



ARKOS COOL RTU

MATERIAL SAFETY DATA SHEET

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

1.1 Product Identifier

Product name ARKOS COOL RTU 50%
Product description AUTOMOTIVE COOLANT
Product type Liquid



1.2 Identified uses

Distribution of substance Industrial
Formulation & (re)packing of substances and mixtures Industrial
Manufacture of substance Industrial
Functional Fluids Industrial

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

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Oral) : CATEGORY 4

Specific target organ Toxicity - repeated exposure (Oral) : CATEGORY 2 (KIDNEY)

GHS label elements

Hazard pictograms



Signal Word : Warning
Hazard Statements : H302 Harmful if swallowed.
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary Statements

Prevention:

P260 Do not breathe mist or vapors.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product:

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P314 Get medical advice/ attention if you feel unwell.



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DISPOSAL

P501 Dispose of contents/ container to an approved waste disposal plant

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

3.2 Mixtures		Mixture		
Product/Ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
ETHYLENE GLYCOL	CAS: 107-21-1	15 - 30		
Water	CAS: 7732-18-5	QS%		
COROSION INHIBITORS	PROPRIETARY	01 - 05		

This product contains nonhazardous anti-Foam agent.

Actual concentration is withheld as a trade secret.

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. Accidental high pressure injection through the skin requires immediate medical attention. Do not wait for symptoms to develop.
Ingestion	Always assume that aspiration has occurred. Do not induce vomiting. Can enter lungs and cause damage. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Seek professional medical attention or send the casualty to a hospital. Do not wait for symptoms to develop. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply. 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	Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
Skin contact	No known significant effects or critical hazards.
Ingestion	May be fatal if swallowed and enters airways.



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4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician
Specific treatments

Due to low viscosity there is a risk of aspiration if the product enters the lungs. Treat symptomatically.
Always assume that aspiration has occurred.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Unsuitable extinguishing media

Dry chemicals. Foam. Carbon dioxide (CO₂). Water spray or foam.
Do not use direct water jets on the burning product; they could cause splattering and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance
or mixture
Hazardous thermal
decomposition products

In a fire or if heated, a pressure increase will occur and the container may burst.
This substance will float and can be reignited on surface water.
Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H₂S, SO_x (sulfur oxides) or sulfuric acid and unidentified organic and inorganic compounds.

5.3 Advice for firefighters

Special precautions for firefighters
Special protective equipment for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
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

Avoid breathing vapour or mist. Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind/keep distance from source. In case of large spillages, alert occupants in downwind areas.

For emergency responders

Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations.

Note : recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions.

For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

Small spillages: normal antistatic working clothes are usually adequate.

Large spillages: full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons.

Note : gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated.

Respiratory protection: A half or full-face respirator with filter(s) for organic vapours (and when applicable for H₂S) a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

6.2 Environmental precautions

Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations.

In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents.

If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.

6.3 Methods and material for containment and cleaning up

Small spill
Large spill

Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.

Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.



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6.4 Reference to other sections

See Section 1 for emergency contact information.
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.

SECTION 7 HANDLING AND STORAGE

7.2 Conditions for safe storage, including any incompatibilities

Store separately from oxidizing agents.
Recommended materials for containers, or container linings use mild steel, stainless steel. 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 vapours. 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.
Not available
Not available

7.3 Specific end use(s) Recommendations Industrial sector specific solutions

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
Distillate (petroleum), hydro treated Heavy Paraffinic,	PEL 5 mg/m ³ Mist. TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction

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. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.

Individual protection measures Hygiene measures

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.

Eye/face protection

Skin protection

Hand protection
Body protection

4 - 8 hours (breakthrough time): nitrile rubber
Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.

Other skin 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.

Respiratory 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.

Environmental exposure controls

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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear
Physical state	Liquid
Color	GREEN
Odor	CHARACTERISTIC
Odor threshold	Not available
pH	8 - 9 (68 °F / 20 °C)
Melting point/Pour point	Not Available
Flash point	212 - < 392 °F / 100 - < 200 C (ISO 2592)



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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	ca. 0.2 hPa (68 °F / 20 °C)
Density	1.02 -1.04 g/cm ³ (68 °F / at 20°C)
Solubility(ies)	
Solubility (water)	Completely soluble in water
Partition coefficient (n-octanol/water)	Not available
Decomposition temperature	No Data available
Auto-ignition temperature	No Data available
Viscosity, Kinematic at 100°C (104°F)	>22.0mm ² /s (20 °c)
Explosive properties	No Data available
Oxidising properties	This substance or mixture is not classified as oxidizing.

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity	Not classified as reactivity hazard.
10.2 Chemical stability	Stable under normal conditions
10.3 Possibility of hazardous Reactions	
10.4 Conditions to avoid	Can react with strong Oxidising Agents.
10.5 Incompatible materials	Keep away from extreme heat and oxidizing agents.
10.6 Hazardous decomposition products	Oxidising Agents No hazardous decomposition products known.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Basis No toxicological data is available for this product. Information is provided based on the additives, other components and base stock used. GLYCOL RADIATOR COOLANT
 Page 4 of 5 Acute Exposure LD 50 expected to be above 2000 mg/kg. - Oral Acute Exposure LD 50 expected to be above 2000 mg/kg. - Skin Inhalation Repeated or prolonged exposure to oil mists may cause irritation. Eye Irritation Slightly irritant. Skin Irritation Not a skin irritant unless repeated or prolonged contact. Respiratory Slight irritant. Irritation Carcinogenicity No data to suggest that product is carcinogenic. Mutagenicity No data to suggest that product is mutagenic.

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SECTION 12 ECOLOGICAL INFORMATION

Basis No ecological data is available for this product. Information is provided based on the additives, other components and base stock used. Mobility Liquid under most environmental conditions. Floats on water. It is absorbed by soil and will not be mobile. Persistence/ Not readily biodegradable. Major constituents are expected to Degradability be inherently biodegradable, but the product contains components that may persist in the environment. Bioaccumulation Has the potential to bioaccumulate. Ecotoxicity Poor soluble mixture. Practically non- toxic to aquatic organisms. May cause physical fouling of aquatic organisms.

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

<u>Product</u>	
Methods of disposal	Dispose of in accordance with local regulations
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for disposal.
Hazardous waste	Yes



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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

Oils

SECTION 15 REGULATORY INFORMATION

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Seveso D

This product is not controlled under the Seveso Directive.

International Lists

National Inventory

Inventory name

On inventory (yes/no)*

Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).



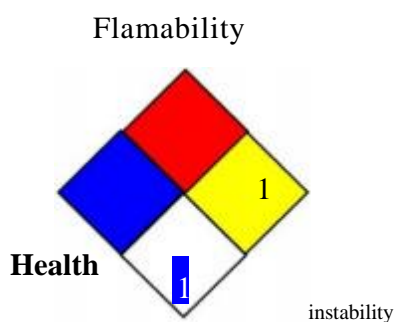
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15.2 Chemical Safety Assessment

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, Labelling 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.



HMIS® IV:

HEALTH*		2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.