HYDROCARBON SOLVENT SOLUTIONS

by Nancy Eilerts, Ph.D.

Myths and Facts about Hydrocarbon Drycleaning

I've learned that the best way to understand the needs of dry cleaners is to watch, listen, and ask a lot of questions. I had a great opportunity last December to do all three of those things with Tom Tipps, Regional Manager for Bowe Textile Cleaning. Tom was doing some maintenance and installation of some hydrocarbon drycleaning machines. As he worked, he explained some of the issues facing drycleaners in getting maximum performance from their equipment.

We also spoke at length regarding some of the stories we had both heard about hydrocarbon drycleaning. From that discussion, we were able to develop what we considered to be a good list of hydrocarbon 'myths and facts' – a list that grows every day as a new rumor makes its way through the industry. I've summarized below what I believed to be some of the most widespread myths about hydrocarbon drycleaning.

Myth #1: Hydrocarbon doesn't clean.

Granted, perc is one of the best degreasers around, but hydrocarbons can also do their share of degreasing. Many industrial precision parts cleaning systems use hydrocarbon solvents for specialty cleaning applications. Thousands of drycleaners throughout North America are successfully cleaning garments, including leathers and beaded articles, with hydrocarbon today. With hydrocarbon solvent, you've got at your disposal a full line of detergents and spotting agents from several different manufacturers. Spotting can be simpler with hydrocarbon than with some other solvents, as many formulations of spotting agents developed for hydrocarbon do not require flushing prior to putting the garment in the machine. Remember, many of the solvents in standard spotters, such as amyl acetate and acetone, will depress the flash point of your solvent. Not flushing spotters containing solvent from the garment prior to cleaning can turn your solvent into a hazardous waste. Introducing spotting agents such as amines or acetic acid can introduce odor into your system, something you're trying to eliminate! Spotters that don't need flushing include pre-spotters made especially for that type of solvent and solvent detergents (either anionic or non-ionic). Always follow the recommended flushing practice for the spotters you use.

Myth #2: Hydrocarbon solvent smells.

A good quality hydrocarbon solvent should not have an odor. One of the biggest hurdles faced by cleaners transitioning from perc to hydrocarbon is machine maintenance. Odors will develop in hydrocarbon solvent in an improperly maintained machine. The water separator is the place in the machine where bacteria from the clothing accumulate and thrive on the oils extracted by the solvent and even on the hydrocarbon solvent itself. Follow carefully your machine manufacturer's recommended water separator maintenance schedule, and you should enjoy odor-free solvent usage for a long time.

Myth #3: Hydrocarbon solvent is gasoline.

This was not always a myth. In the early days of drycleaning, gasoline was a solvent of choice. Today's hydrocarbons are very different than those of almost a century ago. They are synthetically manufactured and the most popular brands have flash points of >140 °F (60 °C) and therefore do not have the risks associated with gasoline when used in the newer technology hydrocarbon machines. These hydrocarbon solvents also have their own unique chemical 'fingerprint,' and can easily be distinguished from gasoline by any chemical analysis laboratory.

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Myth #4: Hydrocarbon cleaning is expensive.

Most elements of hydrocarbon drycleaning are very economical. Being the most mature of the alternative solvents, competition between solvent and detergent suppliers keeps the cost of those products reasonable. There are no monopolies in hydrocarbon drycleaning. Hydrocarbon solvents break down naturally in the environment, so long-term liability for groundwater contamination may be less than with other solvent technologies.

Waste handlers are familiar with proper disposal techniques for spent solvent and cartridges, and the cost of disposal is usually quite reasonable. More machine manufacturers are entering the market with hydrocarbon equipment. The strong competition throughout the hydrocarbon supply chain means that you, as a cleaner, should receive the best market price.

Those are the biggest myths about hydrocarbon drycleaning I have heard and believe should be addressed. But what should we do now? How can we prevent these myths from growing, and where can we find good information about cleaning technology and good practices? Here are a few suggestions:

1. Talk to a dry cleaner using the technology in which you're interested. The best source for information about any innovation is probably a dry cleaner who uses it day in and day out. Attend your local or regional drycleaning meetings and conferences and talk to the other cleaners there. Find out first-hand not what they heard, but what they know and what they've done.
2. Ask questions. Challenge the equipment and supply vendors to help you with your questions and to provide you with the information you need to make sound decisions.

I hope my watching, listening, and asking questions helped you to understand some of the myths and facts concerning hydrocarbon drycleaning. Now it's your turn.

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