

CORIUM Z157 Moly Dry Lubricant

HOW CORIUM Z157 WORKS:

All conventional lubrication systems must contend with boundary or thin film friction. Ideally, the system, when under pressure operation, should maintain this high fluid film thickness, and some do, with varying degrees of success. The bearing, when under normal operation is usually in a fully fluid state, and no frictional wear occurs between the moving parts.

However, during deceleration and when the machine or journal is put to rest, a different situation exists. As pressure in the system drops or ceases, the fluid film on the bearing decreases, and a dangerous situation develops. The minute high spots on the moving parts begin to rub against each other creating a condition known as boundary friction.

Local pressures reach high values with subsequent deformation of the metal. Shearing forces, exceeding the elastic limits of the metal, and accompanied by high local temperatures, develop at the rubbing spots. The excessive heat that develops, attacks the lubricant. This leads to the progressive loss of lubrication efficiency, the formation of oxides, sludge, gummy residues, and finally the occurrence of wear.

Corium Z157 is a new dry lubricant based on a black/gray powder of exceedingly small particle size, known as molybdenum disulphide. In addition to scientifically eliminating harmful boundary friction, Corium Z157 withstands very high temperatures and severe chemical exposures. (Withstands temperatures up to 1112°F (600°C))

Corium Z157 produces a fine lubricating, molecular film, interdispersed with the base material that is unaffected by heat and any inherent weakness of the lubrication system. Corium Z157 never wears out, nor is it contaminated by foreign matter.

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Magna Industrial reserves the right to modify or change this product for purposes of improving its performance characteristics.

CPIM Z157.1	Version 1.0	Revision 1.0	Rev. Date: February 16, 2000	Reference: LUN
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CORIUM Z157 DOES ALL THESE THINGS FOR YOUR MACHINERY:

1. Lubricates chains, gears, slides, toolways, without slinging off. Virtually any moving part made of any material can be protected.
2. Retards the formation of gummy residues and oxides.
3. Cuts wear on any surface.
4. Is easily applied with aerosol package. Waste is eliminated.
5. Mixes with present lubricants, eliminating harmful boundary friction.
6. Will not contaminate or stain any metal or lubricant.
7. Never wears out, and is not contaminated by any material.
8. Won't rub off, just rubs in. It's resinous base assures maximum utilization of material.
9. Eliminates break-in problems on new or rebuilt machinery.
10. Resists high heat, acids, alkalis, all chemical exposure.
11. Is an excellent anti-seize compound.
12. Serves as a machining tool lubricant and coolant.

Corium Z157 is the answer to effective chain and drive protection with positive lubrication in the most adverse conditions.

Following are two methods of lubricating chains which are not running in an oil bath.

1. LUBRICATION WITH GREASE

Grease plastered over the chain may be reassuring, however it is only effecting part lubrication. The area where lubrication is most needed is in the pins and bushes, where the grease cannot be easily applied.

2. LUBRICATION WITH AN OIL CAN

This method is not very satisfactory either, thick oil cannot penetrate pins and bushes, light oil flings off very easily leaving the vulnerable pins and bushes without adequate lubrication.

Corium Z157 is the answer to your chain lubricating problems. Corium Z157 is a unique combination of a volatile carrier liquid and micronized molybdenum disulphide. The advantages of this product are:-

- a. Corium Z157 penetrates extremely well. The light, highly liquid base penetrates readily into the bearing, clearances of links, pins, bushes and rollers.
- b. The use of Corium Z157 results in reduced maintenance Downtime, by easy aerosol applications through inspection holes and guards while the machinery is running. This obviously speeds up maintenance schedules and alleviates the problem of awkward-to-reach chains.
- c. Corium Z157 stays put and gives satisfactory lubrication at High Temperature. The dry film of solid lubricant left on the bearing surfaces after the eventual evaporation of light carrier medium provides a low friction coating which lubricates from room temperature up to 1112°F (600°C).
- d. Even under the most adverse conditions, Corium Z157 will give efficient lubrication. Corium Z157 resists water and extremes of temperature where most conventional lubricants will fail.

The durable lubricating film of Corium Z157 is maintained even under dusty and abrasive conditions. Most oils and greases pick up dirt and dust and drop or throw it off on to machinery and product. Corium Z157 does not creep or drip. The thin lubricating film provided by Corium Z157 adheres to the chain and does not attract dirt or dust.

