

Confidential Report

# Rubber Chemical Consultants



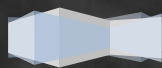
## Tire Tread

## Performance Resins & RPOs

2021

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## Report Scope

The following items are included in the scope:

**Market Segment:** Tire segment focusing on resins and RPOs used to enhance the performance of **tread compounds**, specifically traction, handling, rolling resistance and wear for the **Products** below.

**Tread Performance Resin (TPR):** Resin used to enhance the end performance of a **tread compound**. This excludes tack resins. Examples and categorisation are provided in the table below:

Resin Type	Resin Derivation	Examples
AMS	Alpha Methyl Styrene Types	Sylvatraxx (Kraton), Impera (Eastman)
C5	Aliphatic Hydrocarbons	Escorez (ExxonMobil)
C9	Aromatic Hydrocarbons	Novares C (Rütgers)
H-DCPD	Hydrogenated DCPD	Oppera (ExxonMobil)
C5C9 <sup>1</sup>	Blend of C5 and C9	Struktol 40MS
Terpene	Terpene Derivatives	Sylvares (Kraton), Dercolyte (DRT)
LP	Liquid polymers	Polyvest
LP STY	Liquid styrene polymers	Ricon

<sup>1</sup> C5 or C9 resins modified by C9 or C5 are included in the C5 and C9 volumes.

**Rubber Process Oil (RPO):** Oils used to enhance the processability and end performance of a **tread compound**. Examples and categorisation are provided in the table below:

RPO Type	Derivation	Examples
DAE	Distillate Aromatic Extract	Panoil
TDAE	Treated DAE	Vivatec
HN	Heavy naphthenes and treated naphthenes	HyPrene
MES	Mild Extraction Solvate	Plaxolene
PAR	Paraffinic Oil	Sunpar
RAE	Residual Aromatic Extract (Including treated)	Flavex
VO	Vegetable Oil	Agripure

**Products:** Car, SUV, Motorcycle and Scooter tires and associated subtypes.

**Geographies:** Global market split into 10 regions: Africa, China, CIS, Europe, India, Middle East, North America, North Asia, South America and South Asia.

**Time Frame:** 2015 to 2050 for market demand. Market pricing for APAC, EMEA and USMCA for the years 2017 to 2020. Market values for 2020/30/40/50.



## Report Objectives

The key report objectives are as follows:

- Determine the current TPR and RPO manufacturing landscapes
- Understand tire types, subtypes and product requirements
- Determine the market drivers for TPRs and TPOs
- Review impact of changing compounding technologies
- Implement long-term forecasts and assumptions
- Determine global and regional splits for TPR and TPOs
- Determine global and regional market values for TPR and TPOs
- Provide an outlook for TPR and TPO manufacturers

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