

Cross Country Product

WHY ICL'S PHOS-CHEK 1X1 AR-AFFF LOW VISCOSITY FOAM IS AN IDEAL FIT FOR CANADA'S CLIMATE

Earlier this spring the Manitoba Office of Fire Commissioner selected Phos-Chek 1x1 AR-AFFF Low Viscosity foam concentrate for their Class B firefighting foam across the province. The product was selected based on numerous criteria including, fire performance, compatibility of the foam in the Manitoba climate, environmental safety, container availability, shelf life, and cost – concerns that many other fire commissioners have across the country.

Phos-Chek 1x1 AR-AFFF Low Viscosity (Alcohol-Resistant Aqueous Film Forming Foam) is a mixture of water, hydrocarbon surfactants, solvents, short chain (C6) fluorosurfactants, and fluoropolymers. The product is a one per cent concentrate proportioned solution for use on both hydrocarbon and polar-solvent fires. This new formulation demonstrates ICL Performance Products' commitment to superior firefighting performance and environmental responsibility by meeting the intent of the US EPA 2010/2015 PFOA Stewardship Program. Phos-Chek 1x1 AR-AFFF meets some of the most widely recognized and respected third party certifications including UL162 and EN1568.

The wide temperature swings in Canada present a unique challenge for foam concentrate storage and usage. The Phos-Chek 1x1 AR-AFFF Low Viscosity foam is designed to meet those needs with a low temperature usage rating of -18° C (0° F). In addition to the low temperature rating the foam concentrate is low viscosity (25 cp) and behaves as a Newtonian fluid having water like flow characteristics. The distinct advantage of this Newtonian like foam concentrate is a consistent proportioning performance across the entire temperature range from -18° C (0° F) to 50° C (122° F). These two important properties ensure that you will be able to deliver an accurately proportioned foam solution to your discharge device in virtually every situation.

Another key selection criterion for many of Canada's fire commissioners is environmental safety. There continues to be much confusion in the market about the environmental impact of fluorinated firefighting foams and more specifically fluorinated surfactants – the key ingredient in AFFF and AR-AFFF. The short-chain (C6) fluorosurfactants and fluoropolymers used in Phos-Chek 1x1 AR-AFFF are produced from the telomerization process and are classified as fluorotelomers. Fluorotelomers do not contain perfluorooctyl sulfonate (PFOS), a substance that is only produced via a process known as electrochemical fluorination (ECF). Some countries including Canada have banned the use of PFOS-based foams. It should be noted that fluorotelomer-based foams do not contain or break down into PFOS or any substances listed on the Stockholm Convention as



Persistent Organic Pollutants (POPs). In addition, neither the foam concentrates nor the chemicals used to make them are persistent, bioaccumulative, and toxic (PBT).

In 2006, the U.S. EPA and eight major fluorochemical manufacturers entered into a voluntary global stewardship program known as the EPA 2010/2015 PFOA Stewardship Program. The EPA's first goal was to get a 95 per cent reduction of PFOA and precursor chemicals that could break down into PFOA (perfluorooctanoic acid) by 2010. The long term goal was 100 per cent elimination of these chemicals by 2015. PFOA has historically been used to improve the flow characteristics of many coatings, paints, and other surface treatment chemicals. PFOA can potentially be produced by the breakdown of C8 and longer chain perfluorinated telomers. Simply put when you think of regulated perfluorinated molecules you must understand that it is the longer chain C8 and higher molecules that are the source of the regulated substances.

PhosChek 1x1 AR-AFFF is clearly the leader in the next generation C6 short-chain fluorinated Class B firefighting foam for use on both hydrocarbon (gasoline type) and polar solvent (water miscible fuels like alcohols). A one per cent proportioned foam offers significant advantages including smaller equipment for stationary systems such as storage tank, piping, and proportioning device. In an emergency response situation one per cent foam concentrate requires less foam to be staged improving efficiency of the firefighter and giving back precious time to fight the fire. ❖