NEUTRACID NCS

Character	Product with pH buffering properties for neutralization and demineralization
Chemical Structure	Mixture of organic / inorganic buffers containing a sequestering agent
Appearance	Colourless to slightly yellowish, clear liquid
Ionic Character	-
pH-Value of a 10 % solution	0.8 – 1.8
Specific Weight at 20 °C	1.28
Stabilities	NEUTRACID NCS is stable to hard water and those chemicals used for pretreatment, dyeing and printing. The product is sensitive to frost to a certain extent; changes occurring at low temperatures disappear after warming up and stirring thoroughly.
Storage	On proper storage in closed original containers, the product is stable for at least 12 months.

Properties

Unlike the usual products based on organic acids/buffer mixtures, NEUTRACID NCS has additionally a high sequestering effect in cold and hot liquors. Therefore, the product is suitable not only for neutralization processes but also for a combined neutralization/extraction of hardening substances and heavy metals as well as for the acid demineralization before a bleaching process.

NEUTRACID NCS is not volatile and does not have any corrosive effect. Therefore, there is no corrosion on stenters or wet finishing machines.

The storage and dosage of NEUTRACID NCS in tanks/dosage pipelines made of stainless steel is possible.

Application for neutralization of alkaline finishing processes

The product allows the adjustment of neutral to slightly acid pH values on the material.

By application of NEUTRACID NCS for the neutralization, the pH change on the fabric by alkaline industrial water is compensated.

The pH value of the material treated by NEUTRACID NCS does not change, not even during longer storing times.

In normal industrial concentrations the product does not cause any fibre damaging in comparison with mineral acids.

A neutralization with NEUTRACID NCS has the following advantages

- no yellowing of the fabric during drying by residual alkalis
- elimination of alkaline earth ions
- no sedimentation of alkaline earths in washing machines during dosage in counter-flow
- lower charge of electrolytes of the fabric
- no problems in pigment printing by residual alkalis
- better crease angle in resin finishing by lower mineral content of the fabric
- lower residual formaldehyde values when resins with little formaldehyde are applied
- no deposits on rollers during finishing with reactive softeners
- lower content of carbon in exhaust air
- lowest possible costs for chemicals

Application for demineralization of cellulosic fibres

- no formation of insoluble calcium sulphate or calcium oxalate as with sulphuric or oxalic acid
- elimination of hardening substances and heavy metals
- improved dyeing effect in case of dyes which are sensitive to hardening substances
- reduced risk of catalytic damages on fabrics containing heavy metals
- higher whiteness degree in subsequent peroxide bleach

Application technique

Diluting instructions

NEUTRACID NCS is miscible with cold and warm water at any ratio.

Fields of application

NEUTRACID NCS is used to adjust neutral to slightly acid pH-values after alkaline finishing processes.

Recommendation for Use

Neutralization with NEUTRACID NCS in case of discontinuous working processes (vat, jet, machine):

The application concentration depends on the following parameters:

- residual alkali content in the liquor and on the fabric
- pH of industrial water

- desired pH value of the liquor or the fabric

- weight and structure of the fabric

For neutralization/extraction after alkaline, discontinuous processes we recommend the addition of NEUTRACID NCS in the rinsing bath.

Application quantity:

0.3 – 2.0 % NEUTRACID NCS
treatment temperature: 40 – 70 °C
treatment time: 10 – 15 min

On full white NEUTRACID NCS can be applied together with the softener in order to obtain a neutral pH value on the fabric.

Application quantity:

0.2 – 0.5 % NEUTRACID NCS
x % softener

pH: 5.5, 20 – 30 min at 40 °C

Neutralization with NEUTRACID NCS on continuous washing machines

The application concentration depends on the following parameters:

- residual alkali content of the fabric

- pH of industrial water

- desired pH value of the fabric

- weight and structure of the fabric

- contact time of the fabric with the neutralization liquor

1. pH controlled dosing to the last washing box

   In case of continuous washing machines NEUTRACID NCS can be dosed to the penultimate or to the last washing box. For pH controlled dosing we recommend a pH-value of 4.3 – 5.0 at the control device of the acid dosing. NEUTRACID NCS can be added in undiluted form to the washing liquor by means of pH controlled dosing pumps.

2. Dosing without pH control on continuous washing machines

   The dosage of NEUTRACID NCS can be effected directly into the counter-flow of the washing machine in dependence of the residual alkali content of the fabric. Sediments of hardening substances are prevented by the high sequestering effect.

   Industrial trials showed that in most cases a sufficient neutralization is obtained by applying 0.3 – 0.5% NEUTRACID NCS.

Neutralization with NEUTRACID NCS on the stenter

Due to the fact that contrary to acetic acid, NEUTRACID NCS does not need to be washed out after neutralization, the application can also be done on a pad before the stenter.

Application quantity:

1.0 - 3.0 g/kg NEUTRACID NCS

Demineralization of natural and synthetic textiles containing alkaline earths and heavy metals

Recipe suggestions:

1. Continuous procedure

Wovens

demineralization in the pad batch process

5.0 – 10.0 g/l NEUTRACID NCS
1.0 - 2.0 g/l KOLLASOL OCE
1.0 - 3.0 g/l FELOSAN NKB

Liquor pick-up:	80 – 100%
Impregnation temp. :	50 – 70 °C
Dwell time:	2 – 6 hours

demineralization in the pad steam process

5.0 – 8.0 g/l NEUTRACID NCS
1.0 – 2.0 g/l KOLLASOL OCE
1.0 – 3.0 g/l FELOSAN NKB

Liquor pick-up:	80 – 100%
Impregnation temp.:	20 – 50 °C
Dwell time:	2 – 10 min

demineralization on the washing machine

3.0 – 5.0 g/l NEUTRACID NCS
0.5 –1.0 g/l FELOSAN NKB

temperature:	70 – 90 °C
dwell time:	30 – 60 sec

On wovens with acrylate or CMC size it is necessary to avoid precipitations of the size by desizing the fabric before the demineralization.

Knits

demineralization on the J-box, dwelling band

3.0 – 6.0 g/l NEUTRACID NCS
1.0 – 3.0 g/l KOLLASOL OCE
1.0 – 3.0 g/l FELOSAN NKB

liquor pick-up: 100 – 130 °C
dwell time: 2 – 20 min
impregnation temperature: 50 – 70 °C
dwell temperature: 30 – 70 °C

demineralization on the washing machine

3.0 - 5.0 g/l NEUTRACID NCS
0.5 - 1.0 g/l KOLLASOL OCE
0.5 - 1.0 g/l FELOSAN NKB

temperature: 70 – 90 °C
dwell time: 30- 60 sec

2. Discontinuous process

demineralization on the jet, vat, machine

1.5 – 3.5 g/l NEUTRACID NCS
1.0 – 2.0 g/l FELOSAN NFG

liquor ratio: 1:10
treatment temperature: 40 – 60 °C
treatment time: 10 – 30 min

Please note:

NEUTRACID NCS is not volatile. If a fabric neutralized with NEUTRACID NCS is subsequently treated with a resin finishing, the catalyst quantity will have to be adapted to the pH of the fabric.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

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