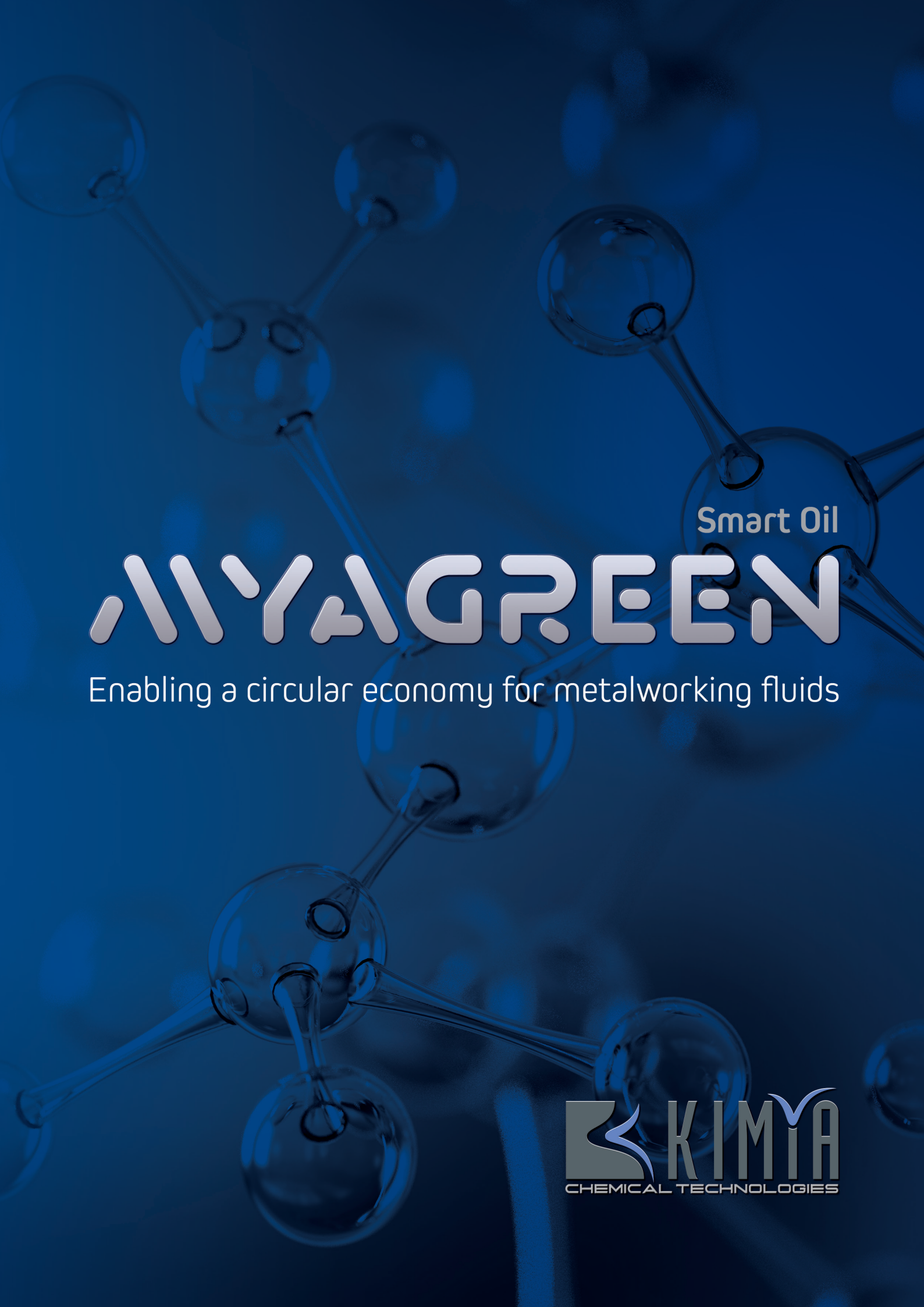


A blue-tinted background featuring a complex molecular structure with several large, translucent spheres connected by thin, metallic-looking rods, resembling a chemical or industrial design.

Smart Oil

AYAGREEN

Enabling a circular economy for metalworking fluids

 **KIMYA**
CHEMICAL TECHNOLOGIES



AYAGREEN

UIBM Patent Nr. 102020000017149

AYAGREEN is a novel technology designed to provide cooling and lubrication in grinding, turning, drilling and other metalworking operations.

AYAGREEN is a patented formulation, developed through a structured R&D process that involved Universities, Research Institutes and Multinational Companies for the testing phase.

Green formulation benefits

Kimya novel technology for metalworking fluids promotes environmental protection and healthier workplace.

