

# **Off-road Vehicle Antifreeze Market Size, Share & Trends Analysis Report By Technology (OAT, HOAT, IAT, NOAT), By Product (Ethylene Glycol, Propylene Glycol), By Application (Automotive, Agriculture, Construction), By Region, And Segment Forecasts, 2026 - 2033**

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## **Abstracts**

The global off-road vehicle antifreeze market size was valued at USD 3.6 billion in 2025 and is projected to reach USD 5.6 billion by 2033, expanding at a CAGR of 5.6% from 2026 to 2033, primarily driven by increasing demand for off-road vehicles in construction, agriculture, and industrial sectors, where reliable engine performance and thermal management are critical.

Rising emphasis on extended-life, eco-friendly, and high-performance antifreeze formulations, coupled with technological advancements in OAT, HOAT, and propylene glycol-based products, is further supporting market expansion.

A key factor driving the growth of the global off-road vehicle antifreeze industry is its extensive use in construction, industrial, and agricultural vehicles, where reliable engine cooling and thermal stability are critical for performance and longevity. These applications demand high-performance chemical solutions to ensure freeze protection, corrosion resistance, and efficient heat transfer under extreme conditions. With the rising adoption of off-road vehicles in demanding environments, manufacturers are increasingly developing advanced OAT, HOAT, and propylene glycol-based antifreeze formulations to enhance engine efficiency and operational reliability.

Growing emphasis on eco-friendly, long-life, and biodegradable formulations, coupled

with stringent regulatory requirements on emissions and environmental compliance, is encouraging the development of sustainable antifreeze solutions. However, raw material price fluctuations, strict environmental regulations, and competition from conventional and alternative cooling fluids continue to influence market dynamics.

## Global Off-road Vehicle Antifreeze Market Report Segmentation

This report forecasts volume & revenue growth at global, regional, and country levels and provides an analysis of the latest industry trends in each of the sub-segments from 2021 to 2033. For this study, Grand View Research has segmented the global off-road vehicle antifreeze market report based on technology, product, application, and region:

Technology Outlook (Volume, Kilotons; Revenue, USD Million, 2021 - 2033)

### OAT

HD-OAT

Nitrite Free OAT

Extended Life Cycle (ELC)

Phosphate-enhanced Organic Acid Technology (POAT)

Other OAT

### HOAT

Silicate HOAT (Si-HOAT)

Phosphated HOAT (p-HOAT)

NAP-Free HOAT (Phosphate Free)

Other HOAT

### IAT

Silicate-Based IAT

Phosphate IAT

Other IAT

NOAT

2-EH Free Technology

2-EH Free Formulations

Other NOAT

Other Technologies

Product Outlook (Volume, Kilotons; Revenue, USD Million, 2021 - 2033)

Ethylene Glycol

Propylene Glycol

Other Products

Application Outlook (Volume, Kilotons; Revenue, USD Million, 2021 - 2033)

Automotive

Construction

Agricultural

Mining

Power Generation

Aerospace

Industrial Heat Transfer & Cooling Systems

Other Applications

Regional Outlook (Volume, Kilotons; Revenue, USD Million, 2021 - 2033)

North America

U.S.

Canada

Mexico

Europe

Germany

France

UK

Italy

Spain

Asia Pacific

China

India

Japan

South Korea

Latin America

Brazil

Argentina

Middle East & Africa

South Africa

Saudi Arabia

**This report can be delivered to the clients within 6 Business Days**

## Contents

### **CHAPTER 1. METHODOLOGY AND SCOPE**

- 1.1. Market Segmentation & Scope
- 1.2. Market Definition
- 1.3. Information Procurement
  - 1.3.1. Purchased Database
  - 1.3.2. GVR's Internal Database
  - 1.3.3. Secondary Sources & Third-Party Perspectives
  - 1.3.4. Primary Research
- 1.4. Information Analysis
  - 1.4.1. Data Analysis Models
- 1.5. Market Formulation & Data Visualization
- 1.6. Data Validation & Publishing

### **CHAPTER 2. EXECUTIVE SUMMARY**

- 2.1. Market Snapshot (USD Million)
- 2.2. Segment Snapshot
- 2.3. Competitive Landscape Snapshot

