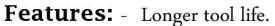




### **MOL-MET 22**

**Description:** MOL-MET 22 is extra high performance neat cutting oils. It is chlorine-free and is intended for severe cutting operations especially on difficult to machine steels. it demonstrate superior surface finish, extended tool life and control of built-up edge. Their light color enables the work area to be seen during machining operations. Closer tolerances are consistently achieved. It is formulated to prevent the formation of oil mist in the vicinity of the tools.



- Higher feed rates lead to reduction in operating cost.
- Improve the surface finish, closer tolerances and
- reduced formation of built-up edge
- Broad multi-purpose capability
- Light transparent color
- Anti-mist formulation

| MOL-MET 22                                | Value   |
|---|---------|
| Kinematic Viscosity @ 40o C               | 22      |
| Kinematic Viscosity @ 100o C              | 3       |
| Flash Point (COC), °C ASTM D 92           | 160     |
| Specific Gravity @15° C kg/l, ASTM D 1298 | 0.87    |
| Sulfur, Active                            | 1.6     |
| Anti-Mist Package                         | Present |
| Friction Modifier                         | Present |
| Chlorine                                  | Nil     |

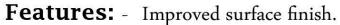
- **Applications:** Drilling, Deep hole drilling (less than 20 mm diameter).
  - Tapping, Threading, Milling
  - Gear shaving
  - Parting-off and Broaching
  - Automatic lathe operations





### MOL-CUT BC 32

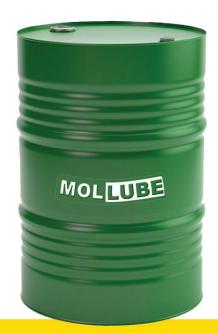
**Description:** MOL-CUT BC 32 is a neat cutting oil specially formulated for light to medium-duty machining of ferrous and non-ferrous metals. It is formulated with highly refined mineral oils, and specific EP additives. Efficient combination of the additives provides excellent lubricity and cutting performance with very long tool life and outstanding surface quality of the machined tools.



- Heavy metal free formulation.
- Provides increased cutting speeds
- Low smoke formation.
- Suitable for yellow metals

- **Applications:** drilling and cutting operations, on automatic lathes.
  - for light to medium duty machining of any kinds of metals.

| MOL-CUT BC 32                          | Value               |
|--|---------------------|
| Appearance                             | Visual yellow fluid |
| Density @ 15°C, g/cm3 ASTM D 1298      | 0.875               |
| Kinematic Viscosity @ 40°C, cSt ASTM D | 32                  |
| Viscosity Index ASTM D 2270            | 100                 |
| Flash Point (COC), °C ASTM D 92        | Min. 200            |
| Copper Corrosion ASTM D 130            | 1 a                 |





### MOL-MET HPT 150

**Description:** MOL-MET HPT 150 ia viscous fluid containing extreme pressure additives for metal. cutting operations. It is suitable for all metals including hardened steels, titaniums and nimonics. This product significantly reduces friction giving superb cutting performance. It can also be added to ordinary mineral cutting oil for the most severe cutting operations, such as broaching and gear cutting on the toughest metals.



- **Features:** Ultimate cutting performance
  - Doubles tool life
  - Excellent surface finish
  - Reduces wear and tap breakages
  - Minimises waste and scrap
  - Reduced friction and increased wear resistance

- Applications: Applied straight to the cutting operation
  - Reaming, Tapping and Drilling
  - Available in a handy squeeze bottle for ease of use.

| MOL-MET HPT 150                   | Value        |
|-----------------------------------|--------------|
| Appearance                        | Brown, Clear |
| Density @ 15°C, g/cm3 ASTM D 1298 | >1.00        |
| Flash Point (COC), °C ASTM D 92   | Min. 100     |
| Copper Corrosion ASTM D 130       | 4 b          |





### **MOL-PLUNGER LUBE**

**Description:** MOL-PLUNGER LUBE is a graphite free, semi-synthetic type plunger lubricant intended to be used in the process of aluminimum extrusion and die-casting. It provides an ultra low consumption combined with superior lubricity on the surface.



