



Material Safety Data Sheet

1. Identification of the Substance / Preparation and Company / Undertaking

Product Name : Engine Treatment
Technical Name : Metal Treatment
: Metal Conditioner
: Anti - Friction Treatment
: Anti - Friction Modifier
: Friction Modifier
Validation Date : 31 December 2012

In Case of Emergency Call :

Manufacturer / Supplier

Pheeramas Group Company Limited.
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2. Composition and Information on Ingredients

Product Description - Metal Treatment Concentrated, it's the complex chemical containing the chemical ingredients.
- The main composition are include Phosphorus, Zinc, Barium and Dioctyl not more than 39 %
- The rest of 61 % of containing are Hydrocarbhone and others additive.

Hazardous Ingredient(S) : Contains no Hazardous Ingredients in accordance with EC Directive 93 / 112 / EEC

Hazard Symbol "R" Phrases

3. Hazards Identification

Low acute toxicity under normal conditions of handling and use.
Slightly irritant to eyes.
Repeated exposure to high levels may produce liver and kidney damage.



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4. First Aid Measures

- Inhalation** : Remove patient from exposure, keep warm and at rest.
- Ingestion** : DO NOT induce vomiting. Wash out mouth with water and give 200-300 ml. (half a pint) of water to drink.
- Skin Contact** : Remove contaminated clothing. Wash Skin with soap and water.
- Eye Contact** : Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain medical attention.
- Further Medical Treatment** : Unlikely to be required but if necessary treat symptomatically.

5. Fire-Fighting Measures

Non-Flammable

May decompose if heated above 200 Deg C with liberation of phosphoric / sulfuric

Extinguishing Media : Normal extinguishing media

Fire Fighting Protective Equipment : A self contained breathing apparatus and full protective clothing should be worn in fire conditions.

6. Accidental Release Measures

Caution - spillages may be slippery.

Absorb spillages onto sand, earth or any suitable adsorbent material.

Transfer to a container for disposal.

Do not allow to enter drains, sewers or watercourses.

Spillages or uncontrolled discharges into watercourses must be alerted to the environment agency or other appropriate regulatory body.



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7. Handling and Storage

- Handling** : Avoid contact with eyes.
Avoid prolonged skin contact.
Provide adequate ventilation where operational procedures demand it.
Do not allow to enter drains, sewers or watercourses.
- Storage** : Keep only in original container at temperatures not exceeding 40 Deg C.
Keep container dry.
Keep away from direct sunlight.
Storage vessels should be made of lined mild steel in accordance with the advice given in bulk storage and handling brochure.
- Storage Life** : In excess of 2 years if stored in accordance with advice given above.

8. Exposure Controls and Personal Protection

- If prolonged or excessive skin contact is likely : Wear suitable protective clothing and gloves.
- If splashing or mist is likely to occur : Wear eye / face protection.
- Good working practice suggests gloves and goggles should be worn.

Occupational Exposure Limits

Hazardous Ingredient(s)	LTEL 8 hr TWA		STEL		Notes
	ppm	mg/m ³	ppm	mg/m ³	
No Occupational Exposure limit Assigned					

9. Physical and Chemical Properties

For specific physical properties of individual grades, please refer to technical literature and / or product specifications.

- Form** : Mobile liquid - viscous liquid.
- Odour** : low
- Boiling Point (Deg C)** : >200, Decomposes below boiling point.
- Flash Point (Deg C)** : None
- Vapor Pressure** : Practically non-volatile
- Solubility (Water)** : Insoluble
- Solubility (Other)** : Soluble in most aromatic hydrocarbons, solvents, esters and ketones.
- Pour Point (Deg C)** : -40 to +27



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10. Stability and Reactivity

- Hazardous Reactions** : Can react with alkali metals and alkaline earth metals which have a strong affinity Friction Proofing can react with iron, zinc and aluminium at high temperatures leading to decomposition.
- Conditions to avoid** : Strong oxidising agents, heat and hot surfaces.
- Hazardous Decomposition Product(s)** : Prolonged heating at temperatures in excess of 180°C or heating above 200°C for short periods of time will result in decomposition.

11. Toxicological Information

This health hazard assessment is based on information available on similar products.

- Inhalation** : Unlikely to be hazardous by inhalation.
- Skin Contact** : Unlikely to cause skin irritation in man.
- Eye Contact** : By analogy with a similar substance this material is likely to cause slight eye irritation.
- Ingestion** : Unlikely to be hazardous if swallowed.
- Long term Exposure** : Repeated exposure to high levels may produce liver and kidney damage chronic ingestion studies in animals have shown that repeated doses of a similar complex chemical blend (C14-17 52%) gave no effect levels in the range of 250-300 ppm. Slight effects on the liver were seen at higher doses. Adverse effects (blood disorders) have been seen in newborn rats, reared by dams fed on high doses of a similar complex chemical blend as a group of chemicals are not genotoxic. Their lack of genotoxic activity together with the results of other studies leads us to conclude that complex chemical are unlikely to present a carcinogenic hazard to man under normal conditions of handling and use.

12. Ecological Information

- Environmental Fate and Distribution** : High tonnage material produced in wholly contained systems.
High tonnage material use in wholly contained systems.
Liquid with low volatility.
The product is essentially insoluble in water.
The Product has potential for bioaccumulation.
- Persistence and Degradation** : There is evidence of partial hydrolysis in water.
There is evidence of slow degradation in soil and water.
- Toxicity** : Unlikely to have any ecotoxic or environmentally toxic effect.
- Effect on Effluent Treatment** : The product is partially remove in biological treatment processes.



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13. Disposal Considerations

Do not discharge into drains or the environment, dispose to an authorized waste collection point.
Disposal should be in accordance with local, state or national legislation.

14. Transport Information

Not classified as dangerous for transport.

15. Regulatory Information

Not classified as dangerous for supply / use

16. Other Information

PREPARATION INFORMATION

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ADDRESS CONTACT INFORMATION

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