### **CHAPTER 3. OFF-ROAD VEHICLE ANTIFREEZE MARKET VARIABLES, TRENDS & SCOPE**

- 3.1. Market Lineage Outlook
  - 3.1.1. Market Outlook
- 3.2. Industry Value Chain Analysis
  - 3.2.1. Industry Outlook
  - 3.2.2. Manufacturing Trends
  - 3.2.3. Sales Channel Analysis
- 3.3. Regulatory Framework
- 3.4. Market Dynamics
  - 3.4.1. Market Driver Analysis
  - 3.4.2. Market Restraint Analysis
  - 3.4.3. Industry Challenges
  - 3.4.4. Industry Opportunities
- 3.5. Industry Analysis Tools
  - 3.5.1. Porter's Five Forces Analysis

### 3.5.2. Macro-Environmental Analysis

## **CHAPTER 4. OFF-ROAD VEHICLE ANTIFREEZE MARKET: TECHNOLOGY ESTIMATES & TREND ANALYSIS**

### 4.1. Technology Movement Analysis & Market Share, 2025 & 2033

#### 4.2. OAT

4.2.1. Off-Road Vehicle Antifreeze Market Estimates & Forecast, By OAT, 2021 - 2033 (USD Million and Kilotons)

##### 4.2.2. HD-OAT

4.2.2.1. OAT Off-Road Vehicle Antifreeze Market Estimates & Forecast, By HD-OAT, 2021 - 2033 (USD Million and Kilotons)

##### 4.2.3. Nitrite Free OAT

4.2.3.1. OAT Off-Road Vehicle Antifreeze Market Estimates & Forecast, By Nitrite Free OAT, 2021 - 2033 (USD Million and Kilotons)

##### 4.2.4. Extended Life Cycle (ELC)

4.2.4.1. OAT Off-Road Vehicle Antifreeze Market Estimates & Forecast, By Extended Life Cycle (ELC), 2021 - 2033 (USD Million and Kilotons)

##### 4.2.5. Phosphate-enhanced Organic Acid Technology (POAT)

4.2.5.1. OAT Off-Road Vehicle Antifreeze Market Estimates & Forecast, By Phosphate-enhanced Organic Acid Technology (POAT), 2021 - 2033 (USD Million and Kilotons)

##### 4.2.6. Other OAT

4.2.6.1. OAT Off-Road Vehicle Antifreeze Market Estimates & Forecast, By Other OAT, 2021 - 2033 (USD Million and Kilotons)

#### 4.3. HOAT

4.3.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By HOAT, 2021 - 2033 (USD Million and Kilotons)

##### 4.3.2. Silicate HOAT (Si-HOAT)

4.3.2.1. HOAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Silicate HOAT (Si-HOAT), 2021 - 2033 (USD Million and Kilotons)

##### 4.3.3. Phosphated HOAT (p-HOAT)

4.3.3.1. HOAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Phosphated HOAT (p-HOAT), 2021 - 2033 (USD Million and Kilotons)

##### 4.3.4. NAP-free HOAT (Phosphate Free)

4.3.4.1. HOAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By NAP-free HOAT (Phosphate HOAT), 2021 - 2033 (USD Million and Kilotons)

##### 4.3.5. Other HOAT

4.3.5.1. HOAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By

Other HOAT, 2021 - 2033 (USD Million and Kilotons)

4.4. IAT

4.4.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By IAT, 2021 - 2033 (USD Million and Kilotons)

4.4.2. Silicate-Based IAT

4.4.2.1. IAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Silicate-Based IAT, 2021 - 2033 (USD Million and Kilotons)

4.4.3. Phosphate IAT

4.4.3.1. IAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Phosphate IAT, 2021 - 2033 (USD Million and Kilotons)

4.4.4. Other IAT

4.4.4.1. IAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Other IAT, 2021 - 2033 (USD Million and Kilotons)

4.5. NOAT

4.5.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By NOAT, 2021 - 2033 (USD Million and Kilotons)

4.5.2. 2-EH Free Technology

4.5.2.1. NOAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By 2-EH Free Technology, 2021 - 2033 (USD Million and Kilotons)

