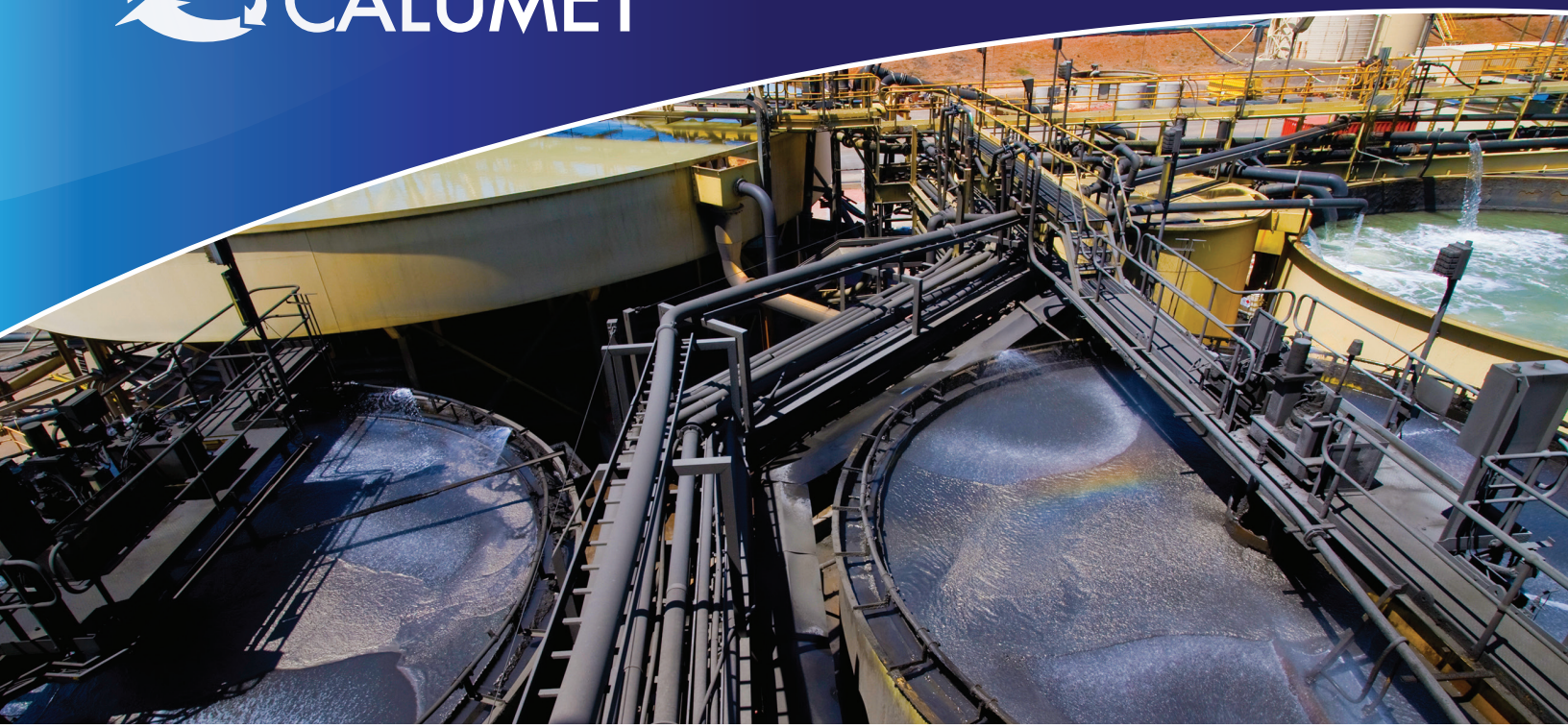


GOLD RECOVERY SOLUTIONS

CALUMET MINING OVERVIEW

Calumet delivers high-performance solvents and base oils for a wide range of mining applications, from ore extraction and solvent extraction to flotation and material handling. Our highly refined products provide exceptional consistency, process reliability, and environmental stewardship, helping operators improve efficiency, optimize recovery, and maintain tighter control over critical mining processes.

▶ MINING SOLUTIONS

- **Gold Recovery Solutions:** Preg-Robbing Mitigation and Carbon Blinding
- **Copper Solvent Extraction:** SX-EW Diluents for Copper Recovery
- **Critical Minerals and Metal Extraction:** Extraction Diluents for Precious and Base Metals
- **Flotation Process Solutions:** Diesel Alternatives
- **Ore Handling and Dust Control:** Railcar Dust Suppression and Product Preservation

▶ ABOUT CALUMET

Calumet manufactures, formulates, and markets a diversified slate of specialty branded products and renewable fuels. Founded in 1919, Calumet proudly produces more than 1,900 unique specialty products including: base oils, solvents, waxes, high-purity specialty oils, asphalts, fuels, and esters used in the development of the world's most trusted brands and products. Calumet is vertically integrated and holds a comprehensive portfolio of branded products for use in commercial, industrial and consumer applications.

Headquartered in Indianapolis, Indiana, more than 1,500 team members operate at 12 specialty product manufacturing and production facilities across North America. Calumet products are available in more than 80 countries across the world, serving 2,400+ customers globally.

CALUMET

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CALUMET

GOLD RECOVERY SOLUTIONS

▶ PREG-ROBBING MITIGATION AND CARBON BLINDING

Carbonaceous gold ores can reduce recovery rates by adsorbing dissolved gold-cyanide complexes from pregnant leach solutions during processing, a phenomenon known as preg-robbing. Left untreated, preg-robbing can significantly impact gold recovery and overall process efficiency.

Calumet highly-refined paraffinic base oils are designed to help mitigate preg-robbing by selectively coating carbonaceous particles during grinding and processing. Through electrostatic attraction to charged carbonaceous material, these oils effectively blind or blank adsorption sites, reducing the material's ability to capture valuable gold-cyanide complexes and helping improve gold recovery.

Compared with conventional treatment options, Calumet base oils offer a cleaner, safer and more environmentally responsible solution. Their consistent quality and blending performance provide operators with greater process control, improved operational reliability, and more predictable recovery outcomes.

▶ PRODUCT RECOMMENDATION

- CALPAR™ 60

▶ TECHNICAL ASSISTANCE

For product or technical questions, contact your Sales Representative or Calumet Product Support at 800.437.3188 or email technical@calumet.com.

CALUMET BASE OILS TYPICAL PROPERTIES

PROPERTIES	METHOD	CALPAR 60
Viscosity @ 40 °C (cSt)	ASTM D445	7.3
Viscosity @ 100 °C (cSt)	ASTM D445	2.1
Viscosity @ 100 °F (SUS)	ASTM D2161	51.3
Viscosity @ 210 °F (SUS)	ASTM D2161	33.4
Specific Gravity @ 60 °F	ASTM D1250	0.8437
Density (Pounds per Gallon)	ASTM D1250	7.025
Flash Point (°C)	ASTM D92	159
Flash Point (°F)	ASTM D92	318
Pour Point (°F)	ASTM D97	-57
Aniline Point (°C)	ASTM D611	91.6
Aniline Point (°F)	ASTM D611	196.9
Carbon Type Analysis (%)	ASTM D2140	
Ca		1
Cn		36
Cp		63
APPLICATIONS		
Gold Recovery Solutions		✓
Copper Solvent Extraction		
Critical Minerals & Metal Extraction		
Flotation Process Solutions		✓
Ore Handling & Dust Control		

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