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LIQUID-ICE® HPX MACHINING COOLANT AND LUBRICANT

LIQUID-ICE® HPX is an alternative to oil-based or semi-synthetic coolants. This Premium, fully water-soluble coolant has superb cooling properties and an extremely high grade of lubricity. LIQUID-ICE® HPX has been engineered to be environmentally responsible and safe to operators. It does not create mists, vapors or odors.

- Excellent Anti-Foaming Characteristics, even under 1000 PSI high pressure applications.
- Increased Cooling Capability resulting in excellent Tool Life.
- HPX is Clean and non-sticky eliminating the need of washing machined parts before painting, welding or heat treating.
- HPX contains added lubricity, which prevents build up on tools in soft metals such as 60 series aluminum, or Die Cast Aluminum.
- Easy to keep clean and free from tramp oil resulting in longer sump life.
- Excellent Corrosion Protection without the need of expensive tank side additives.
- Environmentally friendly, does not create mists in the air.
- Extremely Safe for Operators and Machinery, no solvents or dyes.
- Clear in appearance allowing full visibility of the machining process

Applications: All machining applications involving ferrous and non-ferrous metals.

Application Data: LIQUID-ICE® HPX should be flooding the surface of the cutting tool and material to be machined at all times.

Recommended

Dilution Rates: Concentrations for Ferrous or Non Ferrous metals (aluminum, brass, steel or stainless) ranging from 5% - 12% (19:1 – 7:1) each situation will vary depending upon the specific water-hardness, type of machining and specific application.

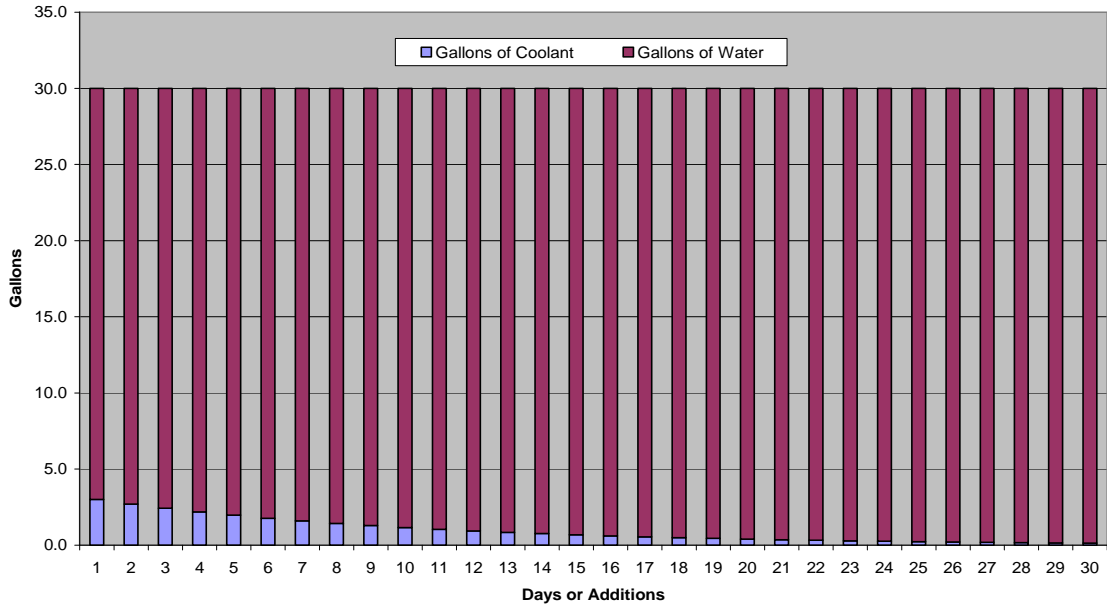
Percentage	Dilution Ratio	Refractometer
5%	19:1	1.7
6%	14:1	2.0
8%	11:1	2.7
10%	9:1	3.4
12%	7:1	4.0

It is recommended to initially charge the system at 8 – 10%, to establish a baseline performance.

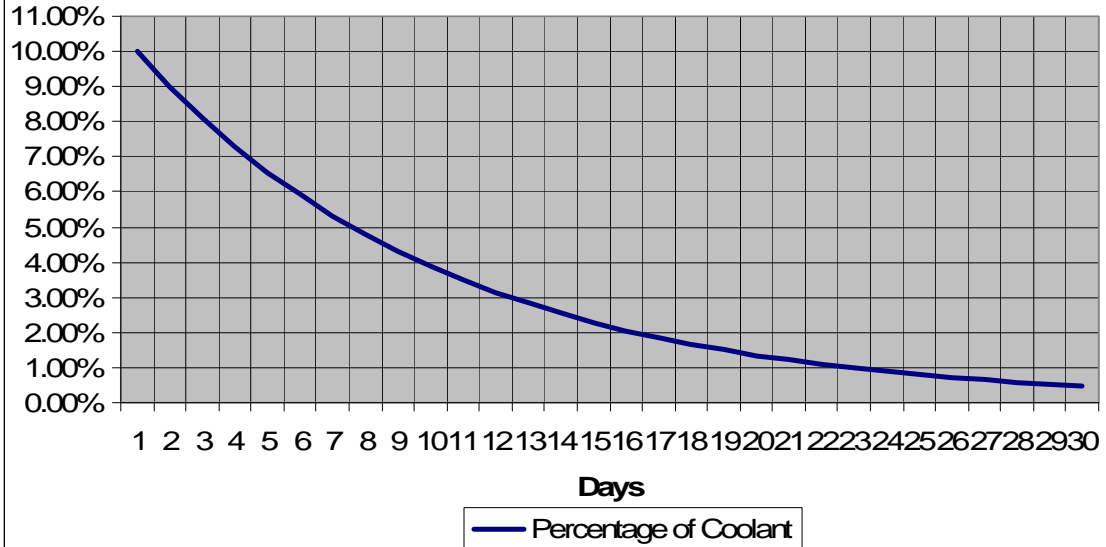


Environmental Data: LIQUID-ICE® HPX's ingredients are highly biodegradable according to EPA, DIN, ASTM, or standard methods, are harmless to the environment, and contain no hazardous or toxic materials.

Coolant Loss Model



Percentage of Coolant



ASSUMPTIONS:

SYSTEM CAPACITY 30 GALLONS; CHARGED WITH 10% COOLANT (9:1)
 DAILY LOSS OF SYSTEM VOLUME IS 10% ; OF WHICH 90% IS WATER
 DAILY COOLANT MAKE UP IS MADE USING WATER ONLY RESULTING
 IN LOSS OF CONCENTRATION AS SHOWN ABOVE