# ARKOS AdBlue ®
# MATERIAL SAFTEY DATA SHEET (MSDS)

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

### 1.1 Product Identifier

**Product name** — **ARKOS AdBlue ®**
**Product description** — Diesel engine exhaust fluid/ SCR fluid – For reduction in emission pollutants
**Product type** — Liquid

### 1.2 Identified uses

**Distribution of substance** — Automobile sector
**Formulation & (re)packing of substances and mixtures** — Automobile sector
**Manufacture of substance** — Automobile sector
**Functional Fluids** — Automobile sector

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

**Supplier/Manufacturer** — APAR Industries Limited
18 T.T.C., M.I.D.C. Industrial Area , Thane Belapur Road , Rabale, Navi Mumbai – 400701. India.
+91 22 61110444 (Office hours 9.30am to 17.00pm)
www.apar.com

**e- mail address of person responsible for this SDS** — hse@apar.com

### 1.4 Emergency telephone number

+91 9833811132

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Product definition — Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code**

### 2.2 Label elements

Hazard pictograms — Not Applicable
Not Applicable

Signal word — Not applicable
Hazard statements — Not Applicable
Precautionary statements — Not Applicable.
Prevention — Not Applicable
Response — Not applicable

Storage
Disposal — Not applicable

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles — Not applicable

### 2.3 Other hazards

Not Applicable

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

## SECTION 3 COMPOSTION/ INFORMATION ON INGREDIENTS

### 3.2 Mixtures — Mixture

| Product/Ingredient name | Identifiers | % | Classification Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|---|---|---|---|
| UREA | CAS NO 57–13- 6 | 30 - 34 | **N.A** | UREA |
| WATER | CAS 7732-18-5 | 66- 70 | N.A | WATER |

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance does not meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance does not meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

## SECTION 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

| | |
|---|---|
| Eye contact | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist. |
| Inhalation | If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If casualty is unconscious and: If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe. Maintain an open airway. |
| Skin contact | Wash with soap and water. Remove contaminated clothing and shoes. Handle with care and dispose of in a safe manner. Seek medical attention if skin irritation, swelling or redness develops and persists. |
| Ingestion | Immediately give a glass of water.<br>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor |
| Protection of first-aiders | Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. |

### 4.2 Most important symptoms and effects, both acute and delayed

**Potential acute health effects**

| | |
|---|---|
| Eye contact | Eye contact may cause redness and transient pain. |
| Inhalation | No Known significant effects or critical hazards. |
| Skin contact | No known significant effects or critical hazards. |
| Ingestion | May be fatal if swallowed and enters airways. |

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

| | |
|---|---|
| Notes to physician | Due to low viscosity there is a risk of aspiration if the product enters the lungs. Treat symptomatically. |
| Specific treatments | Always assume that aspiration has occurred. |

## SECTION 5 FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

| | |
|---|---|
| Suitable extinguishing media<br>Unsuitable extinguishing media | The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.In such an event consider:<br>foam.<br>dry chemical powder.<br>carbon dioxide. |

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

| | |
|---|---|
| Hazards from the substance or mixture | If heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | Solid urea decomposes above the melting point(132.7°c to 135°C).Carbon monoxide, carbon dioxide, ammonia,nitrogen may be produced. |

### 5.3 Advice for firefighters

| | |
|---|---|
| Special precautions for firefighters | Promptly isolate the scene by removing all persons from the vicinity of the incident . No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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

| | |
|---|---|
| For non-emergency personnel | Ensure adequate ventilation .Use protective clothing |
| For emergency responders | Ensure adequate ventilation .Use protective clothing |

6.2 Environmental precautions — No special measures required

6.3 Methods and material for containment and cleaning up

Minor spills
Clean up all spills immediately.
Avoid breathing vapours and contact with skin and eyes.
Control personal contact with the substance, by using protective equipment.
Contain and absorb spill with sand, earth, inert material or vermiculite.
Wipe up. Place in a suitable, labelled container for waste disposal.