- Features: Highly economical
  - Provides the manipulation of the plunger speed
  - Ultra low evaporation
  - Outstanding casting surface quality
  - Cleaner application, lower waste formation

- **Applications:** Used in the lubrication of hot sleeve and pistons in the process of . aluminimum extrusion
  - Applied by brushing manually

| MOL-PLUNGER LUBE                       | Value          |
|--|----------------|
| Appearance                             | Bright & Clear |
| Density @ 15°C, g/cm3 ASTM D 1298      | >0.92          |
| Kinematic Viscosity @ 40°C, cSt ASTM D | >700           |
| Flash Point (COC), °C ASTM D 92        | >300           |
| Copper Corrosion ASTM D 130            | 1 a            |





### **MOL-DRW PASTE FR 4000 Forming Grease**

**Description:** MOL-DRW PASTE FR 4000 is a special paste type. Composed of low aromatic, highly refined base oils, it is free of PCB and chlorine. It contains special additives to improve lubrication and anti-wear properties to protect the dies, as well as emulsifiers to ensure trouble-free washing upon the end of the operation. It contains unique white solid lubricant that does not scratch surface.



- **Features:** EP (Extreme Pressure) additives provide maximum die protection.
  - Very easily washable.
  - Outstanding protection against corrosion.
  - Very good load carrying property.
  - Provides less down time.
  - High cooling property.

- **Applications:** Cold forming operations such as steel, platen and aluminum pressing.
  - Deep drawing, bending, blanking, punching and pressing of ferrous metals of medium to high thickness
  - Applied by brushing or dipping

| MOL-DRW PASTE FR 4000                  | Value              |
|--|--------------------|
| Appearance                             | Visual white paste |
| Density @ 15°C, g/cm3 ASTM D 1298      | 0.995              |
| Kinematic Viscosity @ 40°C, cSt ASTM D | 445                |
| Flash Point (COC), °C ASTM D 92        | Min. 150           |
| Copper Corrosion ASTM D 130            | 1 a                |

**Available in:** 15 Kg / 170 Kg





# Forming Grease MOL-FORM DRW BG

**Description:** MOL-FORM DRW BG is a special paste type. Composed of low aromatic, highly refined base oils, it is free of PCB and chlorine. It contains special additives to improve lubrication and anti-wear properties to protect the dies, as well as emulsifiers to ensure trouble-free washing upon the end of the operation. It contains unique white solid lubricant that does not scratch surface.



- **Features:** EP (Extreme Pressure) additives provide maximum die protection.
  - Very easily washable.
  - Outstanding protection against corrosion.
  - Very good load carrying property.
  - Provides less down time.
  - High cooling property.

- **Applications:** Cold forming operations such as steel, platen and aluminum pressing.
  - Deep drawing, bending, blanking, punching and pressing of ferrous metals of medium to high thickness
  - Applied by brushing or dipping

| MOL-FORM DRW BG                      | Value                       |
|--------------------------------------|-----------------------------|
| Appearance                           | Visual brown, viscous fluid |
| Density @ 15°C, g/cm3 ASTM D 1298    | > 1.00                      |
| Flash Point (COC), °C ASTM D 92 min  | 200                         |
| Anti-Corrosion Test @ 5% DIN 51360/2 | 0-0                         |

**Available in:** 15 Kg / 170 Kg





# **Emulsion Oils**

### MOL-CUT M 280

**Description:** MOL-CUT M 280 is high quality milky type soluble oil of outstanding performance. Special emulsifiers produce rich opaque emulsion of marked stability when mixed with water. It provides anticorrosion characteristics coupled with good lubricating and wetting properties which greatly improve cooling at the working area. Incorporates an effective biocide to combat bacterial degradation in system, extending the emulsion life. It is free of phenolic compounds.



