

# **DESCRIPTION:**

Probably the most neglected part of a car or truck is the cooling system. Most vehicle owners give the cooling system only cursory attention. The cooling systems of today's modern engines face two great difficulties. These are lack of lubrication and rust. Lack of lubrication results in the pre-mature failure of the water pump and causes sticking of the thermostat and improper operation of the thermostat. Rust can and often does cause complete radiator failure.

# **PRESENT PROBLEMS:**

Surveys show that 1 out of every 5 vehicles have cooling system breakdowns each year, especially in summer time. A cooling system breakdown in a private car is inconvenient but such a breakdown in a commercial vehicle such as a truck or lorry or a mining or construction vehicle can prove disastrous and is usually exceedingly expensive in lost production and repair cost. One vehicle failure usually holds up more than that one vehicle. Substantial lost production, upset schedules, wasted man-hours, delayed deliveries and lost customers can be the costly result of the cooling system failure of a commercial vehicle.

Radiators and cooling systems in modern vehicles have to work much harder than cooling systems had to in the past. It is much more important today than ever in the past to use Omega 906 water pump lubricant and radiator conditioner. Today, vehicles are much more apt to have cooling system break-downs than in the past.

The internal combustion engine has a thermal efficiency of only about 25%. 75% of that energy is wasted, mostly in the form of heat. If this excess heat is not removed properly, it can cause great damage to both the transmission and engine parts. The cooling system has to absorb and dissipate about half this heat via various mechanical parts and the fluid in the radiator (A small percentage of vehicles are air cooled).

# **OMEGA 906 - THE PROBLEM SOLVER:**

Omega 906 is the solution to 98% of all cooling system problems. It does the following things: -

- (1) It raises the boiling point of the water thus causing a greater differential between the cooling air and the core, which greatly increases the radiator heat transfer.
- (2) Stops water pump cavitation which enables a higher coolant flow rate.
- (3) Inhibits corrosion. As is well known, several different metals are used together in radiator construction including cast iron, copper, steel, aluminium, brass and solder. These metals have different places in the galvanic scale and galvanic action will occur unless Omega 906 is used. Omega 906 retards corrosion of all metals.
- (4) Omega 906 controls scale and greatly increases cooling system efficiency. A variety of water is used in coolant systems and many of these waters are high in mineral content. This causes scaling in even the hottest parts of the engine and restricts and retards the transfer of heat from the engine block. A mere 1.5 mm of mineral scale will cause a drop of up to 40% in heat transfer. Scale can cause warped engine blocks and heads and overheating damage.



OPIM906-1	Ver. 2.0	Rev. 3.0
Rev. Date: 2 Jan 2019		
Reference: CKL		

# FORMULA:

50-75ml Omega 906 for every 10 litres radiator water capacity every 8,000kms. For heavily scaled and corroded surfaces, repeat draining the system at more frequent intervals until all scale is removed.

# HOW TO APPLY:

- (1) When the engine is cold, remove the radiator cap. Drain the radiator through the drain plug or drain cock. To speed the draining process, the drain plug or plugs in the block can also be removed.
- (2) Reinstall the block drain plugs and close the drain cock. Fill the cooling system with water.



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OPIM906-2 Ver. 2.0 Rev. 3.0	
Rev. Date: 2 Jan 2019	
Reference: CKL	



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# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Omega 906

2020-08-26

 1.1. Product identifier

 Product name:
 Omega 906

Container size: 300 ml & 5 l

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

Application: Radiator water additive.

#### 1.3. Details of the supplier of the safety data sheet

Supplier:	GB importer:	Distributed by:	Trust Engineering Company
<u>Manufacturer:</u>	ITW PP & F Korea Limited 13th Fl., Unit B, PAX Tower 609 Eonju-ro, Gangnam-Gu Seoul, Korea 06108 Tel:+82-2-2088-3560 Fax:+82-2-513-3567 magna@magnagroup.com		<ul> <li>9 Abdel Hamid El Deeb Street Alexandria, 21613 Egypt T: +(20)3 5822779 T: +(20)10 1223554</li> <li>5 Ahmed Shaker Street Fourth Zone Nasr City, 11586 Egypt T:+(20)2 26909965 T: +(20)10 1223553</li> </ul>
14 Emorranay telephone	www.magnagroup.com		info@trustengineering-eg.com www.trustengineering-eg.com

#### 1.4. Emergency telephone number

<u>Emergency telephone:</u> Call a Poison Center, emergency number or doctor/physician.

