

## Product Bulletin

### CLEARON S 954

#### High-performance filtration aid for fine-grained, moisture-bearing materials

##### 1. Product Overview

**CLEARON S 954** is a specialty process reagent developed to enhance the filtration of slurries containing fine-grained mineral and industrial materials.

It is used to improve filtration efficiency by lowering the moisture content of the final product and increasing the throughput of filtration equipment.

CLEARON S 954 can be used in the treatment of a wide range of moisture-bearing materials, including:

- Iron ore concentrate
- Coal concentrates and coal slurries
- Sands
- Phosphates
- Other fine-grained mineral materials

Since 2008, CLEARON S 954 has been used at mining and mineral processing operations in Ukraine, including Southern GOK, Ingulets GOK, Poltava GOK, ArcelorMittal Kryvyi Rih, and other industrial sites.

##### 2. Key Benefits

Field application of CLEARON S 954 has demonstrated the following benefits:

- Reduction of product moisture content, for example:
  - up to **3 percentage points** in iron ore concentrate
  - up to **9 percentage points** in coal products
- Ability to control the degree of moisture reduction by adjusting the reagent dosage
- Increase in filtration equipment throughput by up to **50%**
- Reduction in the number of operating vacuum pumps
- Improved stability and efficiency of filtration operations

##### 3. Application Areas

CLEARON S 954 is recommended for filtration circuits handling fine-grained materials where excessive residual moisture reduces process efficiency or complicates product handling, transportation, or downstream processing.

Typical applications include:

- Vacuum filtration of iron ore concentrate
- Filtration of coal products
- Dewatering of mineral slurries
- Processing of phosphate materials
- Dewatering of fine sands and similar mineral products

The product is suitable for laboratory evaluation, pilot-scale testing, and full-scale industrial trials under site-specific operating conditions.

#### **4. Mode of Action**

CLEARON S 954 enhances filtration performance by influencing the interaction between solid particles and water in fine-grained slurries.

Depending on the material and process conditions, the reagent may help to achieve:

- Improved water release from the filter cake
- Reduced capillary retention of moisture
- Better permeability of the filter cake
- More efficient operation of vacuum filtration equipment
- Increased filtration rate and reduced residual moisture

Final performance depends on the properties of the processed material, particle size distribution, solids concentration, filtration conditions, reagent dosage, and mixing method.

#### **5. Performance Control**

The degree of moisture reduction can be controlled by adjusting the dosage of CLEARON S 954.

This allows the product to be aligned with different operating objectives, such as:

- Maximum reduction of residual moisture
- Increased filtration capacity
- Reduced energy consumption in vacuum systems
- Improved balance between filtration rate and final product moisture

Site-specific laboratory testing is recommended to determine the optimum dosage and application method.

#### **6. Laboratory and Industrial Testing**

To support evaluation under real production conditions, Klimana CZ offers initial laboratory testing of CLEARON S 954 using material samples supplied by the customer.

For the initial evaluation, Klimana CZ can provide the following at no charge:

- A trial quantity of CLEARON S 954
- Laboratory equipment for modelling the vacuum filtration process
- Technical support during laboratory testing

Once laboratory testing has been completed, the results can be reviewed jointly in order to define the next steps for industrial trials.

#### **7. Storage and Stability**

CLEARON S 954 is stable in storage at temperatures from **-25 °C to +50 °C**.

The guaranteed shelf life is **12 months**, provided the product is stored in its original packaging under the recommended storage conditions.

#### **8. Documentation**

The following documentation is available upon request:

- Technical Data Sheet — TDS
- Safety Data Sheet — SDS / MSDS
- Product Bulletin

- Regulatory and supporting product documentation, where applicable

## **9. About Klimana CZ**

**Klimana CZ** is a Czech company focused on the development and implementation of polymer-based and specialty chemical solutions for industrial applications.

The company supplies high-quality products for mineral processing, metallurgy, construction materials, ceramics, and other industrial sectors.

Over the past 10 years, technologies developed by Klimana specialists have been successfully implemented at approximately 200 industrial sites.

Klimana CZ works with partners and customers across Western and Eastern Europe, North America, India, and China.

Selected references include:

- Ingulets Mining and Processing Plant, Ukraine
- Southern Mining and Processing Plant, Ukraine
- Poltava Mining and Processing Plant, Ukraine
- ArcelorMittal Kryvyi Rih, Ukraine
- Třinecké železářny, Czech Republic
- Ceramic production enterprises in Europe and Ukraine

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