- Features: Good emulsion stability and long coolant life.
  - Suitable for wide range of materials and operations.
  - Very high ratio of tramp oil rejection.
  - Low foaming in soft and hard water.

| Applications: | - Used in metal cutting operations for all |
|---------------|--|
|               | materials even ferrous or nonferrous       |

| MOL-CUT M 280                               | Value                      |
|---|----------------------------|
| Appearance                                  | Visual amber fluid         |
|   | (5% emulsion) Visual Milky |
| Density @ 15°C, g/cm3 ASTM D 1298           | 0.89                       |
| Mineral Oil Content                         | 80%                        |
| pH @ 5% DIN 51369                           | 8,5 - 8,9                  |
| Refractometer Coefficient                   | 1.00                       |
| Corrosion Protection, 15°dh, 5% DIN 51360/2 | 0-0                        |





# **Emulsion Oils**

### **MOL-CUTSYN 320**

**Description:** MOL-CUTSYN 320 is a semi synthetic oil with high performance additives of water miscible and anti-corrosion. Having a high biological stability and resistant of bacterial and fungal attacks and provides long-life usage. Besides having an excellent lubricity, it also maintains highly stable emulsion even in difficult working environments where there is leakage of oil into the emulsion or bacterial growth. Its exceptional detergency property ensures cleaning of the machine tools. It forms an odorless solution.



- **Features:** High detergency formula.
  - Outstanding protection against rust.
  - Good cooling properties.
  - Prevent bacterial and fungal formation.
  - Provide very stable solution.
  - Extreme low foaming behavior.
  - Suitable for use in hardness water

- **Applications:** Specially developed for metal working processes.
  - Developed for the CNC machining of cast iron, steel, aluminum and any other non-ferrous metals.

| MOL-CUTSYN 320                             | Value                     |
|--|---------------------------|
| Appearance                                 | Visual light brown, Clear |
| Density @ 20°C, g/cm3 ASTM D 1298          | 1.02                      |
| Mineral Oil Content                        | 20%                       |
| pH @ 5% DIN 51369                          | 9.2                       |
| Refractometer Coefficient                  | 1.8                       |
| Foaming Test (500 ppm water @ 5% emulsion) | No                        |





# **Emulsion Oils**

### **MOL-CUTSYN 400**

**Description:** MOL-CUTSYN 400 is a fully synthetic oil with high performance additives of water miscible and anti-corrosion. Having a high biological stability and resistant of bacterial and fungal attacks and provides long-life usage. Besides having an excellent lubricity, it also maintains highly stable emulsion even in difficult working environments where there is leakage of oil into the emulsion or bacterial growth. Its exceptional detergency property ensures cleaning of the machine tools. It forms an odorless solution.



- **Features:** High detergency formula.
  - Outstanding protection against rust.
  - Good cooling properties.
  - Prevent bacterial and fungal formation.
  - Provide very stable solution.
  - Extreme low foaming behavior.
  - Suitable for use in hardness water

- **Applications:** Specially developed for metal working processes.
  - Developed for the CNC machining of cast iron, steel, aluminum and any other non-ferrous metals.

| MOL-CUTSYN 400                             | Value              |
|--|--------------------|
| Appearance                                 | Visual blue, Clear |
| Density @ 20°C, g/cm3 ASTM D 1298          | 1.10               |
| Mineral Oil Content                        | 0%                 |
| pH @ 5% DIN 51369                          | 9.5                |
| Refractometer Coefficient                  | 1.9                |
| Foaming Test (500 ppm water @ 5% emulsion) | No                 |

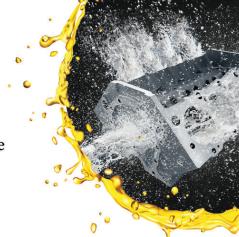




# **Cleaner Oils**

### **MOL-RUSTSTOP 50 W**

**Description:** MOL-RUSTSTOP 50 W is a water soluble rust preventive based on mineral oil, preventive and emulsifiers additives. It forms an opaque white, stable and homogenous emulsion once mixed with water. It forms a thin oily non-sticky film on the bare or phosphate metal surfaces, which provides excellent corrosion protection.