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## **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

<u>CLP:</u>

The product is classified: Skin Irrit. 2;H315 - Eye Dam. 1;H318 - Skin Sens. 1;H317

## 2.2. Label elements



Danger

<u>Contains:</u>	Triethanolamine 2-Aminoethanol 1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5-triazine
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
P280	Wear eye protection and gloves.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P501	Dispose of contents/container as hazardous waste.
2.3. Other hazards	
<u>PBT/vPvB:</u>	This product does not contain any PBT or vPvB substances.
<u>Other:</u>	The harmful effects may increase in used oil.

# SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2. Mixtures

The product contains: mineral oil and additives. DMSO < 3% (IP 346) Only classified substances above threshold limits are shown.

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CLP:

<u>%:</u>	CAS-No.:	EC No.:	REACH Reg. No:	Chemical name:	Hazard classification:	Notes:
55-65	64742-55-8	265-158-7	-	Distillates (petroleum), hydrotreated light paraffinic; Baseoil-unspecified	Asp. Tox. 1;H304	L
5-9	102-71-6	203-049-8	-	Triethanolamine	Skin Sens. 1;H317 Eye Irrit. 2;H319	
2-<5	141-43-5	205-483-3	-	2-Aminoethanol	Acute Tox. 4;H332 Acute Tox. 4;H312 Acute Tox. 4;H302 Skin Corr. 1B;H314	
0.5-2	9004-98-2	500-016-2	-	Polyethylene glycol monooleylether	Skin Irrit. 2;H315 Eye Irrit. 2;H319	
0.5-2	68920-66-1	500-236-9	-	Alcohols, C16-18 and C18- unsatd., ethoxylated	Skin Irrit. 2;H315	
0.5-2	27458-92-0	248-469-2	-	Isotridecan-1-ol	Skin Irrit. 2;H315 Aquatic Acute 1;H400	
0.5-1.5	4719-04-4	225-208-0	-	1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine	Acute Tox. 4;H302 Skin Sens. 1;H317	

<u>Chemical name:</u>	<u>SCL</u>	<u>M (ac)</u>	<u>M (chr)</u>	ATE(o) (mg/kg bw)	<u>ATE(d)</u> (mg/kg <u>bw)</u>	<u>ATE(i)</u> (vapour, mg/L)
Distillates (petroleum), hydrotreated light paraffinic; Baseoil-unspecified			-	-	-	
Triethanolamine			-	-	-	
2-Aminoethanol	STOT SE 3;H335: C ≥ 5 %		-	-	-	
Polyethylene glycol monooleylether			-	-	-	
Alcohols, C16-18 and C18-unsatd., ethoxylated			-	-	-	
Isotridecan-1-ol			1	-	-	
1,3,5-Tris(2-hydroxyethyl)hexahydro- 1,3,5-triazine	Skin Sens. 1;H317: C ≥ 0,1 %		-	-	-	
Notes:	L: DMSO < 3% (IP 346)					

References: The full text for all hazard statements is displayed in section 16.

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## **SECTION 4: FIRST AID MEASURES**

4.1. Description of first aid me	pasures
Inhalation:	Move into fresh air and keep at rest. In case of persistent throat irritation or coughing or after inhalation of oil mist: Seek medical attention and bring along these instructions.
<u>Skin contact:</u>	Remove contaminated clothing immediately and wash skin with soap and water. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.
Ingestion:	Immediately rinse mouth and drink 1-2 glasses of water. Keep person under observation. If uncomfortable: Transportation to hospital. Bring along these instructions.
4.2. Most important symptoms	s and effects, both acute and delayed

<u>Symptoms/effects:</u> See section 11 for more detailed information on health effects and symptoms.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

## 5.1. Extinguishing media

Extinguishing media:	Small fires: Extinguish with carbon dioxide or dry powder.
	Larger fires: Extinguish with foam, carbon dioxide or dry powder.
	Do not use water jet as an extinguisher, as this will spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

<u>Specific hazards:</u> During fire, gases hazardous to health may be formed.

#### 5.3. Advice for firefighters

Protective equipment for fire-	Selection of respiratory protection for fire fighting: follow the general fire
fighters:	precautions indicated in the workplace.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures

<u>Personal precautions:</u> Avoid inhalation of oil mist and contact with skin and eyes. Follow precautions for safe handling described in this safety data sheet.

## 6.2. Environmental precautions

Environmental precautions:	Do not discharge into drains, water courses or onto the ground.
6.3. Methods and material for	containment and cleaning up
Methods for cleaning up:	Absorb spillage with oil-absorbing material. Clean contaminated area with oil- removing material.

