Worldwide,LLC

HORSEPOWER

Worldwide, LLC

Top NASCAR & NHRA race teams are now using **CerBond®** in their race cars.

After much testing, these top teams determined that not only does a **CerBond®** pour in ceramic metal treatment provide them with an immediate horsepower gain, but have also realized that the gain is consistent in every application and actually improves horsepower and torque gains more the longer the treatment is in the car.

Horsepower gains from the baseline run following the addition of **CerBond®** increased immediately and produced a 2.5 horsepower gain in a 10 second dynamometer pull. They also measured an immediate temperature drop which is not only beneficial to the equipment but is proof of friction reduction which equates to a horsepower and torque gain to the wheels.

The testing Engineers have not seen such a gain from simply adding a new substance so they recalibrated the dynamometer to confirm accuracy and repeated the test three times. They received the same increase in horsepower each time. The horsepower gains increased on subsequent dyno pulls so it became time to put some time on the equipment with the **CerBond®** treatment applied. Again, they saw a drop in operating temperatures throughout the dyno tests. Through 3 + hours of run time, the differential alone never exceeded 167 degrees vs. the normal operating temperature range of around 190-197.

Remember that race engines are built to much higher standards with tighter tolerances than the average street vehicle. This means you will see even more improvement in your street vehicle than those reflected in these tests.

For more information on the NASCAR & NHRA teams testing results, please see your **CerBond®** Dealer, Certified Installer or contact us at www.cerbond.com. We have team owners, drivers, and engineers that will be happy to verify all tests results. Many have included their testimonials on our web site in writing and/or via video.

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Comparative Horsepower Tests:

The improved lubricating properties of lubricants including the **CerBond®** were further demonstrated by comparing the horsepower generated by an automobile engine operating without **CerBond®** added to the lubricant versus the horsepower generated by the same automobile engine with **CerBond®** added to the engine lubricant. In each case, the horsepower generated by a 1998 Jeep Grand Cherokee Laredo ("Jeep") with a 4.0 liter, 6 cylinder engine was measured using a Dynajet Model 248C Dynamometer.

Five quarts of 10W30 petroleum-based motor oil were added to the Jeep. The horsepower of the Jeep was initially measured prior to addition of **CerBond®**. In the first test, the engine was accelerated from 0 to 5200 RPMs (Revolutions Per Minute). The absolute barometric pressure was recorded as 29.92 in. Hg (about 100 kPa) with a vapor pressure of 0.61 in. Hg (about 2 kPa). The intake air temperature was measured at 86° Fahrenheit (30° C) and the gear ratio was recorded as 49 RPM/MPH. A Society of Automotive Engineers ("SAE") correction factor of 1.01 was used to convert the measured horsepower to a corrected horsepower.

A second test was performed on the same automobile by adding 2 ounces of **CerBond®** to the 5 quarts of engine-lubricating oil, resulting in a **CerBond®** concentration of 0.58%. The automobile was again accelerated from 0 to 5200 RPM with measurements again taken at increasing 250 RPM intervals. During the second test, the absolute barometric pressure was recorded as 20.92 in. Hg (about 100kPa) with a vapor pressure of 0.61 in. Hg (about 2 kPa). The intake air temperature was measured at 88.8 ° F (31.6° C), and the gear ratio was recorded as 48 RPM/MPH. An SAE correction factor of 1.01 was used to convert the measured horsepower to a corrected horsepower.

The measured and corrected horsepower of the Jeep at various engine speeds, operating with lubricant alone versus with CerBond® added to the lubricant is detailed below in Table 1.

Table 1

Engine RPM	Measured Horsepower W/out CerBond® treatment	Corrected Horsepower W/out CerBond® treatment	Measured Horsepower With CerBond® treatment	Corrected Horsepower With CerBond® treatment
3250	109.0	**109.7**	136.8	**138.2**
3500	117.5	**118.3**	119.8	**120.9**
3750	124.5	**125.3**	124.6	**125.9**
4000	129.7	**130.6**	130.0	**131.3**
4250	133.9	**134.8**	138.3	**139.6**
4500	138.5	**139.5**	142.7	**144.2**
4750	139.0	**139.9**	139.9	**141.2**
5000	133.4	**134.3**	135.2	**136.6**
Avg.	125.4	**126.3**	133.4	**134.7**
Max.	139.0	**139.9**	142.7	**144.2**

In comparing the data in Table 1, it can be seen that the **corrected horsepower increased by an average of 8.4** horsepower when **CerBond®** was added to the engine lubricant compared with the corresponding tests performed without the additive. In addition, the maximum horsepower achieved in the tests using **CerBond®** exceeded the maximum horsepower in the tests without the metal treatment by 4.3 horsepower. The test measurements of increased horsepower resulting from use of **CerBond®** supports the conclusion that use of **CerBond®** provides better lubrication of the engine parts.