

# CASWELL SEALER INSTRUCTION MANUAL

## TABLE OF CONTENTS

CASWELL METAL SEALER .....	2
SUPPLIES & MATERIAL CHOICE .....	2
APPLICATION – METHODS .....	2
SUGGESTED USE.....	2
PROPERTIES .....	3
APPLICATION.....	4
PREPARATION.....	4
PROCESS STEPS.....	4
BATH MAINTENANCE .....	5
SEALER REMOVAL .....	5
WARNING! .....	6
SAFETY.....	6
DISCLAIMER.....	7

## CASWELL METAL SEALER

Caswell Sealer is a glossy, water-based acrylic lacquer. The sealer forms a hard, clear, shiny, dry anti-corrosion coating on bare metals and on conversion coatings (including black oxide, patina and phosphate).

## SUPPLIES & MATERIAL CHOICE

Sealer tank & equipment: mild steel, stainless steel, rubber-lined steel, PP/PE or fiberglass.

Cover: always cover tank when not in use to limit evaporation.

## APPLICATION – METHODS

Caswell Sealer can be applied by:

- Dipping (recommended after chemical blackening)
- Brush/sponge (swab-on)
- Low-pressure sprayer

## SUGGESTED USE

Caswell Sealer is used undiluted or diluted (max 1:1) and can be applied to wet or dry parts, both to bare metals and to surfaces with a chemical conversion coating (such as cold black oxide or patinas). Very suitable as a sealer for:

- Bare metals for storage
- Caswell Black Oxide / Mega Black
- Caswell Stainless Steel Blackener

## PROPERTIES

Technical characteristics of the sealer:

- Finish: hard clear glossy very thin film
- Thickness: +- 0.0025 mm when immersed
- Coverage: +- 70 m<sup>2</sup> per liter
- pH: +- 9.9 and should be maintained at pH 9.5 or higher with periodic additions of ammonia
- Flash Point: None
- Solids: 16.5%
- Drying time:
  - Dust-dry after about 10 to 30 minutes.
  - Cured after 24 hours.
  - The drying process can be accelerated with heated air or centrifugation.
- Thinning: Generally, it is applied undiluted, but it can be diluted 1:1 with up to an equal part of water for a thinner surface with reduced corrosion and wear resistance.

Dilution affects the above characteristics.

## APPLICATION

### PREPARATION

- Cleaning/degreasing: use an alkaline degreaser; Rinse thoroughly and drain well.
- Avoid oil/solvent residue, dirty gloves and dust.
- Limit the introduction of rinse water into the bath: let workpieces drain first. The rinse water will mix with the Caswell Sealer and adjust its properties.
- Surface condition: parts may be *slightly damp* from rinsing, but not dripping. The rinse water mixes with the sealer - remove visible free water before sealing to avoid dilution and craters.
- Warm, clean air or (for basketwork) spinning can speed up drying; Too hard airflow quickly causes dust impact/craters.

### PROCESS STEPS

Dipping (recommended for series work)

- Immerse completely and leave on for a few seconds.
- Drain excess sealer and shake off.
  - Do not blow off with compressed air.
- Drying: dust-dry in approx. 10–30 minutes at room temperature with gentle ventilation.
- Optional second coat: apply as soon as the first coat is dust-dry (10–30 min) for extra shine/abrasion resistance.
- Manageable: after  $\pm 30$ –60 min. Fully cured:  $\pm 24$  hours.

Brush / Sponge / Syringe

- Apply thinly and evenly; Several thin layers give the best result.
- Wait 10–30 min between coats (dust-dry), then apply the next coat.
- Let each layer flow gently; Don't "brush off" as soon as it gets tacky—that will draw streaks.
- Drying/curing: manageable  $\pm 30$ –60 min, full  $\pm 24$  hours.

## BATH MAINTENANCE

- Cover: always cover when stationary; prevents evaporation, dust and skin formation.
- pH value: keep pH above 9.5; if necessary, small correction with ammonia. Measure again after dosing.
- Stirring/filtering: stir gently (do not store air). Periodic filtering ( $\pm 100\text{--}200\ \mu\text{m}$ ) to remove dried edges/skin and particles.
- Prevent contamination: drain parts well after rinsing; No oil, solvent or dirt in the bath. Do not dip rinsing baskets/drums from previous baths into the sealer.
- Temperature: process and store  $>10\ \text{°C}$ ; Do not freeze. Cold sealer = slower drying/thicker layer.
- Cleaning tank: in case of a lot of deposits/"skin": drain the sealer, clean the tank with warm water (possibly mild alkaline), rinse/dry, return clean sealer.

## SEALER REMOVAL

Caswell Sealer can be removed with strong alkaline cleaners.

## **WARNING!**

Caswell Sealer is not a dangerous product under normal use. Avoid contact with eyes and skin.

Do not operate with the Caswell products without first reading and understanding the SAFETY INFORMATION.

The safety data sheet can be found on the product page or can be requested from Verzinkshop.nl by e-mail: [info@verzinkshop.nl](mailto:info@verzinkshop.nl)

Do you have any questions? Contact us via:

Mail: [info@verzinkshop.nl](mailto:info@verzinkshop.nl)

Whatsapp or call: +31 6 28090022

[WWW.VERZINKSHOP.NL](http://WWW.VERZINKSHOP.NL)

## **SAFETY**

ALWAYS wear a dust mask, respirator, gloves, and apron when necessary.

ALWAYS treat any chemical as if it could kill you.

ALWAYS label buckets and storage containers with a permanent marker so that you and others know what's inside.

NEVER pour water into acid; it can heat up and explode. ALWAYS pour acid into water.

NEVER leave electroplating pools or other systems that use power unattended. These products may cause a short circuit and cause a fire.

NEVER come into direct contact with chemicals. They can cause serious burns or other damage and are very dangerous substances if not treated with respect.

NEVER THINK you can get away without taking safety precautions! That is not possible!

NEVER leave the lids off the tanks when not in use. They WILL fall over!

Always work safely and ensure good protection and ventilation.

The safety data sheet can be found on the product page or can be requested from Verzinkshop.nl by e-mail: [info@verzinkshop.nl](mailto:info@verzinkshop.nl)

## **DISCLAIMER**

Did you find an error or something unclear in the manual? Please let us know via [info@verzinkshop.nl](mailto:info@verzinkshop.nl)

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