



# MOLUB-ALLOY<sup>®</sup> 777 ES GREASES

## Product Data Sheet

Molub-Alloy 777-1 ES and 777-2 ES Greases were designed for very heavy duty service in adverse environments. They are blended and compounded to withstand the shock and heavy loading commonly found in the processing of steel and other primary metals. They further offer durable resistance to the severe environments of the construction, mining, and forest products industries.

Molub-Alloy 777 ES Greases are multipurpose in that they operate effectively in plain bearings, journals, and in antifriction bearings other than precision and high speed. They exhibit excellent adhesive and cohesive characteristics and, yet, are highly resistant to mechanical shearing.

Molub-Alloy 777 ES Greases are part of Castrol Performance Lubricants' Eco-Solutions<sup>™</sup> product offering. Formulated to address environmental concerns, they are free of lead, chlorinated solvents, barium, antimony and zinc.

### DESCRIPTION

Molub-Alloy 777 ES Greases are made using a blend of high quality petroleum oils and polymers that produce a tough lubricating film capable of withstanding shock and vibration. This blend, together with a shear stable thickening system, provide a uniquely effective seal against loss of grease or contamination from the atmosphere, even where mechanical seals may be damaged.

Molub-Alloy 777 ES Greases contain a proprietary blend of metallic lubricant solids of a grade and size distribution best suited to the rugged mill service for which these products were intended. The solids are treated to increase their natural positive affinity to metal surfaces and are thoroughly dispersed to assure effectiveness during the lubricants' full working life.

Rust and oxidation inhibiting characteristics are maximized to afford effective rust protection and long life of the grease.

Molub-Alloy 777-1 ES and 777-2 ES Greases meet NLGI Consistency Grades No. 1 and No. 2 respectively.

### APPLICATIONS

Typical applications are in ball and roller bearings, bushings, slides, screws, and general lubrication, even where loads may be quite heavy and speeds slow.

Industries most commonly requiring the heavy duty, all weather capabilities of Molub-Alloy 777 ES

Greases include steel, mining, logging, chemical, and construction.

In transportation and materials handling equipment, applications include king pins, sleeve bearings, U-joints (other than high speed, precision), chassis, and cams.

Application of 777 ES Greases may be done manually or by automatic dispensing systems. Special conditions may warrant the consideration of these other heavy duty, all weather greases:

- **Molub-Alloy 840 Greases** - where automatic dispensing systems are complex, or lube lines are long.
- **Molub-Alloy 333-0 EP Arctic Greases** - where lubricating lines are long and ambient temperatures range between -40°F (-40°C) and +40°F (4°C).

### ADVANTAGES

Compounded to give optimum protection and long life to seals, as well as forming a protective barrier in damaged seals.

Reduced friction, attributable to the Molub-Alloy solid lubricants, is most evident under boundary conditions. This benefit is most pronounced where frequent start-up, slow speeds, or high and unexpected loads are encountered.

Realistic energy savings are possible through a reduction in peak power demand during cold start-up

Please See Reverse Side for Typical Properties.

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**MOLUB-ALLOY 777 ES 09-95 -R01**  
Formerly PDS 4167 9/95  
*Molub-Alloy*<sup>®</sup> *Optimol*<sup>®</sup> *Tribo*<sup>®</sup>

Overall savings are derived from the above and result from less labor and downtime, smoother, more efficient operation with longer parts life, and extended lubrication cycles.

**NOTES**

Molub-Alloy 777 ES Greases are **not** compatible with sodium or inorganic base greases.

Lubrication intervals should be increased gradually to ensure complete removal of previous lubricant and the establishment of the surface layer of Molub-Alloy solids.

For specific terms, conditions, warranty, and availability, refer to Castrol Performance Lubricants' Price List in effect at time of purchase.

**TYPICAL PROPERTIES**

**MOLUB-ALLOY 777 ES GREASES**

	<b>777-1 ES</b>	<b>777-2 ES</b>
NLGI Grade	1	2
Worked Penetration, ASTM D217, mm/10	310-340	265-295
Thickener Type	Lithium	Lithium
Dropping Point ASTM D2265, °C/°F	182/360	182/360
Base Fluid Properties		
Viscosity, D445, D2161:		
@ 40°C, cSt	951	951
@ 100°C, cSt	85.5	85.5
@ 100°F, cSt/SUS	1072/4966	1072/4966
@ 210°F, cSt/SUS	88/411	88/411
Flash Point, ASTM D92, °C/°F	235/455	235/455
Water Washout, ASTM D 1264:		
@ 79°C/175°F, % loss	5.0	4.5
Rust Prevention Properties, ASTM D 1743, rating	Pass	Pass
Emcor Rust Test, DIN 51802, IP 220/85, Rating	No. 0 (Pass)	No. 0 (Pass)
Worked Penetration, ASTM D217, 100M strokes, mm/10	314	287
% change from 60 strokes	5	5
Stability, ASTM D 1831, points change	10	5
Wheel Bearing Performance, ASTM D1263:		
Leakage, grams	1	0
Deposits	0	0
Timken EP Test, ASTM D2509, OK Value, kg/lbs	27/60	27/60
Four Ball EP Test, ASTM D2596:		
Load Wear Index, kg	100+	100+
Weld Load, kg	620	620
Molub-Alloy Solids, Grade Classification	Heavy Duty	Heavy Duty

Subject to Usual Manufacturing Tolerances