Ωmega 656

DESCRIPTION:

Omega 656 is a totally new, 100% Synthetic Cutting, Grinding & Machining Fluid that revolutionizes machining operations due to its inherent safety, consistently superior performance, and unique environmentally-friendly formulation that makes disposal at the end of its service life, safe and easy.

OUTSTANDING PERFORMANCE CHARACTERISTICS:

Omega 656 is yet another fine quality product designed to enhance the wide range of Omega superior machining fluids and additives.

Omega 656 can be diluted to extremely economical dosage rates, yet will still give performance superior to ordinary cutting/machining fluids. It is far better in its ability to cool the area being machined than any "neat", oil-type, soluble cutting fluid. Omega 656 is versatile and can be used with complete confidence on iron, steel, stainless steel, aluminium, and copper as well as non-metals, such as ceramics and glass. This product is so versatile it can be diluted and used to lubricate chains and as a burnishing compound as well.

In addition, Omega 656 contains a new class of EP (Extreme Pressure) additives and corrosion inhibitors that are totally chlorine-free (an environmental hazard), sulphur-free (which causes staining on copper and its alloys), and nitrite-free (aserious worker health hazard)!!!

NOW....COMPLETE ELIMINATION OF "SKIP AND TEAR" MACHINING PHENOMENON:

With ordinary machining fluids, the contact "line" between the cutting tool and the base metal to be machined often encounters "skip and tear" operation. The tool "bites" into the metal with a good angle and feed rate but the heat transmitted gets intense so rapidly that the two surfaces literally weld together for micro-seconds due to the inability of ordinary machining fluids to carry the heat away rapidly enough.

However, the torque of the machining tool then overcomes the instantaneous "hold" exerted by the welding together of the machining tool and base metal surface and destructively "tears" the two temporarily-mated surfaces apart by sheer brute strength. Both the cutting edge of the tool and the base metal surface are left jagged, damaged and microscopically-deformed by the combined effects of heat, instant welding, shearing forces and plastic deformation of the metal surfaces.

This little-known "Skip and Tear" phenomenon causes rapid deterioration of cutting tool effectiveness and, in virtually all cases, damages the machined surface as well. Tool life and the accuracy of the machined surfaces are compromised. In severe cases, the machined surfaces will require additional honing or finishing -which adds substantially to both the time and cost of machining.

LOW FOAMING FOR HIGHLY ACCURATE MACHINING:

Omega 656 features a superior, low foaming chemistry that provides for a degree of working part visibility virtually second to no other machining fluid. With improved workpiece visibility, the accuracy of machining is immeasurably enhanced, with the added advantage that machinists are also less likely to suffer from occupational eye-strain.

USER-FRIENDLY FORMULATION:

An added benefit with Omega 656 is that the product has an extremely low eye and skin irritation factor which workers appreciate as most machinists suffer from one form of skin dermatitis/infection or other -from time to time -due to exposure to cutting and machining oils. It is a very common occupational hazard

faced by machinists and now, with Omega 656, this long-standing problem has finally been thoroughly addressed.

Cleaning of used Omega 656 is also much simpler as the product is water dispersible. Clean up for both workers and for the equipment and machined parts also is no longer hazardous, unpleasant, costly nor time-consuming since Omega 656 does not contain either sulphur or chlorine.

SUPER ECONOMICAL DILUTION RATES:

Omega 656 is mixed with water and remains virtually clear at all mixture rates for improved workpiece visibility.

TYPICAL DATA:

TEST	CONDITION	RESULTS
pH Values (Approximates)	As is:	9.7
	1:20 Dilution:	9.3
	1:50 Dilution:	9.2
Falex Load Test	1:20 Dilution:	Passed @ 4000-Lb (1814-Kg)
	1:50 Dilution:	Passed @ 3000-Lb (1360-Kg)
Falex Wear Test	1:20 Dilution:	5 mins @ 1000-Lb -0 Teeth To next 250-Lb -85 Teeth
Waring Blendor Foam Test	200-ml of 1:20 solution agitated in Waring Blendor for 1 minute	
	Initial Foam:	6.4 cm
	After 5-min stopping:	0.8 cm
Cast Iron Chip Test	1:20 Dilution:	Passed
	1:50 Dilution:	Passed
Heat Stability Test	1:20 Dilution:	Passed
(Solution boiled for 1-hr. Observations made on dilution appearance and performance)	1.50 Dilution:	Passed

RECOMMENDED DILUTION RATIOS:

Applications	Ration of Omega 656: Water
• Broaching, Tapping & Threading:	Between 1:10 to 1:20
• Milling, Drilling & Turning:	Between 1:20 to 1:30
• Grinding of Metals:	Between 1:40 to 1:50
• Grinding of Ceramics & Glass:	Between 1:50 to 1:80

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 Omega 656

Company Identification

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

Telephone (852) 25775187
Fax (852) 25773190

Distributor

Alshawi Trading,
Block 351, Road 51, Bldg 20, Manama - Bahrain.
www.alshawitrading.com
info@alshawitrading.com
P.O.Box 33526

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

SECTION 2 - HAZARDS IDENTIFICATION

Irritant product.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Wt.%	Classification
Water	7732-18-5	60-80	-
Triethanolamine	102-71-6	5-10	R43, Xi;R36/38
Dodecanedioic Acid	693-23-2	1-2	Xi;R36

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 and foam.
Special Protective Equipment for Fire Fighters: Self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Toxic nitrogen oxides may evolve when burning.

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.

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. Keep out of reach of children.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

	ACGIH TLV
Triethanolamine	5mg/m^3

Eye Protection: Safety goggles
Hand Protection: Rubber or plastic oil resistant gloves.
Ventilation: Use under well ventilated conditions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: clear liquid
Odour: Amine odour

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pH: 9.5
Specific Gravity: 1.06
Vapour Pressure: N.A.
Boiling Point: N.A.
Melting Point: N.A.
Flash Point: >93°C
Flammability: N.A.
Evaporation Rate: N.A.
Solubility in Water: Soluble

SECTION 10 - STABILITY AND REACTIVITY

Stable under normal condition.

Materials to Avoid: Acids, strong bases, strong oxidizing agents, aldehydes, ketones, organic anhydrides, halogenated solvents, acrylates. This material contains amine, do not add nitrite or other nitrosating agents due to the potential for nitrosamine formation.

Toxic compounds may form on thermal decomposition. Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Under combustion conditions, oxides of the following elements will be formed: boron, nitrogen.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity: Triethanolamine: LD50/oral/rabbit = 2200mg/kg

Inhalation: No data available to indicate product or components may be respiratory sensitizers.
Skin: Irritant, prolonged or repeated contact may cause dermatitis.
Eyes: Corrosive to eyes.
Ingestion: Swallowing this material can cause burns to the mouth and esophagus. Asphyxiation can occur from swelling of the throat. Perforation of the esophagus and stomach can occur.

SECTION 12 - ECOLOGICAL INFORMATION

No ecological information is available at present.

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SECTION 13 - DISPOSAL CONSIDERATIONS

Comply with all local and national regulations regarding disposal.

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.

SECTION 15 - REGULATORY INFORMATION

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SECTION 16 - OTHER INFORMATION

R-phrases: R36 – Irritating to eyes.
R36/38 – Irritating to eyes and skin.
R43 – May cause sensitisation by skin contact.

S-phrases: S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.
S39 – Wear eye/face protection.
S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).