



There was a time when coolant recognition was relatively simple. No matter what color it was, if it was intended for heavy duty engine use, it was a conventional formulation. The only differences were in the type and amount of additives for prime metal-pitting protection. Some brands were a nitrite/silicate/borate blend while others might be a nitrite/silicate/phosphate/borate blend. And the formulations were compatible, so maintaining them simply meant maintaining the SCA level. As long as there weren't any mechanical or contamination issues, maintenance was relatively easy.

Today, there seems to be a coolant for every color under the rainbow. It's easy to become overwhelmed when trying to understand the multitude of variation among formulations, but it can actually be broken down quite simply.

Conventional coolant formulations are still on the market today—a couple of others have just been added to the mix. The Organic Acid Technology and Non-Organic Acid Technology (OAT/NOAT) Extended Life Coolants now available contain a Carboxylate Acid Inhibitor formulation while Hybrid Organic Acid Technology (HOAT) Extended Life Coolants contain the carboxylic acid inhibitors as well as the silicate, borate and/or phosphate inhibitors typically found in conventional coolant formulations.

Considerations for selecting and using the proper coolant formulation:

1. Choose a quality coolant that meets your OEM and ASTM specifications.
2. Do not mix the different formulations as this can cause dilution of the inhibitors to a point that neither formulation's inhibitor package can properly protect the metal. If mixing does occur, you must treat the coolant as a conventional and maintain the inhibitor level with Supplemental Coolant Additives (SCA).
3. Know what coolant formulation is in your bulk tank and what coolant formulation is in new equipment being delivered to your site.
4. Perform field testing at every PM that includes visual inspection of the fluid (checking for color change, petroleum contaminants severe levels of precipitate and abnormal odors), nitrite, molybdate, glycol and pH levels.
5. Perform laboratory testing quarterly in heavy duty engine applications and twice a year (before summer/before winter) in medium and light duty applications.