



## ERC Product information sheet

### carbamin 5020

#### Process Additive for Improved Combustion by the Emission Reduction Concept

The product carbamin 5020 is a liquid, water-soluble process additive specially developed for use in coal firing. carbamin 5020 reduces the carbon content of the ash to a proportion that makes the continued use of coal ash possible, for instance in the building industry. carbamin 5020 is dosed into the coal in proportionate quantities to reduce the formation of ash, CO and thermal Nox. It is completely stable, and even after long storage periods shows no sign of precipitating or thickening.

#### How it works

The various catalysts contained in the aqueous solution act synergetically in the flame. Thus the carbon content of the ash is significantly reduced. This influences the ash behaviour positively already in the combustion chamber: less sticky, less corrosive, more filterable ash is obtained.

The results are:

1. Cleaner heating surfaces
2. Reduced corrosion
3. More effective filtering
4. Reusable ash

In addition, by making it possible to run the combustion with a lower air surplus, the SO<sub>3</sub> and NO<sub>x</sub> formation is also pushed back. Together these improvements add up to a genuine gain in performance and availability which clearly exceeds the costs of using carbamin 5020.

#### Application field

All solid-fuel-fired steam and hot-water boilers.

#### Application concentration

Recommended mix ratio

1 : 1000 - 1 : 4000

ERC supplies carbamin 5020 as a concentrate which is prepared in situ with the aid of the dosing system and water to a mix ratio of about 1 : 5.

Depending on the operating conditions and fuel qualities, the application concentration can vary considerably and should, therefore, be checked with our engineers of the Technical application department.

#### Dosing

Fine atomisation of the active substance is a prerequisite for high effectiveness.

To this end we supply cost-effective dosing systems which allow flexible adaptation of the concentration of the active substance to fluctuating fuel qualities.

#### Delivery form

200-, 500- and 1000-litre containers

#### Storage

Store and empty containers at room temperature.

#### Industrial safety

carbamin 5020 contains no substances requiring special markings in compliance with industrial safety regulations. The safety regulations applying to the handling of chemicals, however, must be observed.

#### Environmental protection

carbamin 5020 has an environment-protecting function and produces no toxicologically hazardous combustion products.

#### The special performance concept

The carbamin technology includes a number of types of active ingredients and dosing systems which can be adjusted and combined in ways that allow even the most diverse operating problems to be optimally solved after precise knowledge of the firing conditions.

The engineers of our Technical Applications Department are equipped with all the latest measuring instruments required to enable them to demonstrate by direct comparison the effectiveness of our process additives. Based on precise analysis, apart from the dust and gaseous substances in the flue gas foreign to the air, we also measure among other values the sulphur dew point. That is the only way to make a product application recommendation specific to a particular boiler.

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