



Carbosan 135 TR

Chemical Description

Product based on 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl) triethanol.

Main use

Antimicrobial preserving agent for the ceramic industry

Typical values

Appearance @ 20 °C: clear liquid

Gardner Colour: max. 3

Product properties

In absence of suitable preserving agents, the fluids used in the manufacturing of ceramics, such as body, engobe and glaze slips, solutions of fixing agents and screen-printing pastes, can be affected by the action of micro-organisms, with subsequent alteration of their properties and appearance of defects, bad odours, etc. In particular the attack effected by the microorganisms against glues, binding agents, fixing agents is a well-known cause for viscosity decreasing and poor performance of these products. This causes losses affecting productivity and quality, or at least uneasiness for the workers, which are forced to do corrective actions.

CARBOSAN 135/TR is particularly suitable to meet with the different requirements of the ceramic industry;

Concerning the use in the ceramic industry, the qualifying characteristics are:

Liquid appearance

It reduces the risks of contact and inhalation typical in the handling of products in powder. The handling of liquid preserving agents is easier and the addition can be automated where a continuous and regular dosage is necessary (collecting basins, water basins, decantator).

Effective at alkaline pH

Body, engobe and glaze slips frequently show high pH values. CARBOSAN 135/TR is effective up to pH 11 and more. It is often omitted that many preserving agents have no activity, or degrade when the pH value exceeds 9.

Thermal stability

In body grinding, glaze application, etc. it is possible to get temperatures up to 60°C. This condition wouldn't affect the preservative activity.

A wide spectrum of action

A good protection against all the dangerous microorganisms (bacteria, yeasts or moulds) is guaranteed, and the development of resistant species is very rare. In fact the peculiarity of some products for some microorganisms surely causes their disappearance but, in the meantime, improve the growth of the kinds immune to the action of the biocide. The wide spectrum of action reduces greatly the possibility of adaptation.

Applications

CARBOSAN 135/TR is a very strong product.

Being a mere formaldehyde releaser it is the most unfavorable under the point of view of the health and the environment.

CARBOSAN 135/TR is suggested especially in cases of serious contamination, which cannot be solved by means of other products and for reclamation operations.

The problem of enzymes

Bacteria, moulds and yeasts effect their degradation action by means of secretion of enzymes, proteins that form their "gastric juices". If these microorganisms grow before the proper biocide is used, it is possible that even after their disappearance the enzymes are still present and active. In this case rapid effects will be observed (for instance glaze slips losing in a few hours their viscosity), and the addition of the preserving agents will have no effect. If this event occurs, the solution is just to clean the plant, the pipelines and the tanks and use a high percentage of CARBOSAN 135/TR.

Normally, CARBOSAN 135/TR must be added directly into the mill.

The application dosages depend on the kind of material to preserve, on the nature of the infections and on the wanted shelf life. As a guideline the following percentages can be adopted:

CARBOSAN 135/TR	0.05 - 0.1%
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For the periodical reclamation of basins, tubes, pumps, mills, etc., the dosages must be doubled.

In general biocides show two action levels: at low dosages a biostatic effect occurs, that is the growth inhibition of the micro-organisms, while at higher dosages a biocide effect occurs, that means a complete disinfection from contaminants.

Therefore it is more convenient to use day by day a medium-low dosage, while with a frequency which, according to the requirements may be weekly, monthly or seasonal, it is right to proceed with a complete disinfection with a high dosage.

Storage and handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Use localized ventilation system.

Do not use empty container before they have been cleaned.

Before making transfer operations, assure that there are not any incompatible material residuals in the containers

In order to maintain the performance of the product, store at room temperature and protect from frost.

Always keep in a well ventilated place.

The shelf life is at least twelve months if this conditions are observed.

Packaging

1000 kg tanks; 25 and 200 kg Plastic drums

Material safety

"Detailed health and safety information can be found in our safety data sheet, available according to ECC Directive"

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