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TECHNICAL INFORMATION
Rongalit® C p

Introduction

Discharge and reducing agent for use in discharge printing

- Direct printing and two phase process with vat dyestuffs.
- Discharge printing on dyed cellulosic fabrics.

1. Properties

Appearance	White powder
Chemical character	Sulfinic acid derivative
Decomposition temperature	From > 50 °C. Above this temperature, a thermal decomposition is possible.
pH value[1]	Approx. 10 (10 % aqueous solution)
Solubility in water (20 °C)	Approx. 600 g/l in water has good solubility; the dissolving process is endotherm.
Storage stability	Can be stored in the original sealed containers and in good conditions for 24 months. Opened containers should be used up as quickly as possible and should be properly resealed after use **Avoid moist conditions and should not be stored together with oxidizing agents or acids** As the product is hygroscopic, the product should be stored in dry, acid free and in conditions which are not too warm. Remove from containers with dry equipment (i.e. scoops).
Stability	Good stability with alkalis In neutral or alkaline print thickeners, the product is stable for long periods. With acids, Rongalit® C p decomposes. Decomposition by acids and oxidation are exothermic.
Eco-toxicological data	See Safety Data Sheet The product property data merely provide an indication of how the product is to be used. They do not constitute the agreed quality of the product, nor are they the object of regular quality control tests

[1] In accordance with DIN 19268 DE

2. Application properties

1. Direct printing with vat dyestuffs

For direct printing with vat dyestuffs, a stock thickening is used containing 130 – 140 g/kg Rongalit® C p and also the same amount of 1.1 potash.

Potash can be wholly or partly substituted by soda ash. 100 parts of potash can be replaced by 75 of soda ash.

Example of the stock thickening:

550	g	Thickener
30-50	g	Glycerine
130	g	Potash or 100 g Soda ash
130	g	Rongalit® C p
...	g	Water or thickening
1000	g	

Due to its good solubility, Rongalit® C p can be added directly to the thickening with stirring

The thickener should be set with a neutral or alkaline pH.

The above quantities relate to rotary screen printing. In flat screen printing the reducing agent and the alkali can be reduced by 20%.

The actual print colour has the following composition:

...	g	Vat dyestuff (Printing grades!)
650	g	Stock thickening
...	g	Water or thickening
1000	g	

After printing and drying the fabric is steamed for 8 – 12 minutes with saturated steam (102 °C, „air free “)

2. Colour discharge with vat dyes on dischargeable dyed cellulose fibers

For colour discharge printing with vat dyes on dischargeable dyeing on cellulosic fibers the above stock thickening is also very well suited. Depending on the dischargeability and colour depth of the dyed ground, it may be necessary to increase the proportion of Rongalit® C p and possibly also to increase the amount of potash and / or soda ash.

3. White discharge prints on dischargeable dyeing on cellulose fibers

For white discharge prints, Rongalit® Discharge C has proved successful as discharge agent and reducing agent.

Example for the composition of white discharge pastes:

	Paste „A“	Paste „B“
Thickener:	500 g	500 g
Rongalit® C p:	150 g	200g
Suitable discharge resistant optical brightener:	10 g	10g
Mix together, then		
Caustic soda 38 °Bé	–	40 g
Soda ash	–	40 g
Water or thickening to	340 g	210 g
	1000 g	

White discharge paste „A“ is intended for discharge prints on easily dischargeable dyeings with substantive and reactive dyes.

Print paste „B“ is for white discharge prints on dyeing with more difficult to discharge reactive dyes and naphthol combinations. Also in this case the caustic soda may be wholly or partly replaced by soda ash.

After drying steaming is carried out for 8–10 minutes with saturated steam (102 °C, „air free“).

4. Two phase printing process with vat dyes

Two phase printing process is another application area for Rongalit® C p. In comparison to Rongalit® 2 PH-A liq + Rongalit® 2 PH-B liq, which were specially developed for the two phase process with vat dyes, Rongalit® C p is a slower reaction. It takes a longer steaming time and the product is therefore particularly suitable for textile printers who do not have the opportunity to fix the vat dyes in a special two-phase shock (Flash ager) within a few seconds,

Application rate. 100 g Rongalit® C p[2]

The printed and dried fabrics are padded in a padding mangle and steamed for 5–7 minutes with saturated steam or slightly superheated steam (110 °C –115 °C). Finally the fabric is rinsed, alkaline re-oxidised and given a boiling soaping treatment. An addition of acid is made to the soaping bath or one of the following soaping baths.

[2] Please note: In the event of in the recipe using borate: According to the latest scientific findings, borates/ borax can impair fertility and cause harm to the unborn child. For textile products with borate content of 0.1%, in the EU notification (as of Sept. 2010) applies.

Conversion table

The following table can be used to convert the amount of caustic soda in the corresponding volume or by unit of weight of sodium hydroxide solution.

100 g caustic soda (fixed) correspond to:

347 g or 263 ml NaOH 35 °Bé = 64.0 °TW
307 g or 227 ml NaOH 38 °Bé = 71.4 °TW
286 g or 206 ml NaOH 40 °Bé = 76.6 °TW
238 g or 164 ml NaOH 45 °Bé = 90.6 °TW
214 g or 143 ml NaOH 48 °Bé = 99.6 °TW
206 g or 136 ml NaOH 49 °Bé = 102.8 °TW
200 g or 130 ml NaOH 50 °Bé = 106.0 °TW

Note

Thorough after-washing of the print is essential