



CIT Solutions and Discussion “Foam in Trucks” Corporate Security Department



PROSEGUR



CIT Solutions and discussion (Foam in trucks)

Background

- ❑ Given the **very high risk level** in some countries of the Group, it is necessary to equip the armored units with **systems to avoid or minimize the violent attacks** against the cash in transit services.
- ❑ The attackers base their exit on the speed of their actions, succeeding to **get the cash in a minimal time**, using very **violent methods (explosives)**.
- ❑ We seek to **extend the reaction time and discourage criminals** in their attempts to rob the armored vehicles, due to the the excessive time required to reach the cash before the police reaction.





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Criminal Act

Vehicle Immobilization

- Attack on the vehicle en route with the main goal to immobilize it.
- High number of criminals, heavily armed.
- Shots against the engine with high caliber weapons (50).
- Shots to the wheels of the vehicle.
- Placing vehicles in order to block the road (in various occasions vehicles on fire).



Increasing the reaction time

- Occasionally criminals seek to increase police response time.
- They cause alarm situations in places that are distant to the action, in order to divert police units there.
- Previous deactivation of police vehicles.
- Placing obstacles in the paths, leaving free only their route for escape.



Obtaining the cash

- The criminals threaten and coerce the crew to release the cash.
- If they fail, they proceed to plant explosives in the cargo area to get the values.





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Solutions

Reinforcement to certain areas of the vehicle

- Increase the shield in the engine area.
- Provide the tires with rolling emergency system.
- The CCTV camera for driving in cases of emergency when the front glass were broken by gunfire.



Polyurethane foam system for flooding the cargo

- Local or automatic activation (when the glass is broken).
- Local activation from the driving seat and from the crew's.
- Security systems to avoid the incidental shots.



Automatic Activation Video



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Functioning

- ☐ The system consists in a protected deposit which lies in the cargo zone, within which there are **several tanks with chemicals**.
- ☐ In the moment of its activation, the **chemicals are mixed**, and the product pours into the loading zone in the liquid state.
- ☐ The **chemical reaction causes the product to expand in form of foam** to saturate the available space, solidifying in a short time.



Functioning of the Foam video



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The operation



- ❑ The **crew detects movements** that indicate an **imminent attack** against the armored vehicle.



- ❑ Given their training, they **activate immediately** the equipment.



- ❑ The driver initiates **evasive driving maneuvers**, using the vehicle and relying on security reinforcements with which he is provided.



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The advantages of the system

Blocks the coercion of the crew

- Once activated, the cargo area remains protected and the crew coercion is no longer possible.



Decreases effect of attack with explosives or cutting equipment

- It has been proven that attacks using explosives are not effective once activated the system as the product does not deteriorate too much and continues to protect the cash.
- Moreover, by exerting pressure from the interior, the effects of the explosion on the car body will be minimized.
- The cutting equipment like torch or thermal lance will burn the foam and make impossible to access the cash.



Explosive tests video

Increases the reaction time

- The reaction time will significantly increase because of raising the time of the possible access to the cash to minimum of one hour, in the case in which the criminals succeed to access the cargo area.





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Implementation

- ❑ Prosegur works with **different suppliers** of the foam system for flooding the cargo, which commercialize the product under **different names** (PUDU, SIPE, DIPE, FS, PUR).
- ❑ At the **end of 2013** Prosegur had **installed 362 systems**, being scheduled for the installation **in 2014** another **systems in 282 armored vehicles**.





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Conclusions

- ☐ The equipment ensures an **effective protection** in **the event of a violent attack** against the armored unit.
- ☐ The **increase of the reaction time discourages the criminals** because of the possibility of being caught by the police.
- ☐ The **cash is not damaged**, being **completely recoverable** inside the facilities after the cleaning up of the cargo area.





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