4.5.3. 2-EH Free Formulations

4.5.3.1. NOAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By 2-EH Free Formulations, 2021 - 2033 (USD Million and Kilotons)

4.5.4. Other NOAT

4.5.4.1. NOAT Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Other NOAT, 2021 - 2033 (USD Million and Kilotons)

4.6. Other Technologies

4.6.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Other Technologies, 2021 - 2033 (USD Million and Kilotons)

## **CHAPTER 5. OFF-ROAD VEHICLE ANTIFREEZE MARKET: PRODUCT ESTIMATES & TREND ANALYSIS**

5.1. Product Movement Analysis & Market Share, 2025 & 2033

5.2. Ethylene Glycol

5.2.1. Off-Road Vehicle Antifreeze Market Estimates & Forecast, By Ethylene Glycol, 2021 - 2033 (USD Million and Kilotons)

5.3. Propylene Glycol

5.3.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Propylene Glycol, 2021 - 2033 (USD Million and Kilotons)

#### 5.4. Other Products

5.4.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Other Products, 2021 - 2033 (USD Million and Kilotons)

### **CHAPTER 6. OFF-ROAD VEHICLE ANTIFREEZE MARKET: APPLICATION ESTIMATES & TREND ANALYSIS**

6.1. Application Movement Analysis & Market Share, 2025 & 2033

#### 6.2. Automotive

6.2.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Automotive, 2021 - 2033 (USD Million and Kilotons)

#### 6.3. Construction

6.3.1. Off-Road Vehicle Antifreeze Market Estimates & Forecast, By Construction, 2021 - 2033 (USD Million and Kilotons)

#### 6.4. Agriculture

6.4.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Agriculture, 2021 - 2033 (USD Million and Kilotons)

#### 6.5. Mining

6.5.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Mining, 2021 - 2033 (USD Million and Kilotons)

#### 6.6. Power Generation

6.6.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Power Generation, 2021 - 2033 (USD Million and Kilotons)

#### 6.7. Aerospace

6.7.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Aerospace, 2021 - 2033 (USD Million and Kilotons)

#### 6.8. Industrial Heat Transfer & Cooling Systems

6.8.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Industrial Heat Transfer & Cooling Systems, 2021 - 2033 (USD Million and Kilotons)

#### 6.9. Other Applications

6.9.1. Off-Road Vehicle Antifreeze Market Estimates And Forecasts, By Other Applications, 2021 - 2033 (USD Million and Kilotons)

### **CHAPTER 7. OFF-ROAD VEHICLE ANTIFREEZE MARKET: REGIONAL ESTIMATES & TREND ANALYSIS**

7.1. Regional Movement Analysis & Market Share, 2025 & 2033

#### 7.2. North America

7.2.1. North America Off-Road Vehicle Antifreeze Estimates & Forecast, 2018 - 2033

(Kilotons) (USD Million)

7.2.2. North America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.2.3. North America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.2.4. North America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.2.5. U.S.

7.2.5.1. U.S. Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.2.5.2. U.S. Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.2.5.3. U.S. Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.2.6. Canada

7.2.6.1. Canada Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.2.6.2. Canada Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.2.6.3. Canada Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.2.7. Mexico

7.2.7.1. Mexico Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.2.7.2. Mexico Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.2.7.3. Mexico Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.3. Europe

7.3.1. Europe Off-Road Vehicle Antifreeze Estimates & Forecast, 2018 - 2033 (Kilotons) (USD Million)

7.3.2. Europe Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.3.3. Europe Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.3.4. Europe Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.3.5. Germany

7.3.5.1. Germany Off-Road Vehicle Antifreeze Market Estimates & Forecast by

Technology, 2021 - 2033 (USD Million) (Kilotons)

7.3.5.2. Germany Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.3.5.3. Germany Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.3.6. UK

7.3.6.1. UK Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.3.6.2. UK Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.3.6.3. UK Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.3.7. Italy

7.3.7.1. Italy Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.3.7.2. Italy Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.3.7.3. Italy Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.3.8. France

7.3.8.1. France Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.3.8.2. France Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.3.8.3. France Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.3.9. Spain