Major Spills
Clear area of personnel.
Alert Fire Brigade and tell them location and nature of hazard.
Control personal contact with the substance, by using protective equipment as required.
Prevent spillage from entering drains or water ways.
Contain spill with sand, earth or vermiculite.
Collect recoverable product into labelled containers for recycling.
Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
Wash area and prevent runoff into drains or waterways.
If contamination of drains or waterways occurs, advise emergency services.

6.4 Reference to other sections
See Section 1 for emergency contact information.
See Section 7 for safe handling
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

## SECTION 7 HANDLING AND STORAGE

7.1 Advice on general occupational hygiene Storage
Ensure that proper housekeeping measures are in place. Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash hands thoroughly after handling. Change contaminated clothes at the end of working shift. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities
Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

7.2 Conditions for safe storage, including any incompatibilities
Store separately from oxidising agents.
Recommended materials for containers, or container linings use mild steel, stainless steel Polyethylene or polypropylene container.. Not suitable : Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.
Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Store locked up. Protect from sunlight.

7.3 Specific end use(s)
Recommendations
Not available
Industrial sector specific solutions
Not available

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

**Occupational exposure limits**

| Product/Ingredient name | Exposure limits values |
|---|---|
| DIESEL EXHAUST FLUID/UREA SOLUTION | TEEL -1<br>30 mg/m3 |

Recommended monitoring procedures
If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace
atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure Control
Appropriate engineering Controls
Mechanical ventilation and local exhaust will reduce exposure via the air.
Wash hands, forearms and face thoroughly after handling chemical products,
before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Recommended: Safety glasses with side shields.

Individual protection measures
Hygiene measures
4 - 8 hours (breakthrough time): nitrile rubber

| | |
|---|---|
| Eye/face protection | Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift. |
| Skin protection | |
| Hand protection | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Body protection | Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. |
| Other skin protection | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |
| Respiratory protection | |

Environmental exposure controls

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance | Clear |
| Physical state | Liquid |
| Color | Water white |
| Odor | Odor less to mild ammonia |
| Odor threshold | Not available |
| pH | 9.8 – 10.0 |
| pour point | - 11.5 °C (ASTM D-97) |
| Flash point | Not applicable |
| Evaporation rate | Not available |
| Flammability (solid, gas) | Not available |
| Flammability limits in air, lower, % by volume | Not available |
| Flammability limits in air, upper, % by volume | Not available |
| Vapour pressure | No data availble |
| Density | 1.09@ 20 DEG C |
| Solubility(ies) | |
| Solubility (water) | Soluble in water |
| Partition coefficient (n-octanol/water) | Not available |
| Decomposition temperature | No Data |
| Auto-ignition temperature | No Data |
| Viscosity, Kinematic at 40°C (104°F) | Not available |
| Explosive properties | Dynamic viscosity 1.4cPs @25 DEG C |
| Oxidising properties | Not Explosive |
| | Not available |

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| 10.1 Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | Stable under normal conditions |
| 10.3 Possibility of hazardous Reactions | Under normal conditions of storage and use, hazardous reactions will not occur. Oxidising agent. |
| 10.4 Conditions to avoid | Keep away from extreme heat and oxidizing agents. |
| 10.5 Incompatible materials | Alkali,Acid, oxidizing agent |
| 10.6 Hazardous decomposition products | No dangerous decomposition products are formed under normal conditions. Decomposes at a temperature above 132.7°C to 135°C, carbondioxide , carbon monoxide, ammonia & nitrogen gases are formed. |

