

## Application Bulletin

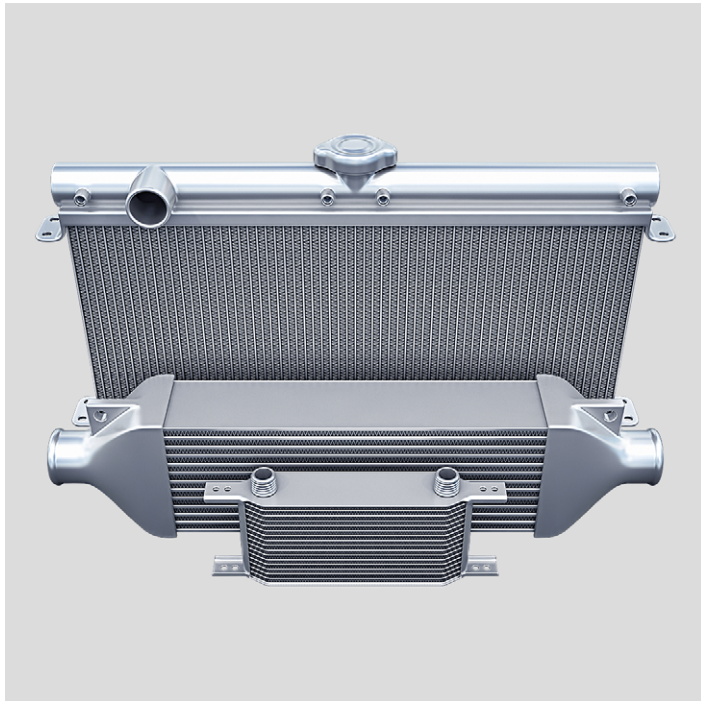
### Automotive Engine – Coolers

**The service environment for automotive coolers has become evermore taxing due to changes to fuel compositions and government regulations regarding emissions and coolant compositions. To meet the demands for longevity and corrosion resistance, coolers are now constructed from stainless steel. This has also necessitated a change to the braze filler metals used to join the various cooler components as the previously used copper filler metals are subject to severe corrosive attack from the new fuel and coolant compositions.**

#### The Metco Joining & Cladding Solution

The braze filler metal must be chosen to provide the needed joint strength, ductility, corrosion resistance and stainless steel compatibility. Metco Joining & Cladding's nickel-based filler metals meet all these requirements, as well as cooler manufacturing cost targets.

- Nickel-based filler metals with chromium additives offer exceptional corrosion resistance for best longevity
- Nickel-based filler metals are compatible with stainless steel and are cost effective to use
- Product availability as powder, paste or tape offers flexible options to apply the braze filler metals, for efficient assembly and brazing of the many cooler plates



#### Recommended Metco Joining & Cladding Products

#### More Information

Amdry 105	Boron-free, nichrome composition eliminates boron erosion and has flow characteristics that result in complete braze coverage of the cooler plates	DSM-0334
Amdry 770 (AMS 4777)	Mid-range melting temperature; chromium aids corrosion resistance and meets production cost and quality goals	DSM-0337
Amdry 100 (AMS 4782)	Higher braze temperature for hotter service conditions and high chromium content that provides good corrosion resistance to fuels and coolants	DSM-0241

Information is subject to change without prior notice.