

# Technical Data Sheet (TDS)

## Shell Antifreeze RTU -40C

### MEG Based Inorganic Additive Ready To Use Coolant



**Shell Antifreeze RTU** is an engine coolant (antifreeze) based on mono ethylene glycol, containing no nitrites, amines or phosphates (NAP free). This product is suitable for both petrol and diesel engines, carefully chosen additives give the following properties in aqueous mixtures:

1. Thermal characteristics that permit effective engine cooling without boiling.
2. Anticorrosion protection of all metals and alloys used in the cooling system of modern vehicles.
3. Protection against frost, depending on the concentration chosen.
4. Compatibility with rubber and plastics used in the cooling system.
5. Excellent antifoaming characteristics.

Typical Properties Shell Antifreeze RTU	
Appearance	Clear liquid, blue-green
Density @ 20 °C	1,074 g/cm <sup>3</sup> ASTM D 4052
pH (50% vol in water)	8,9 ASTM D 1287
Freezing Point (100%)	-40 °C ASTM D 1177
Boiling Point (100%)	110 °C ASTM D 1120
Reserve Alkalinity (ml HCl N/10)	8,6 ml ASTM D 1121
Foaming Characteristics at 88 °C	ASTM D 1881
- Height	35 ml
- Breaktime	2 seconds

*\*These are typical properties and do not constitute a specification, for specification limits please refer to the product specification.*

**Shell Antifreeze RTU** complies with the following quality standards:

	Group	Standard
USA	ASTM Standards	ASTM D3306
UK	British Standards	BS 6580 : 2010
France	French Standards	NF R15-601
Germany	FVV Standards	FVV Heft R443
Australia	Australian Standards	AS 2108
International	SAE Standards	SAE J1034
Spain	UNE Standards	uNE 26361
Austria	Austrian Standards	ONORM V 5123
Italy	CuNA Standards	NC 956-16

These specifications as well as many years of practical experience in the field have demonstrated that **Shell Antifreeze RTU** engine coolant concentrate is suitable for use with all type of cars currently manufactured in Europe.

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#### Freeze Protection

**Shell Antifreeze RTU** is a ready to use product and shouldn't be diluted for optimum performance.

#### Corrosion Protection

Protection from corrosion is the most important function of a coolant concentrate and is achieved by the inclusion of a well-balanced inhibitor package. In modern engines with the greater use of aluminium alloys and thinner section castings, avoidance of corrosion problems is critical. The corrosion products in engine cooling systems can circulate within the system causing fouling which leads to overheating problems.

The inhibitor package of **Shell Antifreeze RTU** is the result of very extensive testing which includes laboratory tests, simulated service tests, static engine test and field service trials. The tables below demonstrate the effective corrosion protection provided when tested against the industry standards such as ASTM D1384 (multi-metal corrosion in glassware) and ASTM D4340 (corrosion of cast aluminium alloys under heat-rejecting conditions).

#### Compatibility

**Shell Antifreeze RTU** is diluted with demineralized water. **Shell Antifreeze RTU** is fully miscible with other coolants and can be safely mixed with them. However, as **Shell Antifreeze RTU** employs an inhibitor type that is very different to that used in traditional mineral coolants it recommended to drain and flush cooling systems containing them before recharging with diluted **Shell Antifreeze RTU**. Failure to do so could significantly lower the performance and longevity of the product.

#### Storage and Handling

**Shell Antifreeze RTU** has a shelf life of at minimum two years when stored in air tight containers at a maximum temperature of 30°C. Translucent containers should not be stored outside in direct sunlight, especially in warm climates. **Shell Antifreeze RTU** can be stored in mild steel, lacquer lined or HDPE containers. As with any glycol-based engine coolant the use of galvanized steel is not recommended for pipes or any other part of the storage/mixing installation.

Disposal of used or unused coolant must be carried out in accordance with local and national law, consult the material safety data sheet for further information.

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#### Hazards and Safety

As with all chemical products, awareness and control of any potential hazards is of high importance. Please consult the material safety data sheet which is available detailing the hazards associated with this product.

*The content of this Technical Data Sheet has been prepared by taking into consideration the relevant international standards and the information contained in specifications of vehicle and equipment manufacturers. This Technical Data Sheet and the statements in content cannot be interpreted as a guarantee commitment in respect of product specifications or usage in any application.*

*It is the consumer's responsibility to use this product in accordance with its ordinary purpose and comply with the applicable laws and regulations. Kemetyl Kimya San. Tic. Ltd. Şti. shall not be held responsible for any claims or damages arising out of abnormal use, improper usage, use for the wrongful purposes or risks and consequences by the nature of product structure.*

*This Technical Data Sheet shall be valid on issue date. Right to amend information provided in content of this Technical Data Sheet without prior notice is reserved.*