by up to 80%
- Improves driving stability and road safety
- Reduces risk of explosions in case of accidents
- Supports firefighting and emergency response
- Lowers overall fuel evaporation during full-load trips
- Reduces environmental impact and emissions

WITHOUT eXess® - UNCONTROLLED LIQUID SLOSHING

HIGH RISK

CFD simulation showing uncontrolled liquid sloshing inside a tanker truck during motion. High momentum waves are generated, creating unstable driving conditions and increasing the risk of rollover and accident severity.



WITH eXess® - STABILIZED LIQUID BEHAVIOR

Low Risk

CFD simulation illustrating stabilized liquid motion when eXess® aluminum mesh is installed inside the tank. Kinetic energy is dissipated throughout the volume, significantly reducing sloshing forces and improving transport safety.



PRODUCT APPLICATION

eXess® FOR AUTOMOTIVE & VEHICLE FUEL TANKS

Safety in vehicles is critical when fuel tanks are exposed to impact, heat, or sudden movement during driving or accidents.

eXess® provides a passive mechanical explosion prevention solution for automotive fuel tanks, significantly reducing explosion risk, sloshing effects, and fuel-related hazards.

THE CHALLENGE / THE RISK

- In warm weathers, the fuel tanks in vehicles are exposed to heat, generation of VOC, and rising of the temperature of the fuel itself.
- Liquid sloshing generates pressure waves inside the tank
- In accidents, ignition sources can cause fire or explosion
- Conventional fuel tanks offer limited internal explosion protection

THE SOLUTION – eXess® Automotive Protection

- eXess® aluminum mesh is installed inside the fuel tank
- Absorbs and dissipates heat instantly
- Prevents flame propagation and pressure buildup
- Reduces sloshing forces and stabilizes fuel behavior

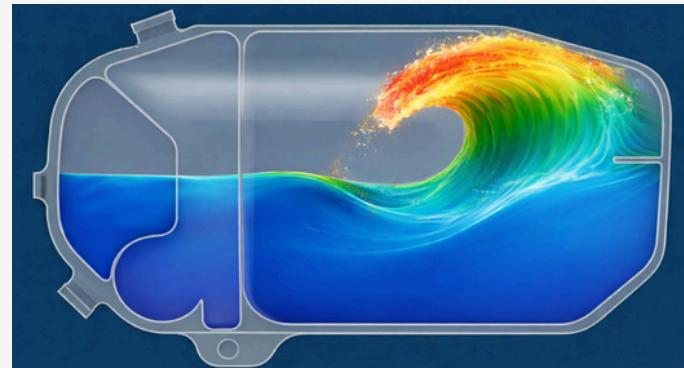
KEY BENEFITS FOR AUTOMOTIVE APPLICATIONS

- Prevents fuel tank explosions and flashback
- Reduces sloshing and improves vehicle stability
- Enhances safety during accidents and rollovers
- No electrostatic charge
- Compatible with all fuels
- Almost maintenance-free
- Negligible fuel volume loss ($\approx 1.5\%$)
- Reduces fuel evaporation, helping protect the environment and improve fuel efficiency

CONVENTIONAL FUEL VEHICLE TANK WITHOUT eXess®

HIGH RISK

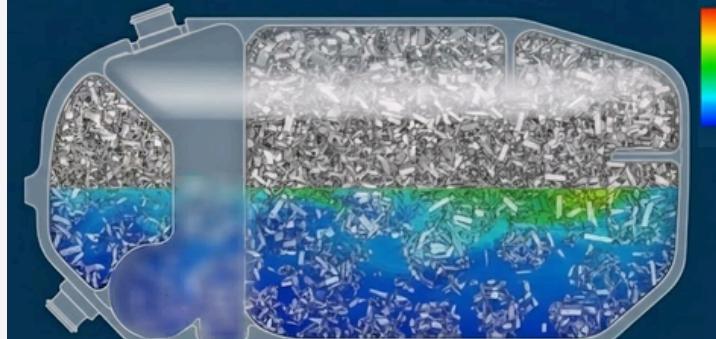
In conventional vehicle fuel tanks, liquid fuel moves freely during braking, cornering, and impacts. This increases internal pressure, sloshing forces, and the risk of fire or explosion in accident scenarios.



FUEL TANK VEHICLE PROTECTED WITH eXess®

Low RISK

When eXess® aluminum mesh is installed inside the fuel tank, fuel movement is stabilized. The system reduces flame propagation, dissipates heat, and significantly reduces explosion risk without affecting normal vehicle operation.



AUTOMOTIVE
FUEL TANKS



Please feel free to contact us for further information or technical support.

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