

# EXTENDED LIFE ANTIFREEZE

## PRODUCT DESCRIPTION

TOTACHI EXTENDED ANTIFREEZE is a concentrated coolant based on aqueous solution of ethylene glycol. The product is specially engineered for the latest generation cooling systems of highly loaded gasoline and diesel engines. It is manufactured using modern OAT-technology (Organic Acid Technology) and contains organic acids (carbon) corrosion inhibitors. The product additionally contains molybdates and nitrites, which help to prevent cavitation and provide improved protection of cooling system parts. TOTACHI EXTENDED LIFE ANTIFREEZE has neutral effect on modern sealing materials and rubber hoses. The formulation promotes increase in service life of water pumps and improve heat exchange from metal surface to coolant.

## APPLICATION

- The product is recommended for cooling systems of highly loaded gasoline and diesel engines, which require the use of OAT Technology-based coolants. The product supports extended service life up to 5 years / 250,000 km for passenger cars / 600,000 km for on-road applications / 12,000 hours for off-road applications.
- TOTACHI EXTENDED LIFE ANTIFREEZE is specially recommended for modern engines, where improved protection of aluminum against high temperature corrosion is required.
- The product does not contain silicates, phosphates and nitrites; thus, it meets performance requirements of many European and American OEMs.

## CUSTOMER BENEFITS

- The product provides effective protection of engine parts made of aluminum, iron (cast iron), solder and copper alloys against corrosion.
- TOTACHI EXTENDED LIFE ANTIFREEZE provides more effective heat exchange up to 15%, which improves reliability of engine performance in high loaded operating conditions.
- TOTACHI EXTENDED LIFE ANTIFREEZE can be safely mixed with other carboxylate-based coolants, it has excellent compatibility with modern sealing materials and rubber hoses.

## MEETS SPECIFICATIONS AND REQUIREMENTS OF:

- ASTM D3306 for maintenance shops;
- ASTM D6210-10 for Heavy Duty engines;
- SAE J 1034
- Case / New Holland MAT3624
- Cummins CES 14603 / 14439
- DEUTZ DQCCB-14
- DHI KS M2142
- GM/Opel GMW 3420
- MITSUBISHI FUSO 325.3
- John Deere JDM H5
- Jenbacher TA 1000-0201
- KOMATSU AF-NAC / 07.892 - 2009
- MAN 324 Type SNF
- Renault Type-D/41-01-001
- Mitsubishi MHI
- Mercedes-Benz DBL 7700/ MB 325.3
- MWM 2091/11
- JSC KAMAZ
- Opel-GM 6277M
- Skoda 61-0-0257
- VOLVO 128 6083/002
- VW/AUDU/SEAT/Skoda TL 774C (G 12)
- ROSTSELMASH
- AVTODIESEL
- KAMAZ
- ISUZU
- CLAAS
- SCANIA
- JCB
- HINO
- IVECO
- KUBOTA
- LIEBHERR
- UD TRUCKS
- WRITGEN
- YANMAR
- DAF 74002
- DOOSAN
- HITACHI
- GAZ
- HOWO
- MANITOU
- SDLG
- TEREX



Before using this product make sure, it is consistent with OEM's recommendations for the equipment operating conditions and customer's maintenance practices.

In cooling systems of highly loaded diesel engines it is necessary to use SCA additives, recommended by vehicle OEM.

## EXTENDED LIFE ANTIFREEZE

TOTACHI EXTENDED LIFE ANTIFREEZE requires additional diluting with water. Do not use without prior

dilution with specially treated water (distilled or deionized).

Chill Point, °C	Coolant Concentrate	Water
-24°C	40%	60%
-37°C	50%	50%
-52°C	60%	40%

It is not recommended to dilute the product with water for more than 70%. It is a good practice to flush cooling system before changing coolant.

### TYPICAL TEST DATA

CHARACTERISTICS	UNITS	VALUE	METHOD
Appearance		Transparent liquid with no residue	P 5.2 ToR
Density at 20°C	g/cm <sup>3</sup>	1.14	GOST 18995.1, section 1
Swelling of rubber	%	5	GOST 9.030-7 p.1
Boiling point	°C	115	ASTM D1120
Alkalinity not less than	cm <sup>3</sup>	3.6	GOST 28084
Foaming: • Volume of foam after 5 minutes;  • Foam stability	cm <sup>3</sup>	30  3	GOST 28084 p 4.6
Hydrogen ion exponent at 20°C	pH	9.6	GOST 22567.5
Color		Yellow	visual

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## ***STORAGE AND HANDLING GUIDELINES***

- Avoid exposing products to direct sunlight.
- Cans, packed in cardboard boxes, must be stored in dry places. Avoid exposing products to moisture.
- It is highly recommended to store drums indoors on pallets and racks.
- If stored outdoors drums should be placed sidewise to avoid accumulation of moisture.
- Shelf life is up to 8 years.

## ***HEALTH, SAFETY AND ENVIRONMENT PROTECTION***

Information on health, safety and environment protection is described in the product Safety Data Sheet (SDS). The SDS file contains details on potential hazards, precautions and first aid measures, as well as information on environmental impact and disposal of used products.

### ***ATTENTION:***

TOTACHI EXTENDED LIFE ANIFREEZE *is poisonous and extremely hazardous if ingested.*

When changing coolant dispose off used product in accordance with local, regional or federal legislative provisions.

TOTACHI INDUSTRIAL CO. LTD. disclaims any liability in case the product is used with violation of these instructions and warnings or it is not used for its intended purpose. Before using product other than intended, consult your local TOTACHI® distributor.