7.3.9.1. Spain Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.3.9.2. Spain Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.3.9.3. Spain Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.4. Asia Pacific

7.4.1. Asia Pacific Off-Road Vehicle Antifreeze Estimates & Forecast, 2018 - 2033 (Kilotons) (USD Million)

7.4.2. Asia Pacific Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.4.3. Asia Pacific Off-Road Vehicle Antifreeze Market Estimates & Forecast by

Product, 2021 - 2033 (USD Million) (Kilotons)

7.4.4. Asia Pacific Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.4.5. China

7.4.5.1. China Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.4.5.2. China Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.4.5.3. China Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.4.6. India

7.4.6.1. India Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.4.6.2. India Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.4.6.3. India Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.4.7. Japan

7.4.7.1. Japan Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.4.7.2. Japan Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.4.7.3. Japan Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.4.8. South Korea

7.4.8.1. South Korea Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.4.8.2. South Korea Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.4.8.3. South Korea Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

7.5. Latin America

7.5.1. Latin America Off-Road Vehicle Antifreeze Estimates & Forecast, 2018 - 2033 (Kilotons) (USD Million)

7.5.2. Latin America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.5.3. Latin America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.5.4. Latin America Off-Road Vehicle Antifreeze Market Estimates & Forecast by

Application, 2021 - 2033 (USD Million) (Kilotons)

#### 7.5.5. Brazil

7.5.5.1. Brazil Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.5.5.2. Brazil Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.5.5.3. Brazil Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

#### 7.5.6. Argentina

7.5.6.1. Argentina Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.5.6.2. Argentina Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.5.6.3. Argentina Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

#### 7.6. Middle East & Africa

7.6.1. Middle East & Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast, 2018 - 2033 (Kilotons) (USD Million)

7.6.2. Middle East and Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.6.3. Middle East and Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.6.4. Middle East and Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

#### 7.6.5. Saudi Arabia

7.6.5.1. Saudi Arabia Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.6.5.2. Saudi Arabia Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.6.5.3. Saudi Arabia Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

