



## **NovaGuard™ 890**

- NovaGuard 890 has **no limitation** to the amount of **(bio)ethanol present gasoline** blends, providing **maximum storage flexibility**.
- No hot cure required when **gasoline blends with ethanol** are stored, **maximum application flexibility**.
- NovaGuard 890 has a **wide chemical resistance** to crude oil up to 90°C, unleaded gasolines and biofuels providing **maximum storage flexibility**.
- NovaGuard 890 is a **one-coat system directly to steel**, no primer required, **reducing down-time**.
- NovaGuard 890 dries down to 10°C creating **maximum application window flexibility**.
- **Good filling properties** making it an excellent choice for refurbishment of pitted tanks.
- NovaGuard 890 can be reinforced by chopped fiber or glass laminates, which makes it **full package coating for tank maintenance**.
- Availability in light colour makes product **easy to apply** in reduced visibility areas of tank.
- The smooth and glossy appearance makes NovaGuard 890 **easy to clean**.
- NovaGuard 890 is solvent free, **improving working safety**.

**FULLY COMPATIBLE  
WITH BIOFUEL STORAGE**

**SOLVENT FREE  
PHENOLIC EPOXY**

**NO HOT CURE REQUIRED  
FOR GASOLINE BLENDS  
CONTAINING (BIO)ETHANOL**



**PPG Protective &  
Marine Coatings**

# NovaGuard™ 890

In the 1990's lead was slowly banned in gasoline and regulations called for oxygenates. Most refiners started using MTBE, because it could be blended easily at the refinery. MTBE was originally added to gasoline to replace lead and meet lower aromatic hydrocarbon specifications. It also reduces carbon monoxide emissions from vehicle exhausts. However, although there is no proven health risk, if it is accidentally spilt or leaks into the ground it can taint groundwater used for drinking supplies. Therefore many countries decided to ban MTBE and the only reasonable oxygenate left to use is ethanol. Depending on the local regulation there are now gasoline's that vary from 5% ethanol (E5) up to 95% ethanol (E95).

Biodiesel and (bio)ethanol are both being captured as biofuel. Biofuel is considered an important mean of reducing greenhouse gas emissions and increasing energy security by providing a viable alternative to fossil fuels. The most common use for biofuels is in automotive transport (for example E10 fuel). Biofuel can be produced from any carbon source that can be replenished rapidly e.g. plants. Many different plants and plant-derived materials are used for biofuel manufacturing. Biodiesel is the name of a clean burning alternative fuel, produced from domestic, renewable resources. Biodiesel contains no petroleum, but it can be blended at any level with petroleum diesel to create a biodiesel blend. Biodiesel is simple to use, biodegradable, non-toxic, and essentially free of sulphur and aromatics. Biodiesel is produced from any fat or oil such as soybean oil, rape seed oil and palm oil, through a refinery process called transesterification.

Typical grades are biodiesel B5, which is a blend of 5% fatty acid methyl ester (FAME) and conventional diesel. Also higher grades up to biodiesel B20 (20%) already exist. NovaGuard 890 is a **solvent free phenolic epoxy** tank lining that meets the latest chemical resistance requirements of the petrochemical industry, such as ethanol blends of gasoline and biodiesel grades. NovaGuard 890 is designed for application by standard airless spray equipment and is ideally suited for the lining of new tanks and major refurbishment of old tanks, including tank bottom repair with reinforced linings.

## Typical specification

- NovaGuard 890, 400 microns

## Chemical resistance

An extended chemical resistance list of NovaGuard 890 can be found in TankSelect.

## Typical Chemical resistance chart of NovaGuard 890

Chemical	Resistance	Maximum temperature (in °C)	Note*
Biodiesel B5	+		
Biodiesel B20	+		
Crude naphtha	+		
Crude oil	+	90	2
Gasoline E5	+		
Gasoline E10	+		
Gasoline E15	+		
Gasoline E20	+		
Gasoline E85	+		
Heavy fuel oil	+	90	2
Jet fuel	+		
Unleaded gasoline	+		



Excellent solvent resistance



Excellent corrosion protection



Resistant to chemical immersion



Minimal maintenance down-time



Solvent-free technology

\*NOTE These products may cause some discoloration of the coating. These products are variable in composition. Consequently, depending on source, the effects on the coating can also differ. Subsequent cleaning of the tanks may be difficult so that contamination of the subsequent products may occur.

Please check our website for the latest version of the product datasheets: [www.sigmacoatings.com/protective](http://www.sigmacoatings.com/protective)



## PPG Protective & Marine Coatings

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