

Dow Corning[®] M Gear Oil Additive

FEATURES & BENEFITS

- High load-carrying capacity at slow speeds
- Compatible with mineral oil gear oils
- Gears – Addition to oil-lubricated gears may provide:
 - Smoother surface finish of new or reworked gear sets following critical run-in
 - Healing of tooth surface damage with resultant reduction of pitting and wear debris (Figures 1 and 2)
 - Lower operating temperature, noise level and power usage due to reduction of friction
 - Longer service life of gear sets
- Bearings – Addition to oil-lubricated plain bearings may help:
 - Minimize wear at slow speeds and extreme pressures, especially during start-ups and under shock loading and vibration
- Machine Tools – Addition to the oil reservoir may:
 - Minimize stick-slip
 - Promote smooth action
- Metalworking – Addition to metalworking fluids and cutting oils may:
 - Increase tool life by lowering friction and heat and metal pick-up on work-contact areas
 - Reduce force required and improve the cutting action
 - Produce better surface finish

COMPOSITION

- Dispersion of molybdenum disulfide in mineral oil

Extreme pressure lubrication additive for petroleum oils

APPLICATIONS

Dow Corning[®] M Gear Oil Additive is primarily designed as an extreme pressure lubrication additive for petroleum oils. Typical applications include:

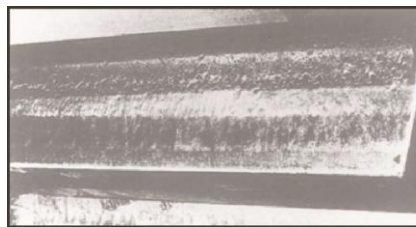
- Gears – Gears at slow speeds and extreme pressures.
- Bearings – Oil-lubricated plane bearings.
- Machine tools – Added to oil reservoir for machine ways, slides, screws, servo mechanisms, transmissions and power-feed systems. (For non-oil-lubricated components, use *Dow Corning*[®] G-n Metal Assembly Paste or Spray.)
- Metalworking – Useful in such operations as broaching, gear hobbing, drilling, tapping, cutting, stamping, punching, drawing, thread rolling and cold heading.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test*	Property	Unit	Result
	Physical Form		Liquid
	Specific Gravity at 25°C (77°F)		0.90
ASTM D 92	Flash Point, open cup	°C (°F)	223 (443)
ASTM D 88	Viscosity at 38°C (100°F)	mm ² /s	59
ASTM D 88	Viscosity at 99°C (210°F)	mm ² /s	7
ASTM D 97	Pour Point	°C (°F)	-29 (-20)
ASTM D 972	Evaporation after 22 hours at 99°C (210°F)	%	0

*ASTM: American Society for Testing and Materials.



Dow Corning M Gear Oil Additive reduces pitting on steel rolling mill gear.

Figure 1. Tooth flank of large steel rolling mill gear shows conspicuous seizure marks and heavy pitting before the addition of Dow Corning M Gear Oil Additive.

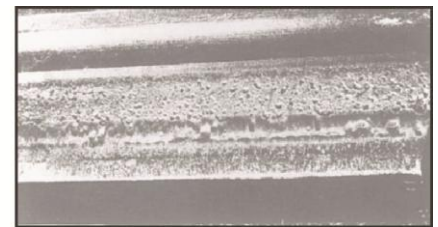


Figure 2. Same gear tooth flank, 16 months after addition of 10 percent by volume Dow Corning M Gear Oil Additive, shows the surface has become noticeably smoother.

DESCRIPTION

Dow Corning M Gear Oil Additive is a stable dispersion of molybdenum disulfide, in a premium-grade mineral oil. It is compatible with most gear oils and has little effect on their viscosity or oxidation stability.

HOW TO USE

Application Method

Dow Corning M Gear Oil Additive may be easily dispersed in most petroleum oils with little or no mixing. Its addition to gear oils containing phosphorous, sulfur and chlorine EP agents can result in significant improvement in the load-carrying capacity of the oil. Addition to oils containing lead naphthenate, however, will not show this effect to the same degree.

The solid lubricant particles in *Dow Corning* M Gear Oil Additive have an average size of 0.5 micron.

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The solid lubricant particles in *Dow Corning* M Gear Oil Additive have an average size of 0.5 micron.

These solids will easily pass through most conventional oil filters that normally retain particles larger than 10 microns.

Dow Corning M Gear Oil Additive is designed for use with oils in spray, mist or wick-type lubrication systems, as well as in oil reservoirs supplying splash, flood or drip-feed lubrication.

Recommended Concentrations

The optimum concentrations of *Dow Corning* M Gear Oil Additive as an additive to petroleum-based

lubricants varies in different applications. The following guidelines are suggested:

Gears – 5 to 10 percent by volume, depending on loads, speeds and condition of equipment. For best running-in results, *Dow Corning* M Gear Oil Additive and *Dow Corning* G-n Metal Assembly Spray or *Dow Corning* G-n Metal Assembly Paste should be applied initially on the gear teeth before start-up.

Machine Tools – 3 to 10 percent by volume, depending on condition of equipment and loads on table ways.

Cutting Fluids – 3 to 10 percent by volume, depending on material being machined and its tendency to weld to cutting tools. In severe applications, such as heading, tapping or hobbing, *Dow Corning* M Gear Oil Additive may be used as supplied or only slightly diluted with oil.

HANDLING

PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOW CORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored below 32°C (90°F), *Dow Corning* M Gear Oil Additive has a shelf life of 60 months from date of manufacture.

PACKAGING INFORMATION

This product is available in different standard container sizes. Detailed container size information should be obtained from your nearest *Dow Corning* sales office or *Dow Corning* distributor.

LIMITATIONS

Dow Corning M Gear Oil Additive is not recommended for addition to nonflammable or fire-resistant hydraulic fluids, or other synthetic fluids such as polyglycols, diesters or silicones.

Dow Corning M Gear Oil Additive should not be used in components that depend on friction for successful operation, such as friction clutches and certain gear reducers that incorporate friction-activated backstops to prevent gravity reversal in the event of power failure.

Experience has shown that excessive water contamination of oils containing *Dow Corning* M Gear Oil Additive can be detrimental to the dispersion and cause settling of the solid lubricant.

Dow Corning M Gear Oil Additive is not intended for addition to watersoluble cutting oils, although such applications have sometimes been successful.

This material is neither tested nor represented as suitable for medical or pharmaceutical uses.

SHIPPING LIMITATIONS

None.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, *Dow Corning* has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

**LIMITED WARRANTY
INFORMATION – PLEASE
READ CAREFULLY**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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