Guard Shield CS8 X

PRODUCT DESCRIPTION

This is a product series developed to provide good corrosion and stone chip resistance, mechanical and chemical properties.

It has been proven consistency in quality and application in coating line, supported by technical expertise.

Application areas

These product series are designed to meet OEMs requirements. Please contact the sales or technical person from Jotun for details.

Primary application areas:
Standard Automotive Suspension Coil Springs
Standard Automotive Stabilizer bars

POWDER PROPERTIES

Storage

Keep in a dry cool area. Maximum temperature 25 °C. Maximum relative humidity 60 %. Shelf life should not exceed 12 months, at the above mentioned conditions.

APPLICATION

Pretreatment

The overall quality of the coating system is largely dependent on the type and quality of the pretreatment. The surface must be free of oil, grease, rust and residues of blasting.

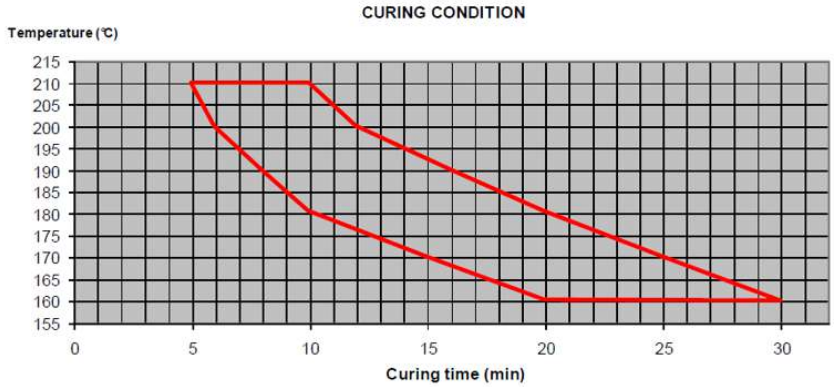
At higher demands, we recommend suitable mechanical or/and chemical surface treatment (e.g. blasting, phosphatizing). Detailed advice should be sought from the pre-treatment supplier.

Powder application

Curing schedule	Object temperature	Time
	180 °C	10 minutes

Recommended film thickness (µm): Typical 50-90, maximum 250
Rework overcoat film thickness (µm): Maximum 250, but not recommended without testing product properties.

Curing



Detailed curing window can be prepared upon technical approvals, considering all technology and technical parameters.

Equipment

Suitable for manual or automatic Corona or Tribo charging equipment. Recommended charging voltage is 40-90 kV.

APPEARANCE

Colour	Black or upon customer's request	
Gloss	EN ISO 2813 (60°)	75-95
Finish	Smooth	

If the significant surface is too small or unsuitable for the gloss to be measured with the glossmeter, the gloss should be compared visually with the reference sample (from the same viewing angle).

PERFORMANCE

All tests have been performed on metal coil spring or panels to paint specifications.
Powder coating was applied on blasted coil springs with zinc phosphating pretreatment.
Film thickness (µm): 60-65

Property	Standard	Result
Adhesion	ISO 2409	Cross-cut rating Gt0 (100 % adhesion)
Pencil hardness test	ISO 15184	>H1
Cupping test	ISO 1520	≥ 5 mm
Flexibility, cylindrical mandrel	ISO 1519	≤ 6 mm
Impact resistance	ASTM D2794 (5/8 '' ball)	> 60 inch-pounds without film cracking
Chipping resistance	ISO 20567-1, Method B, -30 °C	Minimum Rating 1
Thermal cycle	Aging 240 h at 90 °C then rest sample for 1 h at room temp. then perform aging 24 h at -40 °C (wait 1 h before evaluation at room temp.)	No appearance change
Water immersion	Immersion sample 24 h in 60 °C DI-water (dry sample and wait 2 h before adhesion testing at room temp.)	Minimum Rating 1

Humidity exposure	ISO 6270-2, 240 h	No blistering, no corrosion, no adhesion loss
Salt spray test	ASTM B117, 1000 h	Maximum 3 mm creep from scribed
Cyclic corrosion test	10 cycles 1 cycle = 24 h (ISO 9227 NSS) + 96 h (ISO 6270-2 constant humidity) +48 h (at room temp.); corrosion creep evaluation per ISO 4628-8	Maximum 2 mm creep from scribed; no blistering, no corrosion
Chemical resistance (Immerse ca. 2/3 of test piece in chemical solution)	Engine oil, 24 h at 100±2 °C	No blistering (evaluate after cooling at room temperature)
Chemical resistance (Immerse ca. 2/3 of test piece in chemical solution)	Fuel (unleaded premium gasoline and diesel), 7 h at 20±5 °C	No blistering
Chemical resistance (Immerse ca. 2/3 of test piece in chemical solution)	Coolant (50% ethylene glycol, 50% DI-water), 1 h at 70±2 °C	No blistering (evaluate samples after rinsing and dry)
Chemical resistance (Immerse ca. 2/3 of test piece in chemical solution)	Alkali (0.1N NaOH), 7 h at 20±5 °C	No blistering (evaluate samples after rinsing and dry)
Chemical resistance (Immerse ca. 2/3 of test piece in chemical solution)	Acid (0.1N H2SO4), 7 h at 20±5 °C	No blistering (evaluate samples after rinsing and dry)

Remark:
The results shown are based on mechanical and chemical tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for guidance only.
Actual product performance will depend upon the circumstances under which the product is used.

Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.