

# Omega 28

Omega 28 is a totally new and exclusive Fluoroether Synthetic Grease that displays exemplary inertness to many chemicals, coupled with exceptional oxidative and thermal stability - even under arduous application environments. It will even resist hydrocarbon fuels and most solvents, while providing exceptional lubrication qualities.

## **SUPERIOR QUALITIES IN-BUILT:**

Omega 28 is non-toxic, stays where applied and is virtually indestructible. It is also not combustible and is 100% resistant to oxidative degradation and most common solvents. It is compatible with most plastics and elastomeric seal materials at typical operating temperatures.

## **EXEMPLARY STABILITY:**

Omega 28 is perfect for virtually any hostile operating environment, including radiation exposure, since the advanced chemistry employed provides this innovative Omega grease with superior resistance and the ability to withstand the harshest operating conditions including exposure and/or direct contact with:

- Nitrogen Tetroxide
- Oxygen
- Ethyl Alcohol
- Aniline
- Ammonia
- Hydrazine
- Fluorine
- Unsymmetrical Dimethylhydrazine
- Turbine Fuel
- Boiling Sulphuric Acid
- Boiling Nitric Acid
- Molten Sodium Hydroxide
- Diethylenetriamine
- up to 90% Hydrogen Peroxide

It is designed and engineered for critical and previously "impossible" lubricating conditions that conventional greases cannot tolerate, such as lubricating pipe threads for high-pressure oxygen pipes, and for seals, threads, joints and stems used for liquids, gas and strenuous vacuum service environments.

Omega 28 features such highly stable properties that thermal degradation will generally not take place until direct contact temperatures exceeding 500°F (260°C) are encountered. It provides excellent lubrication service for severe applications where chemical resistance and resistance to fuel is required, and where superior film strength needs to be maintained at high temperatures.

## **WIDE RANGE OF APPLICATIONS:**

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Omega 28 can be used for a wide range of applications which demand the highest performance lubrication, including aeronautical equipment, satellites, aircraft components, ground support equipment, etc.

Suggested applications include:

- Lubrication of mining, plastic compounding and oil-well drilling equipment.
- Lubrication of O-Rings, plastics & ceramics, couplings, instruments, valves, circuit breakers & railway switch machine bearings.
- Food Processing, Canning & Textile equipment & machinery.
- Lubrication of valves and other fittings used in gaseous, liquid oxygen and reactive chemical processing.
- Anti-Seize applications and as a releasing agent and gasket sealant.
- Lubrication of plug valves, pressure release valves and pumping equipment handling highly reactive or corrosive liquids.
- Lubrication of equipment and instruments used in high vacuum applications, cryogenic apparatus and pneumatic systems.
- Lubrication of bearings used in hot air fans in chemical drying processes and sealed roller bearings of track & chain conveyors in high temperature environments.
- Lubrication of shaft bearings in petrochemical plants that come into contact with aromatic hydrocarbons.
- Lubrication of rolling contact bearings and fan bearings used to cool solid state electronic systems including gyroscopes.
- Lubrication of fuel pump bearings pumping jet fuel.

Omega 28 is also eminently suitable for many critical applications in the Drugs & Pharmaceuticals industry, the manufacture of Computer Chips, in Oxygen Producing plants, Automotive Manufacture (where Painting & Drying Ovens and Conveyors are used), in Electroplating plants, Fertilizer Factories, in Wooden

Chipboard Manufactories and as an oxygen pipe sealant in Hospitals, Clinics, Hospices, etc.

## **CAUTIONARY NOTE:**

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Since Omega 28 provides superior lubricity when used as a thread sealant, the use of the torque wrench is recommended when mounting nuts on treated threads to avoid over-tightening. In addition, inhaling vapours from Omega 28

at high temperatures over 480°F (250°C) (such as when smoking) should be avoided.

When applying Omega 28 for the first time, parts to be lubricated should be dismantled and thoroughly purged (cleaned) of any existing greases or oils, using chlorinated solvents in an agitated bath and full soak as Omega 28's chemistry is incompatible with ordinary greases.

