

For wear resistant parts

# EXEO-SP

NACHI developed the EXEO series alloys in company-wide combined and connected engineering system by first analyzing and determining necessary characteristics and then applying Nachi original alloy design and special melting technologies.

EXEO-SP shows superior wear resistance, so it is the best suitable for parts where it is desirable to suppress degradation of surface smoothness caused by friction.

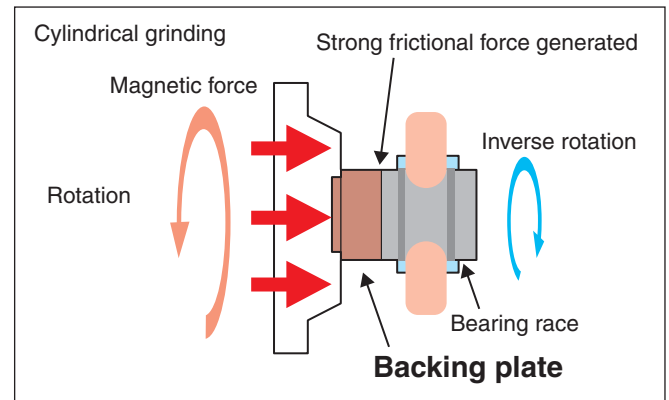
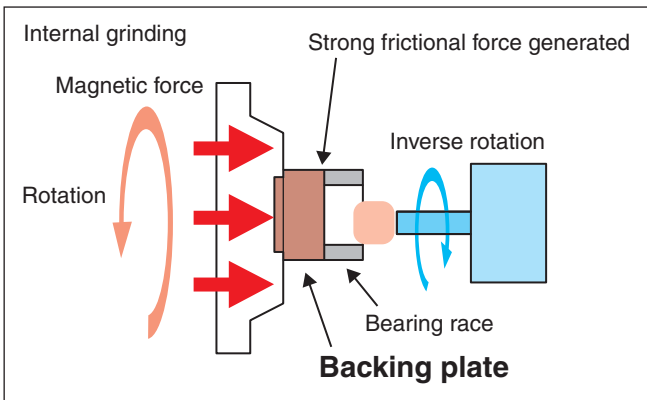
- Alloy composition is accurately controlled by using special melting technology.
- Nachi original technologies make it with well balanced distribution of carbides and matrix alloy elements.
- It is much better than cemented carbides for wear resistant parts because of its good workability and cost performance.

## Applications

EXEO-SP is used as backing plate of cylindrical grinding machine and contributes to long-life of the part.

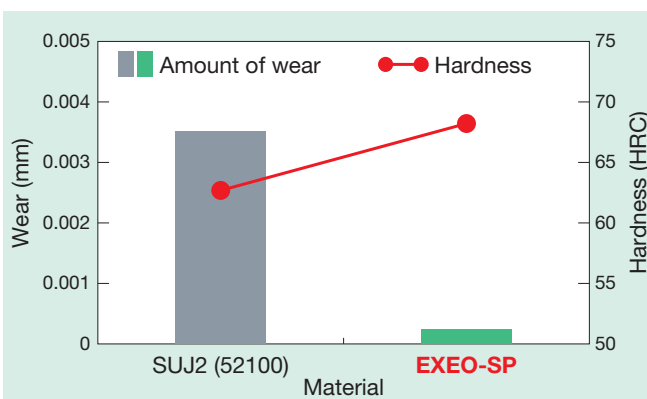
Applications are;

Bearing Inner & Outer, Bush, Collar, Piston, Torque Converter, etc.

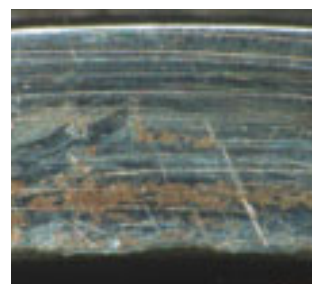


## Properties

### Comparison as wear resistant parts



### Damage on wear surface



SUJ2 (52100) wear surface



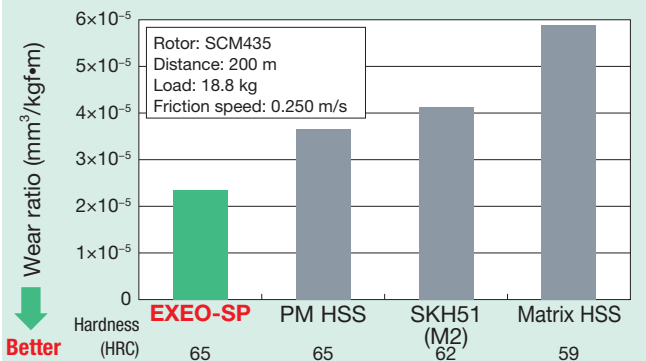
EXEO-SP wear surface

EXEO-SP has 15x the wear resistance compared to SUJ2 (52100)

