



Case Study



GF Strip 4420 Outperforms Custom Blend on Cast Aluminum Parts

OPPORTUNITY:

The customer specializes in coating removal services, including stripping and recovering high value defective or rejected parts. Painted cast aluminum automotive wheels constitute a big business. Because finish standards are extremely high, the industry suffers from relatively low first-pass efficiency, resulting in a significant rework market for defective wheels.

The customer had previously worked with another chemical supplier to develop a custom paint stripper that would be safe on aluminum. Though this product worked well on some paints without attacking the aluminum, it oftentimes was insufficient on difficult coatings. Because of this, and due to a strong historical relationship with DuBois, the customer asked the DuBois research laboratory to research an alternative solution. They sent sample pieces of painted cast aluminum wheels to the laboratory for testing and evaluation. These parts were coated with a black primer, PVD (physical vapor deposition) aluminum, and a clear coat.

THE DUBOIS SOLUTION:

The DuBois research laboratory tested the parts in various paint strippers with a history of success on aluminum parts. To replicate the customer's process at a smaller scale, all experiments were done in immersion application, with all paint strippers used neat without dilution at a temperature of 150°F / 65.5°C. A side-by-side comparison was made with the competitor's custom blend; after 8 hours of processing, it was estimated that the solution would require at least 36 hours immersion to fully remove the coating.

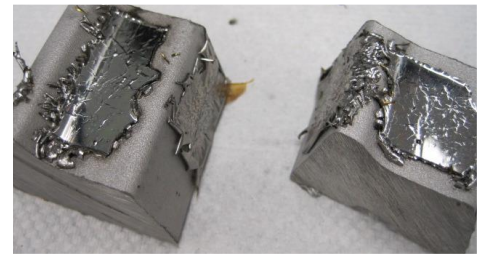
The stand-out product through these trials was **GF Strip 4420**, a multi-metal safe, alkaline stripper. GF Strip 4420 is one of DuBois' best-selling paint stripping products, with a history of success on aluminum and difficult coatings. After just 4 hours immersion, the coating was completely removed from the parts, and the aluminum substrate exhibited a soft and uniform etch with minimal discoloration. The customer also noted that the slight discoloration was consistent with the aluminum's condition prior to the original coating.

KEY BENEFITS:

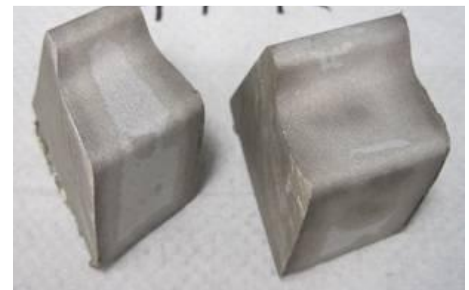
Implementing GF Strip 4420 into their process has drastically increased the customer's ability to recover parts efficiently and effectively. Being a non-methylene chloride-based solvent paint stripper containing 100% active high boiling, high flashpoint ingredients, GF Strip 4420 also significantly decreases the EHS concerns seen with many other paint stripping products. This success has allowed the customer to expand their aluminum recovery services, setting them up for continued success in the future.



Aluminum wheel pieces before coating removal.



Pieces after 8 hours in competitor's custom product.



Pieces after 4 hours in GF Strip 4420.

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