- **Features:** Provides effective protection against corrosion.
  - Cleaned easily from the metal surface in solvent or alkaline degreasing baths.
  - Can be safely used in conditions where rust is a concern especially on the iron and steel materials

**Applications:** - Used as an anti-corrosive fluid inside the radiator and hydraulic water systems.

| MOL-RUSTSTOP 50 W                   | Value               |
|-------------------------------------|---------------------|
| Appearance                          | Visual Brown, Clear |
| Density @ 15°C, g/cm3 ASTM D 1298   | 0.93                |
| Flash Point (COC), °C ASTM D 92 min | 160                 |
| Kinematic Viscosity @ 40°C, cSt     | 58                  |
| pH @ 5% DIN 51369                   | 9.5                 |
| Refractometer Coefficient           | 0.95                |
| Corrosion Test @ 5% DIN 51360/2     | 0-0                 |





# **Cleaner Oils**

### **MOL-CLEAN INF**

**Description:** MOL-ClEAN INF is an aqueous, mild alkaline industrial cleaner, formulated to provide iron corrosion inhibition and a low foaming profile.

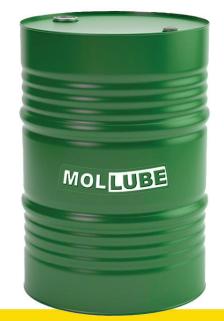


- **Features:** Good detergency properties.
  - Excellent bio stability.
  - Low foaming at ambient temperature.
  - Reduces maintenance and disposal cost.
  - Minimizes scrap rate which improves productivity.
  - Leaves a temporary corrosion preventive film on the metal

- **Applications:** Inter-operational and final cleaning operations of ferrous parts
  - Wide range of industrial spray and high pressure process cleaning.
  - Particularly recommended where good corrosion protection is required

| MOL-CIEAN INF                     | Value                            |
|-----------------------------------|----------------------------------|
| Appearance                        | Visual Clear, pale yellow liquid |
| Density @ 15°C, g/cm3 ASTM D 1298 | 1.05                             |
| pH @ 3% ASTM E 70                 | 10.6                             |
| Refractometer Factor              | 2.7                              |

Available in: 15 Kg. / 170 Kg.





# **General Oils**

# **MOL-HYDRAULIC Series**

**Description:** MOL-HYDRAULIC series is high performance anti-wear hydraulic oils developed for high pressure hydraulic systems operating under moderate to severe conditions in mobile and industrial service. Formulated with high quality base oils and carefully selected performance additives to provide excellent protection against oxidation degradation, rust, corrosion and wear. They also possess superior foam control, water separation and rapid air release properties.

- **Features:** Excellent thermo-oxidative stability.
  - Compatible with multi-metals and sealing materials
  - Rapid air release property.
  - Superior demulsibility .

- **Applications:** Mobile hydraulic fluid power transmission systems.
  - Industrial general machine

| MOL-HYDRAULIC                | Method             | Unit              | 32    | 37    | 46    | 68    | 100   |
|------------------------------|--------------------|-------------------|-------|-------|-------|-------|-------|
| Appearance                   | Visual             |                   | B&C   | B&C   | B&C   | B&C   | B&C   |
| Density @ 15° C              | <b>ASTM D 4052</b> | g/cm <sup>3</sup> | 0.875 | 0.876 | 0.880 | 0.885 | 0.890 |
| Kinematic Viscosity @ 40° C  | ASTM D 445         | cSt               | 32    | 37    | 46    | 68    | 100   |
| Kinematic Viscosity @ 100° C | ASTM D 445         | cSt               | 5.4   | 5.9   | 6.7   | 8.9   | 11.1  |
| Viscosity Index              | ASTM D 2270        | -                 | 99    | 99    | 98    | 97    | 96    |
| Flash Point, (COC)           | ASTM D 92          | °C                | 219   | 220   | 232   | 238   | 251   |
| Pour Point                   | ASTM D 97          | °C                | -30   | -30   | -29   | -23   | -23   |
| Corrosion Test               | ASTM D 665         | Passes            |       |       |       |       |       |





