#### **RAM PETRO PRODUCTS**

AMBATTUR, CHENNAI-58.

#### MATERIAL SAFETY DATA SHEET

#### 1. Product and Company Identification **ProductName Diesel Exhaust Fluid** CAS# Mixture Productuse **Diesel Exhaust NOx Reducing Agent** RAM PETRO PRODUCTS Manufacturer NO.232&233, NAGESHWARA RAO ROAD, VANAGARAM ROAD, AMBATTUR **CHENNAI-600058** Phone: 7338896118 LEGEND Health 1 HMIS/NFPA 0 4 Severe 0 3 Serious 0 2 Moderate Slight 1 Personal Protection В Minimal 0 2. Hazards Identification EmergencyOverview CAUTION EYE AND SKIN IRRITANT. Potential short term health effects Routesofexposure Eve. Skin contact. Inhalation. Indestion

Roulesoi exposui e	Eye, Skircomaci, mnaiation, ingestion.
Eyes	May cause irritation.
Skin	May cause irritation.
Inhalation	May be harmful by inhalation. May cause respiratory tract irritation.
Ingestion	May cause stomach distress, nausea or vomiting.
Targetorgans	Eyes. Skin. Respiratorysystem.
Signsandsymptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin.
	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

#### 3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Water	7732-18-5	67.5
Urea	57-13-6	32.5

#### 4. First Aid Measures

aid procedures	
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if
	irritation persists.

Inhalation	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathinghasstopped, trainedpersonnel should administer CPR immediately.
Ingestion	Do notinducevomiting. Rinsemouthwithwater,thendrinkoneortwoglasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious,or is convulsing.
Notestophysician	Symptoms may be delayed.
Generaladvice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety datasheet to the doctor in attendance. Avoid contact with eyes and skin. We arimpervious gloves and safety glasses. Keep out of reach of children.

## 5. Fire Fighting Measures

Flammable properties Not flammable by WHMIS/OSHA criteria.			
Extinguishing media			
Suitable extinguishing media	Treat for surrounding material.		
Unsuitable extinguishing media	Not available		
Protection of firefighters	Not available		
Specific hazardsarisingfrom the chemical	Not available		
Protective equipment for fire fighters	Firefighters should wear full protective clothing including self-contained breathing apparatus.		
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Ammonia.		
Explosion data			
Sensitivity to mechanical Impact	Not available		
Sensitivitytostaticdischarge	Not available		
	6. Accidental Release Measures		
Personal precautions	Keep unnecessary personnel away. Wear appropriate protective clothing.		
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.		
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labeled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.		
	7. Handling and Storage		
Handling Storage	Use good industrial hygiene practices in handling this material. Keep out of reach of children. Store in a closed container away from incompatible		

## 8. Exposure Controls / Personal Protection

Exposurelimits Ingredient(s)	Exposure Limits
Urea	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	Ensure adequate ventilation, especially in confined areas. Use onlyunder good ventilation conditions or with respiratory protection.
Personal protective equipment	
Eye/faceprotection	Safety glasses with side shields are recommended if splashing or contact is likely.
Handprotection	Impervious gloves (Nitrile, Viton, Butyl) arerecommendedif prolonged or repeated contact is likely.
Skinandbody protection	As required by employer code.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved
	NIOSH respirator.
Generalhygiene considerations	Avoid breathing vapors. Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

## 9. Physical & Chemical Properties

Appearance	Clear.
Color	Colorless
Form	Liquid
Odor	Slight ammonia
Physicalstate	Liquid
рН	9.8 - 10.0
Freezingpoint	-12°C
Boilingpoint	104°C
Density	9.1 lbs./USG - 4.13 kg/3.785L
Specificgravity	1.087-1.093 @ 20°C
Solubility(H2O)	100%

## 10. Chemical Stability & Reactivity Information

Chemicalstability	Stable under recommended storage conditions.
Conditionstoavoid	Do not mix with any other chemical or product.
Incompatible materials	Acids. Oxidizers. Alkalis.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Ammonia.
Possibility ofhazardous reactions	Hazardous polymerization does not occur.

# 11. Toxicological Information

Component analysis - LC50	
Ingredient(s)	LC50
Urea	Not available
Component analysis - Oral LD50 Ingredient(s)	LD50
Urea	11,500 - 13,000mg/kgmouse; 14,300 - 15,000mg/kg rat; 510mg/kg cattle
Effects of acute exposure	
Eye	May cause irritation.
Skin	May cause irritation.
Inhalation	Not available
Ingestion	May cause stomach distress, nausea or vomiting.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.
Reproductive effects	Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.

# 12. Ecolological Information

Ecotoxicity	Components of this product have been identified as having potential environmental		
	concerr	IS.	
Ecotoxicity - Freshwater Fish S	pecies Data	a	
Urea	57-13-6	96 Hr LC50 Barillius barna: >9100 mg/L	
Ecotoxicity - Microtox Data			
Urea	57-13-6	24HrEC50 Daphnia magna straus:>10000mg/L	
Environmental effects	Not ava	ailable	
Aquatictoxicity	Not ava	ailable	
Persistence / degradability	Notava	ilable	
Bioaccumulation / accumulation	Notava	ilable	
Partition coefficient	Not ava	ailable	
Mobility in environmental media	Notava	ilable	
Chemicalfateinformation	Notava	ilable	
Otheradverseeffects	Not ava	ilable	

#### 13. Disposal Considerations

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Wastecodes	Not available			
Disposalinstructions	Review federal, provincial, and local government requirements prior to disposal.			
Waste from residues / unused	Notavailable			
products	Not available			
Contaminated packaging	Not available			
	14. Transport Information			
Department of Transportation (DOT)				
Not regulated as dangerous goods.				
Transportation of Dangerous Goods				
Not regulated as dangerous goods.				
	15. Regulatory Information			
Occupational Safety and Health Administrat 29 CFR 1910.1200 hazardous	tion (USHA) Yes			
chemical	res			
Superfund Amendments and Reauthorizat				
Hazardcategories	Immediate Hazard - Yes			
	Delayed Hazard - No Fire Hazard - No			
	Pressure Hazard - No			
• ··· •••	Reactivity Hazard -No			
Section 302 extremely hazardous substance	No			
Section 311 hazardous				
chemical	Yes			
Clean Air Act (CAA)	Notavailable			
CleanWaterAct (CWA)	Notavailable			
SafeDrinkingWaterAct(SDWA)	Notavailable			
Drug Enforcement Agency (DEA)	Notavailable			
Food and Drug Administration				
(FDA)	Not available			
WHMIS status	Controlled			
HMIS classification	Class D - Division 2B			
Issuedate	06-Sept-2018			
Effective date	06-Sept-2018			
Expirydate	pirydate 06-Sept-2021			

Preparedby

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