- e. The use of Corium Z157 maintains the flexibility in chains.
- f. Rollers rotate more freely when Corium Z157 is used. "Flats" due to the wear of stiff rollers by the track are avoided because there is no formation of sticky carbonaceous deposits caused by the breakdown of mineral oils.
- g. Corium Z157 is extremely economical. Only a small amount is required for efficient lubrication. The interval between applications is increased many times.

Corium Z157 can be used in many and varied applications, some of which follow.:

Furnace Door Lifting Chains, Chains of Bottle Washing Machines, Driving Chain on Roller Hearth Furnace, Tin Printing Equipment, Foundry Core Drying Machinery, Ingot Casting Machines, Paper Dryers, Textile Dryers.

For best results, Corium Z157 should be applied to the joints and rollers of the chain at the coolest part of its cycle.

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This allows maximum penetration of the low viscosity carrier oil before it evaporates to leave a dry film of solid lubricant on the bearing surfaces. Under relatively slow running conditions of high temperature conveyor chains only infrequent replenishment of the lubricant is required.

Prior to application of Corium Z157, it is preferable to remove residues of liquid lubricants and other contamination. A good choice for cleaning would be Corium Z129 Chemical Cleaner and Degreaser.

MUNICIPALITIES:

Fire Hydrants
Fire Hose
Threaded Connections
Water Meter Parts and Valves
Gas Valves & Meters

PRODUCTION MACHINERY AND TOOLS:

Collectors	Reamers
Guides and Machine Ways	Punches
Lathe Steady Rests & Centres	Chucks
Broaches	Conveyors such as monorails and drying ovens
Gear Shaper Cutters	Textile stentor frames and bakery oven conveyors
Milling Cutters	Stone Crushers
Taps	Presses (run in for heavily loaded gears, eccentrics, spindles, etc.)
Drills	

CHEMICAL, PETRO-CHEMICAL AND REFINING INDUSTRIES:

Threaded Connections for All Types.
Valves of All Types: Pumps, such as transfer, vacuum, mixing and rotary types.

PACKING-SEALS - O-RINGS:

Valve	Periscopes
Pumps	Boiler Soot Blowers
Compressors	Hydraulic Systems
Motors and accessories	Shafts, Windows, Doors,
Snorkels	

ENGINES-TRANSPORTATION-AUTOMOBILES:

Threaded Connections	Packings
Gaskets	Cams
Seals	Guides
Press Fits	Gears
Fuel Injector Lines	Fly Wheels
Railroad Pins and Centre Plates	

MARINE APPLICATIONS:

Threaded Connections	Spindles and bearings
Automatic Steam Valves	Deck Booms
Manual Valves	Winches and Windlasses
Soot Blowers	Steering Gear & Telemotor
Oil Separator	Hatch Covers
	Flexible Couplings

PRINTING PLANTS:

Linotype Space Bands	Vertical Guides
Threaded Connections	Binding Machines
Elevator	Paper Cutting Presses
Solenoids	Embossing Presses

HOW TO APPLY

Corium Z157 withstands high pressure & temperature, severe chemical exposure and never wears out or becomes contaminated. It lubricates chains, sprockets, gears, slides, toolways, machinery and equipment of all type and is applicable for lubricating any and all types of moving parts.

APPLICATION:

1. Remove all residue grease, oils and contaminants. Corium Z129 is recommended in this application.
2. Apply Corium Z157 to joints, rollers and moving parts on the coolest part of their operating cycle/range to ensure maximum penetration of the low viscosity carrier oil.
3. Shake can thoroughly.
4. Hold can 100-150 mm. (4"-6") from area to be lubricated and spray to provide complete coverage.
5. Invert can and spray until a clear gas appears to prevent nozzle clogging.

IMPORTANT:

Strictly observe all safety precautions relevant to the use of an aerosol product and/or printed on the can's label.

MAGNA INDUSTRIAL CO. LIMITED

Total Quality Maintenance

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MATERIAL SAFETY DATA SHEET

DATE 01 Aug 2014

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name/Code CORIUM Z157

Company Identification

Omega Manufacturing Division,
Magna Industrial Co. Limited,
1801, Guardian House,
32 Oi Kwan Road,
Wanchai, Hong Kong.