#### 6.4. Reference to other sections

References:	For personal protection, see section 8.
	For waste disposal, see section 13.

# SECTION 7: HANDLING AND STORAGE

## 7.1. Precautions for safe handling

Safe handling advice:	Observe good chemical hygiene practices. Avoid prolonged and repeated contact with oil, particularly used oil. Always remove oil with soap and water or skin cleaning agent, never use organic solvents. Do not use oil-contaminated clothing or shoes, and do not put rags moistened with oil into pockets.
Technical measures:	Use work methods which minimise oil mist production.

<u>Technical precautions:</u> When working with heated oil, mechanical ventilation may be required.

## 7.2. Conditions for safe storage, including any incompatibilities

Technical measures for safe	No special precautions.
<u>storage:</u>	
Storage conditions:	Store in tightly closed original container.

## 7.3. Specific end use(s)

Specific use(s): Cutting fluid.

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#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION 8.1. Control parameters Occupational exposure limits: CAS-No .: Chemical name: As: Exposure limits: Type: Notes: References: 141-43-5 2.5 mg/m3 TWA Sk EH40 2-Aminoethanol 1 ppm -3 ppm 7.6 mg/m3 STEL Sk; 15min Notes: Sk: Can be absorbed through skin. EH40: EH40/2005. 8.2. Exposure controls Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours and oil mist. Provide access to washing facilities incl. soap, skin cleanser and fatty cream. Personal protection: Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Respiratory equipment: In case of inadequate ventilation or risk of inhalation of oil mist, suitable respiratory equipment with combination filter (type A2/P3) can be used. Hand protection: Wear protective gloves. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. Thickness: 0.4 mm; Breakthrough time: >240min. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Eve protection: Risk of contact: Wear goggles/face shield. Wear apron or protective clothing in case of contact. Skin protection: Hygiene measures: Wash hands after contact. Wash contaminated clothing before reuse. Environmental Exposure Not available. Controls:

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# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

# 9.1. Information on basic physical and chemical properties

Physical state:	light brown liquid
<u>Odour:</u>	Petroleum.
Odour threshold:	Not available.
<u>pH:</u>	9,6 (10%)
Melting point / freezing point:	Not relevant.
Boiling point:	Not available
Flash point:	>200°C
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Explosive limits	Not available
Vapour pressure:	not available
<u>Vapour density:</u>	Not available.
Relative density:	~1 (20°C)
Solubility:	Miscible with water.
Partition coefficient (n- octanol/water):	Not available.
<u>Auto-ignition</u> temperature (°C):	Not available.
Decomposition temperature (°C):	Not available
<u>Viscosity:</u>	>22 mm²/s @ 40°C
Explosive properties:	Not available.
Oxidising properties:	Not available.
9.2. Other information	
<u>Other data:</u>	Not available.

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SECTION 10: STABILITY	AND REACTIVITY	
10.1. Reactivity		
<u>Reactivity:</u>	Not reactive.	
10.2. Chemical stability		
<u>Stability:</u>	Stable under normal temperature conditions.	
10.3. Possibility of hazardous	reactions	
Hazardous Reactions:	None known.	
10.4. Conditions to avoid		
Conditions to avoid	Avoid heat.	
10.5. Incompatible materials		
Incompatible materials:	Strong oxidising substances.	
10.6. Hazardous decomposition products		
Hazardous decomposition products:	None in particular.	

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## SECTION 11: TOXICOLOGICAL INFORMATION

## 11.1. Information on toxicological effects

The harmful effects may increase in used oil.

Acute Toxicity (Oral):	Based on available data, the classification criteria are not met. 2-Aminoethanol: LD50 (oral, rat): 1089 mg/kg 1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5-triazine: LD50 (oral, rat): 763 mg/kg
Acute Toxicity (Dermal):	Based on available data, the classification criteria are not met.
Acute Toxicity (Inhalation):	Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation:	Causes skin irritation.
Serious eye damage/irritation:	Causes serious eye damage.
<u>Respiratory or skin</u> sensitisation:	May cause an allergic skin reaction.
Germ cell mutagenicity:	Based on available data, the classification criteria are not met.
Carcinogenicity:	Based on available data, the classification criteria are not met.
Reproductive Toxicity:	Based on available data, the classification criteria are not met.
STOT - Single exposure:	Based on available data, the classification criteria are not met.
STOT - Repeated exposure:	Based on available data, the classification criteria are not met.
Aspiration hazard:	Based on available data, the classification criteria are not met.
Inhalation:	Inhalation of oil mist or vapours formed during heating of the product will irritate the respiratory system and provoke coughing. Prolonged or repeated contact with used oil may cause serious skin diseases, such as dermatitis and skin cancer.
Ingestion:	May irritate and cause malaise.

