

# ELIXORE

## Aliphatic Diluents for metal extraction

Taking hydrometallurgy  
to new levels of purity

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[www.totalspecialfluids.com](http://www.totalspecialfluids.com)



Taking into account both environmental responsibility and cost efficiency, hydrometallurgy is the preferred route for extracting metals from ores and other sources. To ensure optimal performance in terms of operator safety, process efficacy and reliability, Total's Special Fluids division has designed the Elixore range, perfectly defined aliphatic diluents dedicated to liquid-to-liquid extraction processes.

## ELIXORE

### Tailored diluent solutions

for your mining conditions

The Elixore range offers a comprehensive choice of perfectly inert, colourless and odourless fluids. Each product gives you access to the specification sets you need to reach the optimal balance between the desired level of efficacy (viscosity) and the necessary level of operator safety (high flash point).

**Elixore 180's** low viscosity is an efficient solution for operations requiring fast phase separation.

**Elixore 205** offer a good balance between low viscosity and high flashpoint.

**Elixore 250's** high flashpoint and low vapour pressure is the solution to reduce diluent loss due to evaporation.

#### KEY FEATURES

- High flashpoint
- Narrow distillation range
- Low viscosity
- Low pour points
- Ultra low aromatic contents

Properties	Units	Methods	Elixore 180	Elixore 205	Elixore 250
Flash Point PM	°C (°F)	ASTM D 93	68 (155)	76 (169)	119 (246)
Aromatic content	ppm	UV	40	40	40
Sulphur content	ppm	ASTM D5443	<1	<1	<1
Vapour pressure at 20°C	kPa	calculated	0.038	0.016	0.0003
Viscosity at 20°C	mm <sup>2</sup> /s (cSt)	ASTM D 445	2	2.4	5.8
at 40°C			1.4	1.7	3.5
Main characteristic linked to Viscosity / Flash Point compromise			Faster phase separation for Low temperature areas	Standard compromise in Industry	Less evaporation loss for high temperature areas

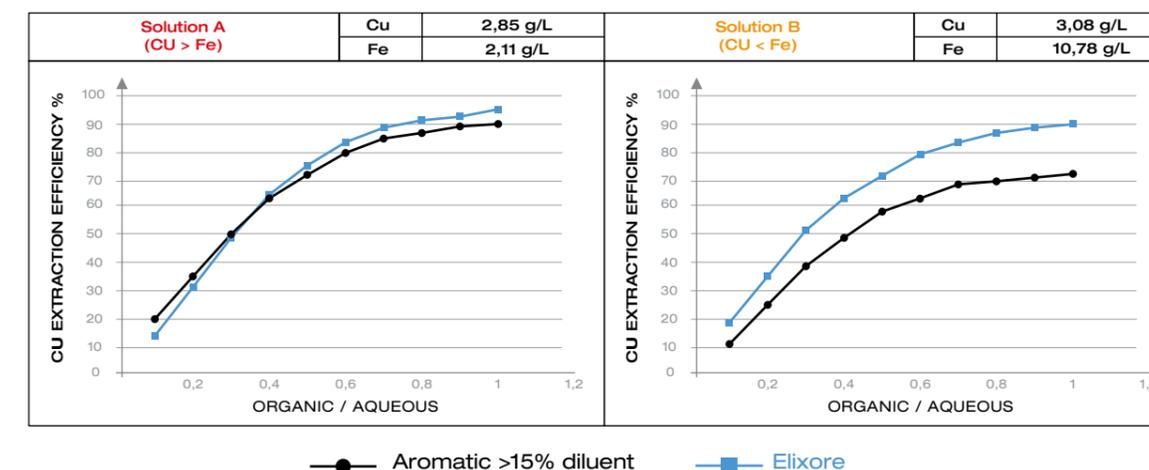


### Extraction efficiency

based on good selectivity

An independent R&D program consisted in comparing the copper over iron selectivity by using Elixore and classical aromatic diluent in the same solvent formulation (extractant + diluent). Aromatic free Elixore product showed great performances compared to aromatic diluent.

Extraction efficiency of ELIXORE compared to aromatic diluent



### Highly stable products

for sustainable performance

Perfectly defined and rigorously constant, the Elixore range gives you access to highly reliable and stable solutions. Moreover, their very low aromatic content makes them specially resistant to organic degradation.

Their outstanding properties make them prime choice diluents in the extraction of valuable and/or ore sensitive metals such as Copper, Zinc, Nickel, Cobalt, Uranium and Rare Earth.



### Making a safer

working environment

Elixore products have low vapour pressure, ultra low aromatic and sulfur content and thus offer the safest environment for working operators.