



Rockit 606

Fe-based powders engineered to endure tough impact & abrasion wear

Abrasive wear is a dominant challenge in many mining & construction, agriculture, and general industry applications—such as rotary vane wheels, crusher rolls and rings, ground engagement tools (GET), harvest blades, shear bars, injection machine and extruder screws, crushing hammer, centrifugal fans, and more.

The current solution often involves using metal matrix carbides (MMCs), such as NiCrBSi/WC. However, these materials typically have low impact wear resistance, as high abrasive wear-resistant materials are inherently brittle.

Höganäs' **Rockit 606** was specifically engineered to meet these demanding wear challenges. It features a martensitic structure with finely dispersed vanadium carbides, delivering excellent wear properties, consistently high hardness, and good impact resistance. Thanks to the uniform distribution of precipitated carbides, this patented material can also be applied in multiple layers while maintaining its original hardness and uniform wear resistance throughout the entire deposit. **Rockit 606** is recommended for Laser Cladding (LC) and Plasma Transferred Arc (PTA) welding processes.

Compared to MMCs, **Rockit 606** offers slightly lower abrasive wear resistance, but with significantly less variation due to process conditions. More importantly, Rockit 606 delivers a major improvement in impact wear resistance. It also outperforms M2—another commonly used material in similar applications—in terms of abrasive wear resistance.

The unique combination of high impact wear resistance and strong abrasive wear performance sets **Rockit 606** apart from conventional solutions.

Main Product Features:

- » Excellent welding properties with smooth deposit
- » Homogenous hardness within deposition layers
- » Exceptional impact and abrasive wear properties

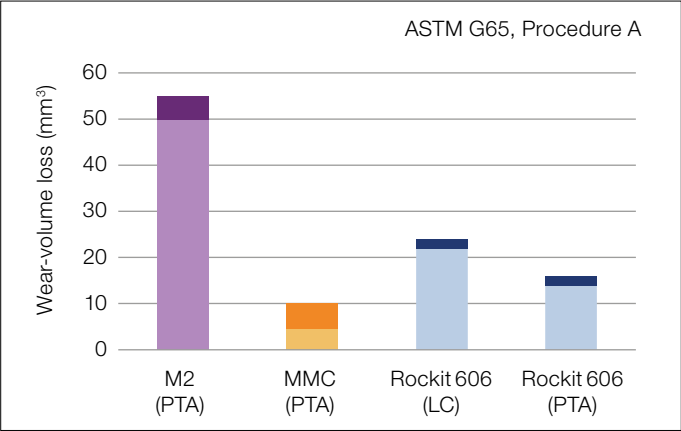
Rockit 606 Properties



Fine grain martensitic matrix with uniform distribution of hard phase precipitate (etched in Glyceregia)

Typical Chemical Properties (wt%) - Rockit 606					
Fe	C	Cr	V	Si	Others
Bal.	2	5	6	0.9	<4

Typical Physical Properties - Rockit 606		
Recommended Deposition Method	Particle Size (μm)	Coating Hardness (HRC)
LC	53-180	67
PTA	53-180	63



Results for M2 (PTA), MMC (PTA), and Rockit 606 (PTA) were generated from two-layer deposits on an EN 235 JR steel substrate using PTA welding, with a typical dilution of 10%.

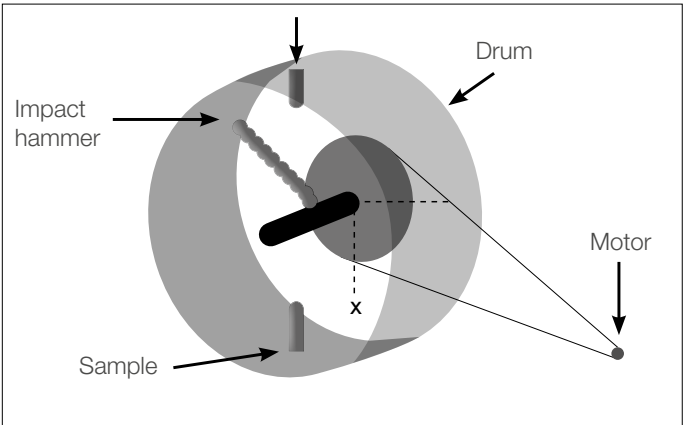
Results for Rockit 606 (LC) were obtained from two-layer deposits on an EN 235 JR steel substrate using Laser Cladding, with a typical dilution of 5%.

For more information on Höganäs' Rockit and other products, please contact your local sales representative or scan/click the QR code to fill out a contact form.



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Impact Wear Test



InnoTech Labs, Alberta Canada. The impact wear test is conducted using a mechanical device that holds a sample while a ball-bearing-tipped hammer, attached to a rotating chain, repeatedly strikes the specimen. Each impact delivers a force of 6 to 10 joules. The test runs for 24 minutes, with mass loss measured at 4-minute intervals.

Impact Wear Test Results	
	Mass loss (gram)
NiCrBSi + 60% WC/W ₂ C (PTA)	1.6
NiCrBSi + 60% Spherical WC/W ₂ C (PTA)	0.2
Rockit 606 (PTA)	0
Rockit 606 (LC)	below 0.02

MMC consists of WC powders in a NiCrSiB matrix, with WC levels of up to 60%. The wear loss values reflect the range typically achieved by PTA-welded MMC under various coating process conditions.