

# EMS FORCE® General Purpose Gasket Maker GM-10

## ☆ General information

EMS FORCE® anaerobic adhesive and sealants are advanced materials with single component and solvent free feature. The products are specifically formulated for sealing, retaining, locking and bonding of metal or metal plated assemblies.

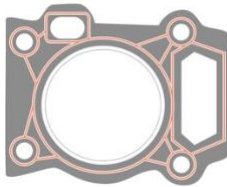
Anaerobic adhesives are stable when in contact with oxygen in air. As the product is placed between two mating metallic surfaces, where oxygen contact is vanished, polymerization starts and forms strong, vibration and pressure proof polymer layer.

## 📄 Product description

EMS FORCE® GM-10 is pink coloured, high-temperature resistant, fast curing liquid gasket maker used in all metal parts. Seals perfectly at temperatures up to 200°C. Can be applied in every position at high temperatures. Fills surface imperfections, reducing machining costs.

Typical application: Fuel and water pumps, bearing boxes, engine thermostats, air compressors, pumps in various combinations, fuel tanks, etc. Can be used on other gaskets. Flexible and non-dripping. Vibration-resistant.

Main constituent	:	Methacrylate ester
Appearance (uncured)	:	Paste
Colour	:	Pink
Viscosity	:	High
Strength	:	Medium



## 📏 Physical properties of uncured adhesive

Specific gravity Conditions: 22°C	:	1.1
Flash point Method: ASTM D56-05	:	>93°C
Temperature range	:	-50°C to 200°C
Corrosivity	:	Non-corrosive
Gap filling	:	up to 0.4mm
Viscosity Conditions: 22°C Method: ISO 2555	:	100000-150000 cPs (@2.5 rpm)

Apparatus: Brookfield RVT,  
spindle 6

## 🔒 Typical curing performance of adhesive

### ○ Curing time at room conditions

Various type of curing time of adhesive on several substrates are given as follows. Note that results can differ due to distance of bond gap and temperature.

Specimens	:	M10x25 bolt and proper nut
Conditions	:	22°C

### Handling time

Material of specimen	Duration (Highly depends on surface gap)
Brass	2 to 3 mins
Steel	8 to 10 mins
Stainless steel	10 to 12 mins
Zinc plated steel	7 to 8 mins
Aluminium	20 to 35 mins

Average functional curing time: 4 to 6 hours

Average full curing time: 8 to 12 hours

## 🔧 Typical cured performance of adhesive

Performance of cured anaerobic adhesive is examined and resultant torque values are given below.

Test method	:	ISO 10123
Conditions	:	22°C
Specimens	:	Different type of pins and collars

### 24 hours curing

Type of specimen	Shear strength (N/mm <sup>2</sup> )
Steel	9

## ☰ Directions for use

- Clean surfaces before assembly. If possible use sandpaper before cleaning.
- If curing speed is low due to inactive metal surface or high surface gap, AC-64 Anaerobic Activator should be applied to surfaces before adhesive.
- Apply the adhesive to both surfaces.
- Roller or brush can be used to apply adhesive.
- Assembly parts and hold on for 24 hours at 22-24°C to ensure full curing of jointing compound.
- For disassembly, use hand tools to remove mating parts. When it is hard to disassemble at room temperature, apply local heat until reaching 250°C and

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disassemble while hot. Then, remove any residual cured adhesive mechanically and clean parts with a proper solvent, acetone.



## Packaging

Bottles: 50mL(tube), 50ml(accordion tube) and 250mL(tube)  
Bulk: 1kg and 10kg



## Storage and shelf life

Keep product in its original container at 22°C and avoid to contact with direct sunlight. Storage below 5°C and above 30°C can negatively affect product properties.

Material removed from its original container can be contaminated during usage which affects both adhesive performance and storage life. Therefore, do not return contaminated product to the original container.

Metsan cannot take any responsibility for product which has been contaminated or stored under conditions different than previously indicated.

Shelf life: 24 months at 22°C



## Health and safety

The product contains methacrylate esters.

For further information, please consult Safety Data Sheet (SDS) before use.

## Disclaimer

The data contained herein are furnished for informational purposes only and are believed to be reliable. However, Metsan does not assume responsibility for any results obtained by persons over whose methods Metsan has no control. It is the user's responsibility to determine the suitability of Metsan products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Metsan products. Metsan specifically disclaims all warranties express or implied, including warranties of saleability and suitability for a particular purpose arising from sale or use of Metsan products. Metsan further disclaims any liability for consequential or incremental damages of any kind including lost profits.

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