## Properties

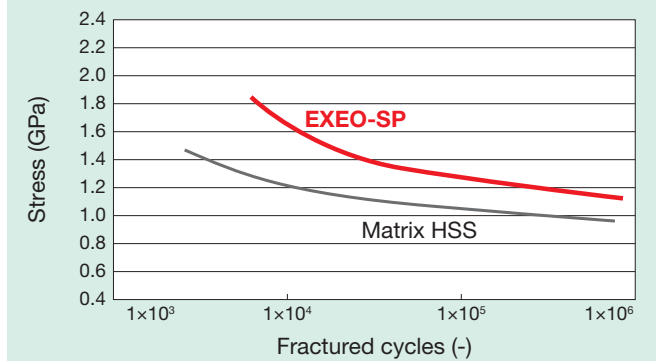
### Mechanical properties

#### Wear test by Ogoshi method



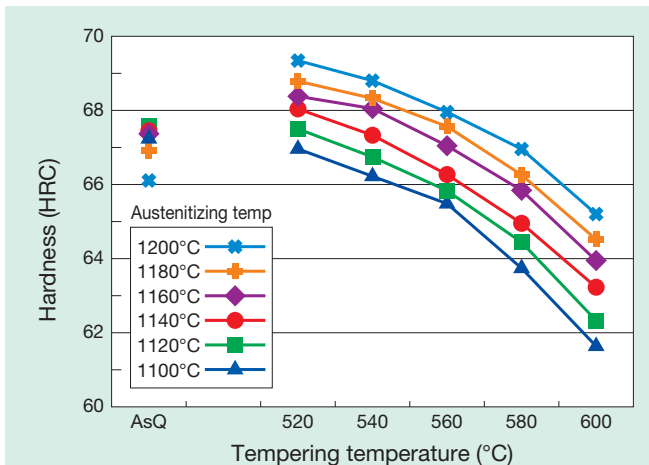
EXEO-SP has better wear resistance compared to PM HSS even under low speed and high load conditions.

#### Low frequency fatigue strength test



EXEO-SP has few non-metallic inclusions and superior fatigue strength.

### Hardness chart



EXEO-SP can be hardened to over 68 HRC at comparatively average quenching temperatures (in a vacuum furnace at about 1180°C). This makes it very effective for applications where wear resistance is required.

### Production range

- Available either finished or semi-finished.
- Contact us for production specifications, delivery times, and minimum orders.

Shape	Range of dimensions (mm)
Forged round bar	φ40 ~ 200
Rolled round bar	φ13 ~ 100
Forged flat bar	Contact us for details ( 30 - 200)
Rolled flat bar	Contact us for details ( t 3 - 48)
Ground rod	( φ2 ~ 13 ) × 2000L
Drawn coil	φ1.3 ~ 12

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- Please note that the characteristics and values provided here are typical examples which may differ from the characteristics of the actual product.

### NACHI-FUJIKOSHI CORP.

#### Tokyo Head Office

Shiodome Sumitomo Bldg. 17F 1-9-2 Higashi-shinbashi, Minato-ku, Tokyo 105-0021, JAPAN Tel: +81-(0)3-5568-5111 Fax: +81-(0)3-5568-5206  
URL: <http://www.nachi-fujikoshi.co.jp> E-mail: [webmaster@nachi-fujikoshi.co.jp](mailto:webmaster@nachi-fujikoshi.co.jp)

#### Toyama Head Office

1-1-1 Fujikoshi-Honmachi, Toyama 930-8511, JAPAN Tel: +81-(0)76-423-5111 Fax: +81-(0)76-493-5211

#### Higashi-Toyama Plant

3-1-1 Yoneda-machi, Toyama 931-8511, JAPAN Tel: +81-(0)76-438-4411 Fax: +81-(0)76-438-6313

#### Eastern Japan Main Branch

Shiodome Sumitomo Bldg. 17F 1-9-2 Higashi-shinbashi, Minato-ku, Tokyo 105-0021, JAPAN Tel: +81-(0)3-5568-5242 Fax: +81-(0)3-5568-5292

### NACHI AMERICA INC.

17500 Twenty-Three Mile Road, Macomb, Michigan, 48044, U.S.A. Tel: +1-586-226-5151 Fax: +1-888-383-8665 URL: <http://www.nachiamerica.com/>

### NACHI EUROPE GmbH

Bischofstrasse 99, 47809, Krefeld, GERMANY Tel: +49-(0)2151-65046-0 Fax: +49-(0)2151-65046-90 URL: <http://www.nachi.de/>

### 那智不二越(上海)贸易有限公司 NACHI (SHANGHAI) CO.,LTD.

Yitong Industry Zone 258, Fengmao Rd. Malu Town, Jiading, Shanghai 201801, CHINA Tel: +86-(0)21-6915-2200 Fax: +86-(0)21-6915-5427

### NACHI-FUJIKOSHI CORP. (INDIA)

A/9A, Sector-16, Noida-201301, Distt. Gautam Budh Nagar, U.P. INDIA Tel: +91-120-4272257 Fax: +91-120-4272256