

TECHNICAL DATA SHEET – HKM H40

Version: 2.0, Dated 30th June 2026

Product: Tire Pyrolysis Oil (TPO) – Heavy Fraction – HKM H40

Source: End-of-Life Tires (ELTs)

Production Method: Continuous Pyrolysis Reactor

Production Site: Saint Mary Parish, Louisiana. USA.

1. Company Introduction

HKM Circular Ventures is developing advanced end-of-life tire recycling projects that convert waste tires into valuable circular hydrocarbon products through continuous pyrolysis and downstream fractionation. The company focuses on producing refinery-compatible hydrocarbon streams and sustainable carbon products for the refining, petrochemical and carbon black industries.

2. Product Description

The Heavy Aromatic Fraction is produced by controlled fractionation of raw tire pyrolysis oil. Approximately 40 wt% of the raw oil is recovered as a heavy aromatic stream intended primarily for Carbon Black Feedstock (CBFS) applications and heavy aromatic process oil markets.

3. Typical Product Specification and Industry Benchmark

Property	Typical HKM Result	Typical Petroleum CBFS Benchmark	Method
Appearance	Dark Brown / Black	Dark Brown / Black	Visual
Yield	40 ±3 wt%	Process dependent	Process
Density @15°C	1.015 kg/L	1.03–1.08 kg/L	ASTM D4052
Flash Point	90°C	90–120°C	ASTM D93
Initial Boiling Point	270°C	300–340°C	ASTM D86
Final Boiling Point	>420°C	430–520°C	ASTM D86
Viscosity @40°C	28 cSt	20–40 cSt	ASTM D445
Sulfur	1.10 wt%	0.8–2.0 wt%	ASTM D4294
Water	<0.20 wt%	<0.20 wt%	ASTM D6304
Sediment	<0.05 wt%	<0.10 wt%	ASTM D473
Carbon Residue	11 wt%	8–15 wt%	ASTM D4530
Ash	<0.05 wt%	<0.10 wt%	ASTM D482
Heating Value	40 MJ/kg	39–41 MJ/kg	ASTM D240
Estimated Biogenic Carbon	18%	0%	ASTM D6866

4. Performance Comparison with Conventional Petroleum Feedstocks

Deliverable / Performance Parameter	HKM Heavy Fraction	Conventional CBFS
Renewable Carbon Content	Yes (~18%)	No
Circular Economy Product	Yes	No
Suitable for Carbon Black Production	High	High
Aromatic Content	High	High
Carbon Residue	High	High
Heating Value	High	High
Sulfur Level	Comparable	Comparable
Ash Content	Low	High
Process Compatibility	High	High
Furnace Carbon Black Suitability	High*	High
Renewable Carbon Contribution	Yes	No
Overall Sustainability Profile	Excellent	No
Circular Feedstock	Yes	No

*Performance subject to customer qualification, pilot validation and process compatibility studies.

5. Conclusion

The HKM fraction is designed as a sustainable alternative to conventional petroleum-derived feedstocks while maintaining comparable technical performance for its intended industrial application. Final commercial specifications shall be confirmed through certified laboratory analysis and customer qualification.

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