

Technical Bulletin

Additive PM

Hot Tank Additive for Improved Paint and Carbon Removal

Product Description:

Additive PM is a non flammable, non DG additive to boost the performance of alkaline hot tank cleaner degreaser solutions.

As a result of input from Castle clients using hot tank cleaning materials it became apparent that there was a market need for a more efficient, economical method for boosting hot tank cleaners with particular emphasis on removing paint coatings, this has become particularly apparent with the increased use of two pack and other highly resilient epoxy type coatings. As a side issue, it was hoped that improvements could be found at lower temperatures.

The following is a 'case study' of several applications of Castle Additive PM to deliver measured improvements in these systems:

The following case study describe various applications of Additive PM in conjunction with the Castle Chemicals LAB series degreaser materials 727, 450 and 495.

Using LAB 727 at 100g/litre combined with 10% Additive PM heavy duty two pack paint and all grease and oil were removed in 11/2 hours at 55°C in a hot agitated pilot plant. At 5% Additive PM with 100g/litre 727 in the same pilot plant; single pack paint, light carbon deposits and all grease and oil were removed in 11/2 hours at 50°C.

In a hot spray unit using 100g/litre LAB 495 with approximately 3% Additive NMP top coat single pack paint along with grease and oil were removed on a 10 minute cycle at 60°C. After one month operation the system was still working efficiently in the hot spray unit.

In a separate pilot pant trial using LAB 727 at 100g/litre with 10% Additive PM two sections of a diesel engine were cleaned. Once section was a cylinder head from a large engine (each cylinder had a separate head). After 11/2 hours immersion at 55°C the head unit was clean except for small quantities of carbon near the exhaust ports. Although still adhering to the cylinder head the material had softened considerably and was easily removed. The second section was part of the exhaust system, a section from adjacent to the cylinder head which had been insulated and subjected to very high temperatures

After 1/12 hours immersed at 55°C all deposits on the outside of the section had been cleaned off along with the black carbon deposits from the exterior of the section. The white calcined deposits on the inside of the section were still present. This was subsequently removed using a chemical wash.

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Additive PM is a high boiling range, stable, material with no obnoxious smell and with normal OH&S considerations is safe to handle.

While the life of the cleaning system depends on the work loading, these systems have been shown to remain active for the full cycle of a hot spray units without addition and with hot pulsating tanks it is anticipated those additions would be proportional to the need to top up as determined by routine alkalinity testing.

In conclusion the use of Additive PM allows more efficient cleaning in a shorter time of approximately 20-30°C lower temperatures.

Application:

The experiences shown in the above case studies suggest that application rates are dependent on many factors, which cleaning material Additive PM is being used with, temperature, nature of deposits and time requirements. To generalise, the range is between 3 and 10% by volume of tank solution.

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