



## Mobilgrease HTR, HTM, HTS and HTF

### Grease

#### Product Description

Mobilgrease HTR, HTM, HTS and HTF are high performance Extreme Pressure greases with exceptional resistance to the water contamination conditions typical of steel mill, surface mining, and off-highway conditions. Additionally, Mobilgrease HTR, HTM, HTS, and HTF are formulated with superior corrosion resistance. Mobilgrease HTM and HTR provide good water and corrosion resistance along with formulations more capable of providing good dispensing characteristics in central systems. The combination of the lithium complex soap with an advanced additive system provide high temperature performance properties. Mobilgrease HTF provides fire retardancy for castor and hot strip mill operations.

Mobilgrease HTR, HTM, HTS and HTF greases are primarily recommended for the lubrication of bearings, gears, and cams where the elastohydrodynamic lubrication (EHL) requirements dictate significant viscometric contribution. The greases shed mill water, continue to lubricate and aid in forming a strong seal to resist water intrusion. When free water enters a bearing, the greases maintain consistency. Their EP properties and high oil viscosity help reduce wear, making them especially applicable for heavy shock loads. With less wear, maintenance costs for replacing failed bearings will be lower. They can also be used in central grease dispensing systems consistent with apparent viscosity calculations.

#### Features and Benefits

Mobilgrease HTR, HTM, HTS and HTF greases are leading members of the Mobilgrease brand of products, which has gained a worldwide reputation for innovation and performance excellence. Mobilgrease HTR, HTM, HTS and HTF grease products are designed by ExxonMobil formulation technologists and backed by our worldwide technical support staff.

Mobilgrease HT products were designed specifically to meet the requirements of customers for heavy-duty products with excellent: resistance to water, high temperature and with cohesive and adhesive properties. These greases offer the following features and potential benefits:

Features	Advantages and Potential Benefits
High EHL viscometrics and selected additives for excellent resistance to wear for heavily loaded components	Less unexpected downtime and reduced equipment replacement costs
Excellent ability to seal bearings against water intrusion, and to maintain consistency in the presence of water	Fewer bearing failures caused by water contamination with reduced maintenance and replacement costs
Exceptional corrosion resistance	Very good bearing protection for reduced maintenance and operating costs
Excellent grease cohesion, adhesion and tackiness at high temperatures and in presence of water spray	Better stay-put properties in tough environments and extended re-lubrication potential
Good pumpability at low to moderate temperatures	Can be used in centralised grease distribution systems

#### Applications

Mobilgrease HTR is primarily intended to address low temperature pumpability challenges. Mobilgrease HTM provides good pumpability with additional protection against water intrusion. Where an NLGI Grade 2 grease can be used, Mobilgrease HTS provides maximum bearing lubrication performance. Mobilgrease HTF provides fire retardancy for castor and hot strip mill operations.

Mobilgrease HTR, HTM, HTS and HTF greases are designed primarily for the lubrication of bearings, gears, and cams, which require high viscosity base oil. Such heavy-duty applications include:

- Steel mill bearings,
- Off-highway rolling stock
- Surface mining drag lines, excavators, drills and haul trucks

## Typical Properties

	Mobilgrease HTR	Mobilgrease HTM	Mobilgrease HTS	Mobilgrease HTF
NLGI Grade	0.5	1.5	2	1.0
Thickener Type	Li-Complex	Li-Complex	Li-Complex	Li-Complex
Color, Visual	Black	Black	Black	Black
Penetration, Worked, 25° C, ASTM D 217, mm/10	340	295	280	325
Dropping Point, °C, ASTM D 2265	280	280	295	190
Viscosity of Oil, ASTM D 445 CSt @ 40° C	320	320	680	320
cSt @ 100° C	24	24	37	24
Penetration Consistency Change, Roll Stability, ASTM D 1831, mm/10	-1	-1	-1	-1
Water Spray-Off, ASTM D 4049, % wt loss	-----	-----	-----	-----
Water Washout, ASTM D 1264, % Wt Loss	-----	5.5	5.5	-----
4-Ball Weld Point, ASTM D 2596, kg	315	315	315	315
4-Ball Wear, ASTM D 2266, mm scar	0.5	0.5	0.5	0.5

## Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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