# 11.2. Information on other hazards

Endocrine disrupting	The product does not contain any substance identified as having endocrine
properties:	disrupting properties.

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# SECTION 12: ECOLOGICAL INFORMATION

SECTION 12: ECOLOGIC	
12.1. Toxicity	
Ecotoxicity:	Oil spills are generally hazardous to the environment. The product contains a substance which is very toxic to aquatic organisms. Isotridecan-1-ol: $0,1 < LC50 \le 1 mg/l$ M(ac) = 1
12.2. Persistence and degrad	ability
<u>Degradability:</u>	The product is expected to be slowly biodegradable.
12.3. Bioaccumulative potenti	<u>al</u>
Bioaccumulative potential:	No data available on bioaccumulation.
<u>12.4. Mobility in soil</u>	
Mobility:	Not available.
12.5. Results of PBT and vPv	B assessment
PBT/vPvB:	This product does not contain any PBT or vPvB substances.
12.6. Endocrine disrupting pro	operties
Endocrine disrupting properties:	The product does not contain any substance identified as having endocrine disrupting properties.
12.7. Other adverse effects	
Other adverse effects:	None known.
SECTION 13: DISPOSAL	CONSIDERATIONS
13.1. Waste treatment metho	
	s in accordance with local authority requirements. Waste is classified as
hazardous waste.	
Waste from residues:	EWC-code: 12 01 07 EWC-code: 12 01 09 (Emulsion.)
Contaminated packaging:	Dispose of contaminated packings as residue.

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## SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

#### <u>14.1. UN number</u>

UN-No:

#### 14.2. UN proper shipping name

Proper Shipping Name:

#### 14.3. Transport hazard class(es)

Class:

## 14.4. Packing group

<u>PG:</u>

## 14.5. Environmental hazards

Marine pollutant:

Environmentally Hazardous

substance:

## 14.6. Special precautions for user

Special precautions: None known.

## 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk: Not relevant.

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## **SECTION 15: REGULATORY INFORMATION**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture		
Special provisions:	As a general rule, persons under 18 years of age are not allowed to work with this product. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.	
National regulation:	<ul> <li>UK Statutory Instruments, 2021 No. 904, CONSUMER PROTECTION ENVIRONMENTAL PROTECTION HEALTH AND SAFETY. The REACH etc. (Amendment) Regulations 2021.</li> <li>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.</li> <li>The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019 (SI 2019 No. 720), as amended.</li> <li>The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.</li> <li>EH40/2005, Workplace exposure limits 2005, with amendments.</li> <li>The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895).</li> <li>The Management of Health and Safety at Work Regulations 1999 (SI 1999 No. 3242), with amendments.</li> </ul>	

#### 15.2. Chemical Safety Assessment

<u>CSA status:</u> No chemical safety assessment has been carried out.

## **SECTION 16: OTHER INFORMATION**

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

For restrictions on use see section 15.

Handling of used oils:

Protect health - avoid prolonged and repeated skin contact. Wash with soap and water. Protect the environment - do not pollute drains, water courses or the soil. Contact your local authority for any used oil disposal instructions.

The following sections contain revisions or new statements: 1, 2, 3, 4, 8, 11, 12, 13, 14, 15, 16.

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Abbreviations and acronyms	CSA= Chemical Safety Assessment.		
used in the safety data sheet:	LC50 = Lethal Concentration 50%.		
	LD50 = Lethal Dose 50%. M(ac) = M-factor acute toxicity.		
	PBT = Persistent, Bioaccumulative and Toxic.		
	SCL = Specific Concentration Limit.		
	UFI = Unique Formula Identifier.		
	vPvB = very Persistent and very Bioaccumulat	tive.	
Additional information:	Classification according to Regulation (EC) No	o. 1272/2008: Calculatic	on method.
Wording of H-statements:			
H302	Harmful if swallowed.		
H304	May be fatal if swallowed and enters airways.		
H312	Harmful in contact with skin.		
H314	Causes severe skin burns and eye damage.		
H315	Causes skin irritation.		
H317	May cause an allergic skin reaction.		
H318	Causes serious eye damage.		
H319	Causes serious eye irritation.		
H332	Harmful if inhaled.		
H400	Very toxic to aquatic life.		

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark. www.dhigroup.com.