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Diesel Exhaust Fluid | 14300 mg/kg | Rat | | Oral |

| | |
|---|---|
| Irritation/Corrosion | |
| Skin | No known significant effects or critical hazards. |
| Eye | No known significant effects or critical hazards. |
| Respiratory | No known significant effects or critical hazards. |
| Sensitisation | |
| Skin | No known significant effects or critical hazards. |
| Respiratory | No known significant effects or critical hazards. |
| Mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Carcinogenicity | The product is not carcinogen. |

| | |
|---|---|
| Reproductive toxicity | Contains no ingredient listed as toxic to reproduction. |
| Specific target organ toxicity - single exposure | Not classified |
| Specific target organ toxicity - repeated exposure | Not classified |
| Aspiration hazard | Not classified |
| Information on likely routes of exposure | Not available. |
| Potential acute health effects | Eye contact may cause redness and transient pain. |
| Eye contact | Inhalation of vapors at elevated temperatures may cause respiratory irritation. |
| Inhalation | No known significant effects or critical hazards. |
| Skin contact | May be fatal if swallowed and enters airways. |
| Ingestion | |
| Potential chronic health effects | No known significant effects or critical hazards. |
| General | The product should not be regarded as a carcinogen. |
| Carcinogenicity | No known significant effects or critical hazards. |
| | No known significant effects or critical hazards. |
| Mutagenicity | No known significant effects or critical hazards. |
| Teratogenicity | No known significant effects or critical hazards. |
| Product/ingredient name | Not available. |
| Fertility effects | |
| Other information | |
| Specific hazard | |

## SECTION 12 ECOLOGICAL INFORMATION

| | |
|---|---|
| 12.1 Toxicity | Not expected to be harmful to aquatic organisms. |
| 12.2 Persistence and degradability | Biodegradable. |
| 12.3 Bioaccumulative potential | Bioaccumulation is not expected to occur. |
| 12.4 Mobility in soil | Substantial biodegradation in soil. |
| 12.5 Results of PBT & vPvB Assessment | Not applicable |
| 12.6 Other adverse effects | When low concentrations are discharged correctly into adapted biological sewage treatment plants, interface with the degradation activity of activated sludge is not likely. |

## SECTION 13 DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**13.1 Waste treatment methods**

Product

| | |
|---|---|
| Methods of disposal | Remove in accordance with national/local authorizations |
| Hazardous waste | Not considered as Hazardous |

European waste catalogue (EWC)

| Waste code | Waste designation |
|---|---|
| 13 03 07* | According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. |

Packaging

| | |
|---|---|
| Methods of disposal | The generation of waste should be avoided or minimized wherever possible. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Disposals in accordance with local regulations. |

## SECTION 14 TRANSPORT INFORMATION

**International transport regulations**

| | ADR/ RID | ADN | IMO/IMDG Classification | ICAO/IATA Classification |
|---|---|---|---|---|
| 14.1 UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - | - |
| 14.4 Packing group | - | - | - | - |

| | | | | |
|---|---|---|---|---|
| 14.5 Environmental hazards | No | No | No | No |
| Additional information | - | - | - | - |

14.6 Special precautions for User

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex I of MARPOL 73/78 and the IBC Code

**Not applicable**

## SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No information available

15.2 Chemical Safety Assessment chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16 OTHER INFORMATION

**Revision comments** Not available.

**Legend to abbreviations**

| | |
|---|---|
| ADR | European agreement concerning the international carriage of dangerous good by road. |
| RID | Regulations agreement concerning the international carriage of dangerous good by rail. |
| IMDG – CODE | International maritime dangerous goods code. |
| ICAO | International Civil Aviation Organization. |
| IATA | International air transport association. |
| GHS | Globally Harmonized System of Classification and Labeling of Chemicals. |
| CLP | Classification, Labeling and Packaging Regulation [Regulation (EC) No.1272/2008]. |
| SCBA | Self-Contained Breathing Apparatus. |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]. |
| LC 50 | Median lethal concentration. |
| LD 50 | Median lethal dose. |
| PBT | Persistent, Bio accumulative and Toxic. |

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

| Classification | Justification |
|---|---|
| Not applicable | Not applicable |

| | |
|---|---|
| Full text of abbreviated H statements | Not applicable . |
| Full text of classifications [CLP/GHS] | Not applicable |
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