Distributor

Alshawi Trading,
Block 351, Road 51, Bldg 20, Manama - Bahrain.
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P.O.Box 33526

Telephone (852) 25775187
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Telephone (973) 1755 0019
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SECTION 2 - HAZARDS IDENTIFICATION

Flammable product

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS Number</u>	<u>Wt.%</u>	<u>Classification</u>
Isobutane*	75-28-5	30-60	Fx;R12
Propane*	74-98-6	30-60	Fx;R12
Acetone	67-64-1	10-30	F;R11
Xylene	1330-20-7	1-5	R10 Xn;R20/21 Xi;R38

SECTION 4 - FIRST-AID MEASURES

Eye Contact: Flush with plenty of water for at least 15 minutes. Seek immediate medical attention.

Skin Contact: Wash thoroughly with soap and water. Obtain medical attention in case of skin irritation or other cause for concern.

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Inhalation: Move patient to open air.

Ingestion: Do not induce vomiting. Seek immediate medical attention.

SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, waterfog, foam, sand and carbon dioxide.

Special Protective Equipment for Fire Fighters: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: At elevated temperature (over 50C) cans may burst, vent or rupture.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage: Avoid breathing vapours. Ventilate area. Remove all sources of ignition. Clean up area with absorbent material and place in closed containers for disposal in accordance with local and national regulations.

SECTION 7 - HANDLING AND STORAGE

Do not incinerate containers. Store in place where temperature may not exceed 50°C. Do not stick pin, nail or any other sharp object into opening on top of can. Do not spray in eyes. Do not take internally.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ACGIH TLV

Molybdenum disulphide	15 mg(Mo)/m ³
Acetone	750 ppm
Xylene	100 ppm
Propane/Isobutane	1000 ppm

Eye Protection: Safety goggles and full-face shield

Hand Protection: Rubber or plastic oil resistant gloves.

Ventilation: Use under well ventilated conditions.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark grey spray

Odour: Solvent odour

pH: N.A.

Specific Gravity: 0.75

Vapour Pressure: In container 60 +- 5psig

Boiling Point: Propellant below -18°C

Melting Point: N.A.

Flash Point: Propellant below -7°C

Flammability: Flammable

Evaporation Rate: >1 (Ether = 1), propellant only

Solubility in Water: Insoluble

SECTION 10 - STABILITY AND REACTIVITY

Stable

Materials to Avoid: Strong oxidizing agents, hydrogen peroxide, chromic acid, bromine.

Toxic compounds may form on thermal decomposition. Hazardous combustion products: Carbon dioxide, carbon monoxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

There is no lethal dose information available.

Inhalation: Inhalation of vapours can cause irritation of the respiratory tract. Do not breathe spray or vapours.

Skin: May cause irritation, drying and cracking.

Eyes: Cause irritation.

Ingestion: Not a likely route of exposure. If swallowed, may cause irritation in mouth and stomach, thirst, nausea, vomiting, diarrhoea, with possible collapse if large amounts ingested.

Aspiration of material upon vomiting may cause chemical pneumonitis.

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SECTION 12 - ECOLOGICAL INFORMATION

No ecological information is available at present.

SECTION 13 - DISPOSAL CONSIDERATIONS

Comply with all local and national regulations regarding disposal.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name : AEROSOLS, FLAMMABLE (FLAMMABLE GAS).

UN Number: 1950

IATA Class: 2.1, Packing Group: -

IMDG Class: 2.1, Packing Group: -

SECTION 15 - REGULATORY INFORMATION

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SECTION 16 - OTHER INFORMATION

R-phrases: R10 – Flammable.
R11 – Highly flammable.
R12 - Extremely flammable.
R20/21 – Harmful by inhalation and in contact with skin.
R38 – Irritating to skin.

S-phrases: S2 - Keep out of reach of children.
S9 - Keep container in a well ventilated place.
S16 - Keep away from sources of ignition – No smoking.
S23 - Do not breathe gas.
S24 - Avoid contact with the skin.
S38 - In case of insufficient ventilation, wear suitable respiratory equipment

*The isobutane/propane used in this product contains less than 0.1% W/W 1,3 butadiene.

Remarks: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.