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Suppression chemical helps boost safety for firefighters

F-500 added to water reduces amount of scalding steam produced and rapidly knocks heat from fires.

BY NIGEL ARMSTRONG
THE GUARDIAN

By adding a product called F-500 to the water being sprayed on fires, the fire will be knocked down faster, produce less scalding steam and remove heat fast.

But it will lighten the wallet of any fire department by \$200 a jug, promoters say.

The fire suppression chemical is a product of Hazard Control Technologies Inc. in Georgia, U.S.A., and marketed in Canada by Mi-Cell. Mark Gotell of Georgetown is the representative of the company for the Maritimes. He is also the deputy chief of the Georgetown fire department.

He hosted a demonstration of the product recently at the P.E.I. fire training centre on the Sleepy Hollow Road.

"This product is making it safer for firefighters," said Gotell.

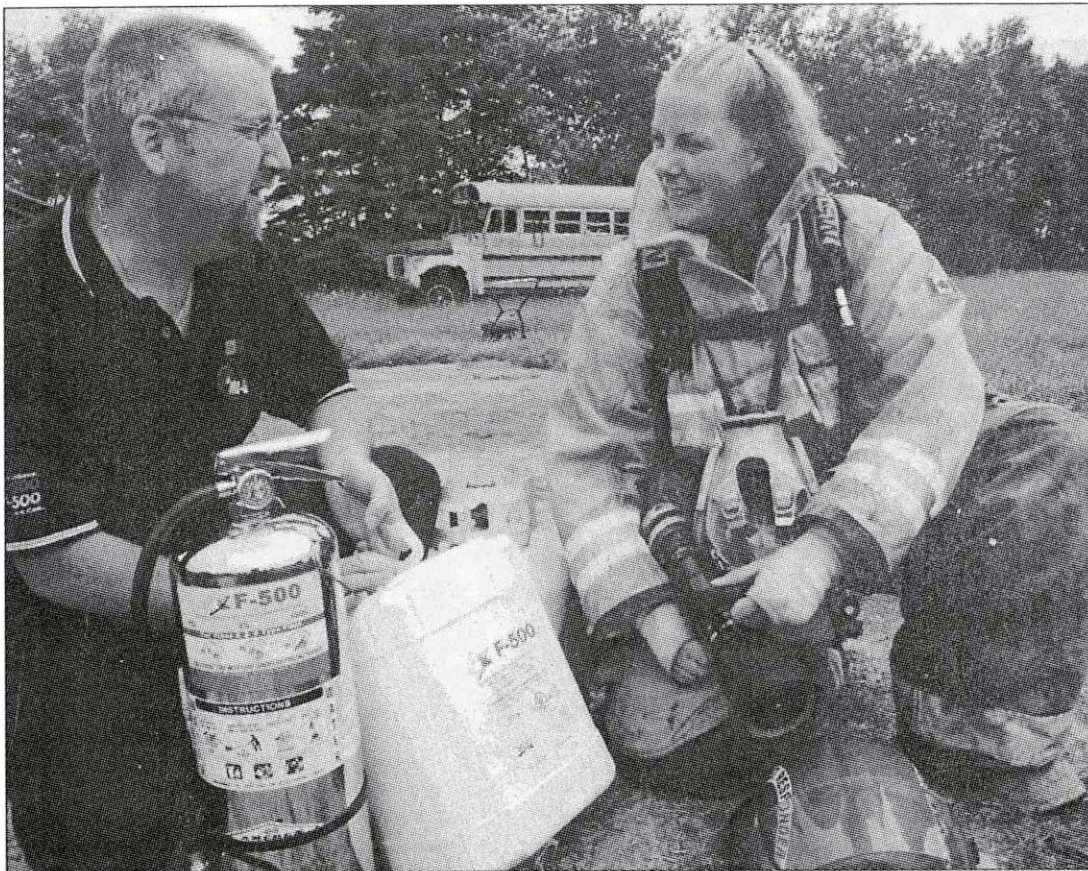
Fire departments have been adding chemicals to water for years, but mostly in the nature of foam.

As Gotell describes it, foam insulates fuels like gasoline from air. A firefighter walking through the foam can break that barrier and the gas could re-ignite.

The F-500 does far more than foam alone, said Gotell.

Plain water on a house or any other kind of fire creates problems for firefighters, he said.

The water turns to steam, often intense, thick steam that will scald firefighters. Plus the water droplets have a surface tension that prevents many of them from spreading out over



GUARDIAN PHOTO BY NIGEL ARMSTRONG

Mark Gotell of Georgetown speaks to firefighter Barbarann Cooke of the Kinkora fire department about the benefits of a water additive that claims huge benefits in firefighting. Called F-500, it pulls heat out of a fire scene and reduces searing steam that often burns firefighters inside burning buildings.

hot surfaces and sinking into porous surfaces, charred wood.

The F-500 product acts as a wetting agent to allow water to spread over surfaces on which it is being sprayed and penetrate surfaces.

It also has a chemical structure that transfers heat into the interior of every water droplet. At the molecule level, that heat turns to steam inside the water droplet then instantly turns back into water from the cooling effect of the exterior water molecules on the outer surface of the droplet.

The end result, says Gotell is a stunningly fast reduction in the heat of a fire with much less steam, compared to water or foam.

There is more, he said. The F-500 product acts at a molecule level to surround molecules or clumps of fuel, be they in the form of a gas or liquid. This encapsulation pre-

vents the molecule of fuel from joining the fire and makes F-500 ideal for spraying on leaking fuels, either at a fire or at a motor vehicle accident.

Firefighters have come to learn that four elements combine to create fire. It used to be thought that fuel, heat and oxygen were all that was involved, but now science has added a fourth critical factor called free radicals. All four factors must be present for fire to continue burning and spreading.

Gotell said F-500 absorbs the high energy contained in the free-radical molecules that swirl through a fire.

That reduces the sooty kind of smoke that often contains toxic substances, he said.

When the fire is out, the cooling effect of the F-500 agent allows firefighters to immediately enter rooms, whereas intense heat and steam of simple water sup-

pression often required them to wait long periods even after the flames were gone.

"We are hoping that insurance companies will offer better rates to home owners where the fire departments are using this," said Gotell.

All the benefits don't end when the fire is out. The product is not corrosive in any way, either to the firefighting equipment or to the structure on fire. Plus it is fully biodegradable.

Gotell hopes it will soon be routine to use F-500 on all fires as in some North American departments, but Gotell recognized that cost is a consideration.

He did note, however, that many Island departments carry foam agents. While they are slightly cheaper, much more of that kind of chemical is used per fire, he said.

More information can be obtained on the Internet at www.mi-cell.com.