

# AGLOCRYL Product Bulletin

## Product Overview

AGLOCRYL is a polymer-based reagent designed to intensify granulation processes in iron ore sintering.

The product is used to improve sinter quality by optimizing granule formation, reducing the amount of fine fraction in the sinter mix after mixing, and consequently improving bed permeability.

## Process Impact

In the context of AGLOCRYL application, improvement of sinter quality and process performance is associated with the following key effects:

- Reduction of FeO content in sinter due to more uniform fuel distribution and improved redox conditions within the bed.
- Increased bed permeability resulting from lower fine fraction content and a more stable granulation structure.

These effects lead to a reduction in coke consumption in the blast furnace as a consequence of lower FeO levels.

## Economic and Ecological Effects

Reduction of FeO content in sinter has a direct impact on the thermal balance of the blast furnace and, consequently, on coke consumption.

Our recent industrial trials demonstrated a FeO decrease of approximately 1.4%. In blast furnace terms, this corresponds to an estimated coke reduction of 7–35 kg per ton of hot metal, depending on operating conditions.

Reduced coke consumption leads to additional benefits:

- Lower CO<sub>2</sub> emissions (approximately 25–126 kg CO<sub>2</sub> per ton of hot metal);
- Reduced operating costs associated with coke consumption.

At a typical coke price of around 300 €/t, this corresponds to a potential saving of approximately 2–10 €/t of hot metal.

These values are indicative and may vary depending on raw material characteristics and operating conditions of both the sinter plant and the blast furnace.

## Mechanism of Action

The mechanism of AGLOCRYL is based on dispersion and stabilization of the particulate system during the granulation stage.

- **Dispersion of fine particles.** The polymer adsorbs on particle surfaces and reduces the agglomeration of fine dust fractions.
- **Optimization of moisture distribution and granule formation.** More uniform moisture distribution leads to the formation of granules with a narrower size distribution and reduced excess fines.

As a result, a more homogeneous bed structure is formed, improving permeability.

## Application

- **Dosage:** 150–250 g/t of sinter mix.
- **Point of addition:** directly into the mixer.
- **Preparation:** not required.

## Industrial Validation

We propose laboratory testing or short-term industrial trials with the supply of the reagent on a free-of-charge basis.

## Contact Information

Ivan Dziadyk  
Research engineer,  
+420 778 568 049  
[research@klimana.cz](mailto:research@klimana.cz)  
KLIMANA CZ s r.o.