



The basis of the **ARCTIC "FROZEN" FOAM QST** program with **Quick Stik Technology** are cartridges of a solid wetting agents meeting the strictest requirements for environmental friendliness and efficiency.

The wetting agents can be applied with both special nozzles and with any turbo-nozzles combined with **Quick Stik Mix** - proportioners.

ARCTIC "FROZEN" FOAM TS cartridges are made in versions for different purposes – extinguishing and cleaning. Cartridges can be used everywhere the wetting effect is required.

The extinguishing agent in the form of a solid cartridge has an excellent ability to decrease water surface tension – by more than 60%. Depending on manner of use this results in improved effectiveness of intervention. Water with low surface tension is able to better penetrate into material to the centre of fire and thus extinguish faster.

Increased water extinguishing efficiency is the biggest advantage of using a solid wetting agent - this decreases the consumption of water in fire fighting by at least 50%. The action time is shortened correspondingly.

This cuts the action time for people and equipment, etc. This all results in lower costs arising not only from the amount of the water used but also the engine and pump fuel used. The decrease of risk of injury arising from the shortened action time cannot be expressed in money. The considerably lower volume of water used minimizes subsequent damages caused by water.

Aqua-Eco application devices are available in common dimensions – 25 or 52 mm with couplings D25, C52 or other on request. A specific field of application is the use of wetting agents in fixed extinguishing systems or in fire-hydrant systems where much stress is put on the system's fire-extinguishing efficiency and water savings.

Extinguishing cartridges are produced in two versions. High foaming **TS TURBO**, containing foam and film-forming components (AFFF/AR) is used on fires which have to be extinguished with high intensity (especially for extinguishing Class A fires with possibility of flammable liquid leakage - e.g. cars, garages, warehouses, plastic materials, industrial buildings and stores, etc.).

The second one is eco-friendly fluorine free **TS ECO** for long intervention on Class A fires where high consumption of water is expected (e.g. forests, bushes, peat bogs, heaps, warehouses, stores, shops, flats, etc.).



Special type is solid wetting&cleaning agent **TS CLEAN** used as detergent for cleaning and degreasing surfaces (e.g. final cleaning of oil product stains on roads after accidents, washing fire-fighting equipment off soot, oils and other dirt after a fire, etc.).

By developing and producing the application technology that is represented by products from today's Aqua Eco QST program we have managed to create a completely new concept of fire control for fire fighters with no need for high investment.

## ARCTIC “FROZEN” FOAM QUICK STICK EXTINGUISHING WATER SAVING PROJECT

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#### ADVANTAGES OF THE ARCTIC “FROZEN” FOAM QST PROGRAMME

- Increased extinguishing efficiency** - A wetting/extinguishing agent has an ability to considerably decrease the surface tension of water, which gives the extinguishing mixture an improved extinguishing efficiency and great cooling effect.
- Saving of water** - With the increased extinguishing efficiency, a TS solid wetting/extinguishing agent cartridge will save at least 50% of water used.
- Safety** - With the high fire-extinguishing efficiency and faster action, the deployment of the Aqua Eco QST system will considerably improve the safety of operating fire fighters.
- Yield** - Depending on its type, one cartridge will last for at least 500 to 2500 litres of water.
- Ecology** - The extinguishing agent is non-toxic, bio-degradable and with no adverse effects for human health.
- Long shelf life** - The shelf life of the extinguishing agent is at least 5 years. The extinguishing agent is frost-resistant (can be stored and used at temperatures from -20 to +35 °C).
- Easy to use** - Using the ARCTIC “FROZEN” FOAM QST does not require any special equipment – the wetting agent cartridge is placed directly in a **QUICK STIK MIX** - proportioner. Any turbo-nozzle can be used in combination with the proportioner.
- Easy to handle** - When using a cartridge, there is no need to prepare and mix the extinguishing solution or handle and store full and then also empty containers as it is the case with liquid extinguishing agents.
- A variety of applications** - Solid wetting agents have a wide range of application – from fires of forests, cars and plastics to final cleaning of oil product spills to installation in fixed fire extinguishing systems.
- Saving of money** - The deployment of the ARCTIC “FROZEN” FOAM QST system results in significantly reduced damage – both direct damage caused by the fire and subsequent damage caused by water. This cuts the costs of the actual fire fighting as well as the amount of indemnity.

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#### ARCTIC “FROZEN” FOAM AGENT TYPES

Cartridges are provided in 3 types for different purposes: TS ECO, TURBO a CLEAN.

| SPECIFICATIONS   | TS ECO  | TS TURBO   | TS CLEAN                      |
|--|---|--|-------------------------------|
| Application  | Class A fires                                     | Class A fires with liquid leakage                  | final cleaning and decreasing |
| Characterization   | ecological wetting agent with low foaming ability | high foaming wetting agent with AFFF/AR components | detergent                     |
| Water surface tension decrease                             | more than 60%                                     | more than 60%                                      | more than 40%                 |
| Specific weight *  | 1,18 g/ml   | 1,15 g/ml  | 1,23 g/ml                     |
| Specific yield * (volume of water treated by 1 g of agent) | ca 4 l/g  | ca 4 l/g   | ca 3 l/g                      |
| Content of fluorosurfactants                               | no  | yes  | no                            |
| Biodegradability in 28 days                                | 94%   | 92%  | 93%                           |
| Store and usage temperature                                | -20°C to +35°C                                    | -20°C to +35°C                                     | -20°C to +35°C                |
| Lifetime   | 5 years   | 5 years  | 5 years                       |

For different types of nozzles or proportioners are available appropriate dimensions: TS, TS-03 and TS-04. Rough yield of 1 cartridge can be calculated by multiplication of specific weight, specific yield and volume of relevant cartridge (items marked \* ).

| DIMENSIONS | TS     | TS-03  | TS-04 |
|------------|--------|--------|-------|
| Diameter   | 50 mm  | 32 mm  | 32 mm |
| Length     | 260 mm | 180 mm | 90 mm |



*B-Foam bvba*

OFFICIAL ARCTIC FOAM DISTRIBUTOR

|         |        |        |       |
|---------|--------|--------|-------|
| Volume* | 510 ml | 145 ml | 72 ml |
|---------|--------|--------|-------|

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#### APPLICATION DEVICE

### **Quick Stick MIX** - proportioners:

**QUICKSTIKMIX01** is a proportioner with by-pass which allows refill of cartridge without necessity stop the water flow. QSM 01 is connected in between water jet hoses with compression couplings. Further, proportioning tube RM 02 can be connected directly on engine or hydrant.

|             | <b>QSM 01</b>   |
|-------------|---|
| Couplings   | DSP   |
| Weight      | 15 kg   |
| Flow rate   | depending on nozzle                                     |
| Range       | on nozzle   |
| Cartridge   | TS  |
| Application | hydrant<br>fire hoses<br>fixed<br>systems<br>(5-18 bar) |