#### 7.6.6. South Africa

7.6.6.1. South Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

7.6.6.2. South Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

7.6.6.3. South Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

## **CHAPTER 8. OFF-ROAD VEHICLE ANTIFREEZE MARKET - COMPETITIVE LANDSCAPE**

8.1. Recent Developments & Impact Analysis, By Key Market Participants

8.2. Company Categorization

8.3. Company Position Analysis, 2025

8.4. Company Heat Map Analysis

8.5. Strategy Mapping

8.6. Company Profiles

8.6.1. AkzoNobel N.V.

8.6.1.1. Participant's Overview

8.6.1.2. Financial Performance

8.6.1.3. Product Benchmarking

8.6.1.4. Recent Developments

8.6.2. Arkema SA

8.6.2.1. Participant's Overview

8.6.2.2. Financial Performance

8.6.2.3. Product Benchmarking

8.6.2.4. Recent Developments

8.6.3. Axalta Coating Systems LLC

8.6.3.1. Participant's Overview

8.6.3.2. Financial Performance

8.6.3.3. Product Benchmarking

8.6.3.4. Recent Developments

8.6.4. Berger Paints India Ltd.

8.6.4.1. Participant's Overview

8.6.4.2. Financial Performance

8.6.4.3. Product Benchmarking

8.6.4.4. Recent Developments

8.6.5. Daikin Industries, Ltd.

8.6.5.1. Participant's Overview

8.6.5.2. Financial Performance

8.6.5.3. Product Benchmarking

8.6.5.4. Recent Developments

8.6.6. Dongyue Group Co., Ltd.

8.6.6.1. Participant's Overview

8.6.6.2. Financial Performance

8.6.6.3. Product Benchmarking

8.6.6.4. Recent Developments

#### 8.6.7. Hempel A/S

8.6.7.1. Participant's Overview

8.6.7.2. Financial Performance

8.6.7.3. Product Benchmarking

8.6.7.4. Recent Developments

#### 8.6.8. Jiangsu Chenguang Fluoropolymer Co., Ltd.

8.6.8.1. Participant's Overview

8.6.8.2. Financial Performance

8.6.8.3. Product Benchmarking

8.6.8.4. Recent Developments

#### 8.6.9. PPG Industries, Inc.

8.6.9.1. Participant's Overview

8.6.9.2. Financial Performance

8.6.9.3. Product Benchmarking

8.6.9.4. Recent Developments

#### 8.6.10. Solvay SA

8.6.10.1. Participant's Overview

8.6.10.2. Financial Performance

8.6.10.3. Product Benchmarking

8.6.10.4. Recent Developments

#### 8.6.11. The Chemours Company

8.6.11.1. Participant's Overview

8.6.11.2. Financial Performance

8.6.11.3. Product Benchmarking

8.6.11.4. Recent Developments

#### 8.6.12. The Sherwin-Williams Company

8.6.12.1. Participant's Overview

8.6.12.2. Financial Performance

8.6.12.3. Product Benchmarking

8.6.12.4. Recent Developments

## List Of Tables

### LIST OF TABLES

Table 1 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 2 Off-Road Vehicle Antifreeze Estimates And Forecasts, by OAT, 2021 - 2033 (USD Million) (Kilotons)

Table 3 OAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by HD-OAT, 2021 - 2033 (USD Million) (Kilotons)

Table 4 OAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Nitrite Free OAT, 2021 - 2033 (USD Million) (Kilotons)

Table 5 OAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Extended Life Cycle (ELC), 2021 - 2033 (USD Million) (Kilotons)

Table 6 OAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Phosphate-enhanced Organic Acid Technology (POAT), 2021 - 2033 (USD Million) (Kilotons)

Table 7 OAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Other OAT, 2021 - 2033 (USD Million) (Kilotons)

Table 8 Off-Road Vehicle Antifreeze Estimates And Forecasts, by HOAT, 2021 - 2033 (USD Million) (Kilotons)

Table 9 HOAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Silicate HOAT (Si-HOAT), 2021 - 2033 (USD Million) (Kilotons)

Table 10 HOAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Phosphated HOAT (p-HOAT), 2021 - 2033 (USD Million) (Kilotons)

Table 11 HOAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by NAP-Free HOAT (Phosphate Free), 2021 - 2033 (USD Million) (Kilotons)

Table 12 HOAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Other HOAT, 2021 - 2033 (USD Million) (Kilotons)

Table 13 Off-Road Vehicle Antifreeze Estimates And Forecasts, by IAT, 2021 - 2033 (USD Million) (Kilotons)

Table 14 IAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Silicate Based IAT, 2021 - 2033 (USD Million) (Kilotons)

Table 15 IAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Phosphate IAT, 2021 - 2033 (USD Million) (Kilotons)

Table 16 IAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Other IAT, 2021 - 2033 (USD Million) (Kilotons)

Table 17 Off-Road Vehicle Antifreeze Estimates And Forecasts, by NOAT, 2021 - 2033 (USD Million) (Kilotons)

Table 18 NOAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by 2-EH Free

Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 19 NOAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by 2-EH Free Formulations, 2021 - 2033 (USD Million) (Kilotons)

Table 20 NOAT Off-Road Vehicle Antifreeze Estimates And Forecasts, by Other NOAT, 2021 - 2033 (USD Million) (Kilotons)

Table 21 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Other Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 22 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 23 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Ethylene Glycol, 2021 - 2033 (USD Million) (Kilotons)

Table 24 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Propylene Glycol, 2021 - 2033 (USD Million) (Kilotons)

Table 25 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Other Products, 2021 - 2033 (USD Million) (Kilotons)

Table 26 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 27 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Automotive, 2021 - 2033 (USD Million) (Kilotons)

Table 28 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Construction, 2021 - 2033 (USD Million) (Kilotons)

Table 29 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Agriculture, 2021 - 2033 (USD Million) (Kilotons)

Table 30 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Mining, 2021 - 2033 (USD Million) (Kilotons)

Table 31 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Power Generation, 2021 - 2033 (USD Million) (Kilotons)

Table 32 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Aerospace, 2021 - 2033 (USD Million) (Kilotons)

Table 33 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Industrial Heat Transfer & Cooling Systems, 2021 - 2033 (USD Million) (Kilotons)