Goals:

- **Lower TCO:** value throughout product lifecycle, from production to use and disposal.
- **Lower HSE impact:** renewable raw materials, no mineral oil in the formulation, elimination of VOC in the working areas, reuse of oily phase as secondary raw material, reuse of aqueous phase in the production cycle.

Lower Total Cost of Ownership

AYAGREEN formulation ensures better lubricity compared to mineral and semi-synthetic based formulations, leading to:

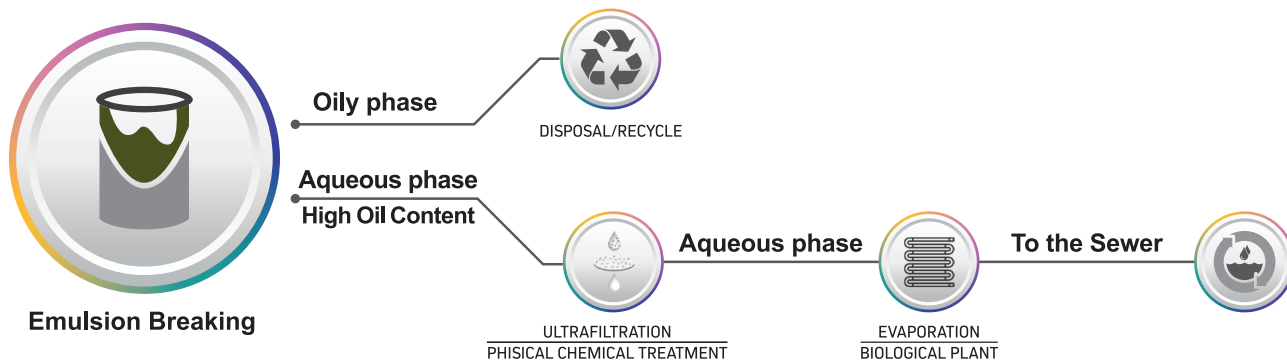
- Extended tool life.
- Reduced power absorption.
- Lower MWF concentration in the emulsion, which in turn entails lower consumption and disposal costs.

AYAGREEN has been specifically designed for in-situ spent emulsion treatment:

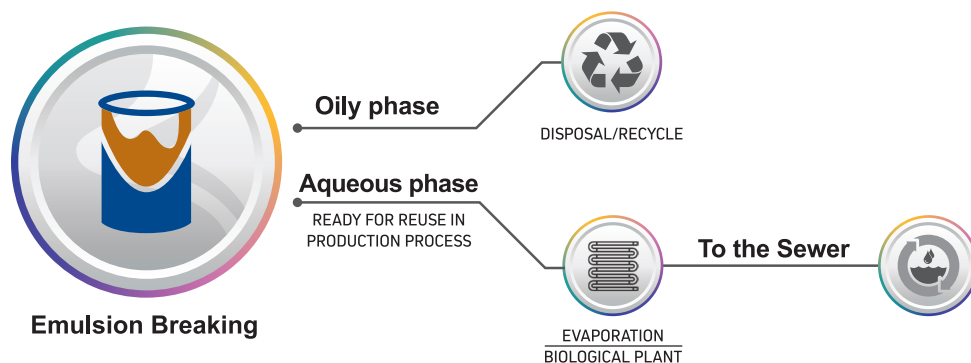
- Oily phase after emulsion breaking can be sold as secondary raw material.
- Aqueous phase after emulsion breaking contains low amounts of COD and Surfactants. It can be re-used within the production cycle as is (e.g. make up water for the cooling tower) or treated before discharge into the sewer.

SPENT EMULSION

Traditional Fluid



AYAGREEN



	AQUEOUS PHASE PARAMETERS					
	After Emulsion Breaking		After Ultrafiltration/Physical Chemical Treatment		After Evaporation/Biological Plant	
	COD [mg/l]	SURFACTANTS [mg/l]	COD [mg/l]	SURFACTANTS [mg/l]	COD [mg/l]	SURFACTANTS [mg/l]
TRADITIONAL EMULSIONS	15-20.000	3-6.000	ca. 15.000	4-5.000	< 500	< 4
AYAGREEN	1.5-2.000	1-3	-	-	< 500	< 4

Lower impact on Health, Safety and Environment



- Bio-based oils from renewable sources.
- Operators not exposed to Volatile Organic Compounds (VOCs) generated by mineral oil.



KIMYA Srl

Legal and Operating Office

Via dei Marmisti, 10/A Z.I.
70026 - Modugno (BA) - Italy

Contact details

 +39.080.9146193

 +39.080.9146362

 info@kimya.it



www.kimya.it



n. 6949



n. 0661



n. 0224