# **General Oils**

## **MOL-GEAR Series**

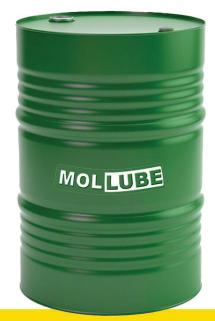
**Description:** MOL GEAR series are CLP class high performance extreme pressure gear oils developed for lubrication of heavy-duty industrial gears working under severe operating conditions. Blended from high quality base stocks and sulphur-phosporous type extreme pressure additive system that gives excellent load carrying capability to provide protection against shock loading and wear. The high thermo-oxidative stability of the oil helps resist high temperature deposit formation and oil thickening.



- Features: Excellent load carrying.
  - High thermo-oxidative stability.
  - Provides effective rust and corrosion protection.

- **Applications:** Industrial spur, helical, bevel and steel-onsteel worm gears.
  - Suitable for splash, mist and circulating systems.

| <b>MOL-GEAR</b>              | Method      | Unit              | 68    | 100   | 150   | 220   |
|------------------------------|-------------|-------------------|-------|-------|-------|-------|
| Appearance                   | Visual      | -                 | B&C   | B&C   | B&C   | B&C   |
| Density @ 15° C              | ASTM D 4052 | g/cm <sup>3</sup> | 0.887 | 0.891 | 0.897 | 0.899 |
| Kinematic Viscosity @ 40° C  | ASTM D 445  | cSt               | 68    | 100   | 150   | 220   |
| Kinematic Viscosity @ 100° C | ASTM D 445  | cSt               | 8.7   | 11.4  | 15    | 19.4  |
| Viscosity Index              | ASTM D 2270 | -                 | 99    | 100   | 100   | 100   |
| Flash Point, (COC)           | ASTM D 92   | °C                | 236   | 240   | 240   | 240   |
| Pour Point                   | ASTM D 97   | °C                | -24   | -24   | -24   | -18   |





# **General Oils**

## **MOL-GEAR Series**

Description: MOL GEAR series are CLP class high performance extreme pressure gear oils developed for lubrication of heavy-duty industrial gears working under severe operating conditions. Blended from high quality base stocks and sulphur-phosporous type extreme pressure additive system that gives excellent load carrying capability to provide protection against shock loading and wear. The high thermo-oxidative stability of the oil helps resist high temperature deposit formation and oil thickening.



- **Features:** Excellent load carrying.
  - High thermo-oxidative stability.
  - Provides effective rust and corrosion protection.

- **Applications:** Industrial spur, helical, bevel and steel-onsteel worm gears.
  - Suitable for splash, mist and circulating systems.

| <b>MOL-GEAR</b>              | Method      | Unit              | 320   | 460   | 680   | 1000  |
|------------------------------|-------------|-------------------|-------|-------|-------|-------|
| Appearance                   | Visual      | -                 | B&C   | B&C   | B&C   | B&C   |
| Density @ 15° C              | ASTM D 4052 | g/cm <sup>3</sup> | 0.903 | 0.904 | 0.912 | 0.931 |
| Kinematic Viscosity @ 40° C  | ASTM D 445  | cSt               | 320   | 460   | 680   | 1000  |
| Kinematic Viscosity @ 100° C | ASTM D 445  | cSt               | 25    | 30.8  | 38    | 45.5  |
| Viscosity Index              | ASTM D 2270 | -                 | 100   | 97    | 92    | 85    |
| Flash Point, (COC)           | ASTM D 92   | °C                | 255   | 260   | 272   | 290   |
| Pour Point                   | ASTM D 97   | °C                | -15   | -12   | -9    | -6    |





Head Office UK: +447490204000

Egypt Office: +201000044890 Turkey Office: +905538444052 Abdelkhalek@elmolla.com info@mollube.co.uk www.mollube.co.uk