**TYPICAL DATA:**

TEST	ASTM TEST METHOD	TEST RESULT
<b>Base Fluid: -</b>		
Viscosity @ 100°F(37.8°C), cSt	D-445	500
Viscosity @ 210°F(98.9°C), cSt	D-445	43
Viscosity Index	D-2270	144
Flash Point	D-92	None
Pour Point	D-97	-20°F (-28.8°C)
Vapour Pressure	Knudsen Method	
	@ 100°F (37.8°C)	6x10 <sup>-9</sup> torr
	@ 500°F (260°C)	3x10 <sup>-4</sup> torr
Evaporation, 5-1/2hours @ 400°F (204°C)	D-927	Less that 1%
Unworked Penetration	D-217	249
Worked Penetration (60Times) @77°F (25°C)	D-217	265-295
Oil Separation, 24hrs @ 302°F (150°C)	D-1742	7.5%
Evaporation, 22hrs @ 302°F (150°C)	D-2595	1.1%
Neutralization Number	D-974	0.11mg KOH/g
Specific Gravity @ 25°C (77°F)	---	1.93
Copper Corrosion	D-130	2C, No corrosion
<b>NLGI Grade</b>	---	<b>#2</b>
Operating Temperature Range		-30°C to 260°C (-22°F to 500°F)
<b>Color</b>		<b>Off White</b>

# MAGNA INDUSTRIAL CO. LIMITED

*Total Quality Maintenance*

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1801, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong Tel: (852) 2577 5187 Fax: (852) 2577 3190  
E-Mail: [magna@magnagroup.com](mailto:magna@magnagroup.com) Web Site: [www.magnagroup.com](http://www.magnagroup.com)

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## MATERIAL SAFETY DATA SHEET

DATE 01 Aug 2014

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### SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

**Product Name/Code** Omega 28

**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.  
[www.alshawitrading.com](http://www.alshawitrading.com)  
[info@alshawitrading.com](mailto:info@alshawitrading.com)  
P.O.Box 33526

Telephone (852) 25775187  
Fax (852) 25773190

Telephone (973) 1755 0019  
Fax (973) 1755 5108

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### SECTION 2 - HAZARDS IDENTIFICATION

Not classified as hazardous.

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### SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS Number</u>	<u>Wt.%</u>	<u>Classification</u>
Polytetrafluoroethylene	9002-84-0	60-80	-
Telomer of Polytetrafluoroethylene	79070-11-4	10-30	-

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### 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.

Inhalation: Move patient to open air.

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

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## SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, carbon dioxide. Do not use water.  
Special Protective Equipment for Fire Fighters: Self-contained breathing apparatus.  
Unusual Fire and Explosion Hazards: Avoid smoke inhalation. Water or foam may cause frothing.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage: Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, vermiculite. Sweep up and dispose of in accordance with local and national regulations.

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## SECTION 7 - HANDLING AND STORAGE

Keep containers closed. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Wash clothing before reuse. Keep away from feed and food products.

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## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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: White  
Odour: No special odour  
pH: N.A.  
Specific Gravity: 1.92  
Vapour Pressure: N.A.  
Boiling Point: N.A.  
Melting Point: >260°C  
Flash Point: None

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Flammability: N.A.  
Evaporation Rate: N.A.  
Solubility in Water: Insoluble

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## SECTION 10 - STABILITY AND REACTIVITY

Stable under normal condition. Avoid pyrolysis.

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

Toxic compounds may form on thermal decomposition. Hazardous combustion products: carbon monoxide, carbonyl fluoride, hydrofluoric acid gas, perfluorocarbon olefins, and small amounts of other toxic fumes.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

There is no lethal dose information available.

Inhalation: Inhalation of solvent vapours can cause irritation of the respiratory tract. Polytetrafluoroethylene (PTFE), when thermally decomposed, may cause polymer fume fever and flu-like symptoms. Inhalation of vapours from material at high temperatures (over 250°C) must be avoided. Contamination of cigarettes or other tobacco products must be avoided.

Skin: May cause irritation, drying and cracking.

Eyes: Cause irritation.

Ingestion: 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

Ecotoxicity: Greases are generally hazardous to the environment.

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## SECTION 13 - DISPOSAL CONSIDERATIONS

Comply with all local and national regulations regarding disposal.

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## SECTION 14 - TRANSPORT INFORMATION

UN Number : Not regulated

IATA Class : Not regulated, Packing Group: Not regulated

IMDG Class : Not regulated, Packing Group: Not regulated

Not considered hazardous for transport purpose.

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## SECTION 15 - REGULATORY INFORMATION

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## SECTION 16 - OTHER INFORMATION

R-phrases: -

S-phrases: -

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