Table 34 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Other Applications, 2021 - 2033 (USD Million) (Kilotons)

Table 35 Off-Road Vehicle Antifreeze Estimates And Forecasts, by Region, 2021 - 2033 (USD Million) (Kilotons)

Table 36 North America Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 37 North America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 38 North America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 39 North America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 40 U.S. Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 41 U.S. Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 42 U.S. Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 43 U.S. Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 44 Canada Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 45 Canada Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 46 Canada Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 47 Canada Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 48 Mexico Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 49 Mexico Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 50 Mexico Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 51 Mexico Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 52 Europe Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 53 Europe Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 54 Europe Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 55 Europe Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 56 Germany Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 57 Germany Off-Road Vehicle Antifreeze Market Estimates & Forecast by

Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 58 Germany Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 59 Germany Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 60 UK Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 61 UK Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 62 UK Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 63 UK Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 64 France Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 65 France Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 66 France Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 67 France Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 68 Italy Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 69 Italy Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 70 Italy Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 71 Italy Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 72 Spain Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 73 Spain Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 74 Spain Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 75 Spain Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 76 Asia Pacific Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 77 Asia Pacific Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 78 Asia Pacific Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 79 Asia Pacific Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 80 China Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 81 China Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 82 China Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 83 China Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 84 India Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 85 India Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 86 India Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 87 India Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 88 Japan Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 89 Japan Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 90 Japan Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 91 Japan Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 92 South Korea Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 93 South Korea Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 94 South Korea Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 95 South Korea Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 96 Middle East & Africa Off-Road Vehicle Antifreeze Estimates And Forecasts,

2021 - 2033 (USD Million) (Kilotons)

Table 97 Middle East and Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 98 Middle East and Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 99 Middle East and Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 100 Saudi Arabia Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 101 Saudi Arabia Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 102 Saudi Arabia Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 103 Saudi Arabia Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 104 South Africa Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 105 South Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 106 South Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 107 South Africa Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 108 Latin America Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 109 Latin America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 110 Latin America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 111 Latin America Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 112 Brazil Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 113 Brazil Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 114 Brazil Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 115 Brazil Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

Table 116 Argentina Off-Road Vehicle Antifreeze Estimates And Forecasts, 2021 - 2033 (USD Million) (Kilotons)

Table 117 Argentina Off-Road Vehicle Antifreeze Market Estimates & Forecast by Technology, 2021 - 2033 (USD Million) (Kilotons)

Table 118 Argentina Off-Road Vehicle Antifreeze Market Estimates & Forecast by Product, 2021 - 2033 (USD Million) (Kilotons)

Table 119 Argentina Off-Road Vehicle Antifreeze Market Estimates & Forecast by Application, 2021 - 2033 (USD Million) (Kilotons)

## List Of Figures

### LIST OF FIGURES

- Fig. 1 Information Procurement
- Fig. 2 Primary Research Pattern
- Fig. 3 Primary Research Process
- Fig. 4 Market Research Approaches - Bottom-Up Approach
- Fig. 5 Market Research Approaches - Top-Down Approach
- Fig. 6 Market Research Approaches - Combined Approach
- Fig. 7 Market Snapshot
- Fig. 8 Segmental Outlook
- Fig. 9 Competitive Outlook
- Fig. 10 Off-Road Vehicle Antifreeze Market - Value Chain Analysis
- Fig. 11 Off-Road Vehicle Antifreeze Market - Sales Channel Analysis
- Fig. 12 Market Drivers Impact Analysis
- Fig. 13 Market Restraint Impact Analysis
- Fig. 14 Industry Analysis - PORTERS
- Fig. 15 Industry Analysis - PESTEL
- Fig. 16 Technology: Key Takeaways
- Fig. 17 Technology: Market Share, 2025 & 2033
- Fig. 18 Product: Key Takeaways
- Fig. 19 Product: Market Share, 2025 & 2033
- Fig. 20 Application: Key Takeaways
- Fig. 21 Application: Market Share, 2025 & 2033
- Fig. 22 Region, 2025 & 2033 (USD Million)
- Fig. 23 Region: Market Share, 2025 & 2033
- Fig. 24 Regional Marketplace: Key Takeaways
- Fig. 25 Competition Categorization
- Fig. 26 Company Market Positioning
- Fig. 27 Strategy Mapping, 2025

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