

# CASWELL

## EUROPE

### A 385 Room Temperature Blackening Solution for Aluminium

The A-385 liquid concentrate is diluted with distilled water and used as an immersion blackening solution for aluminium and its alloys. Used full strength, the concentrate may be applied by swab-on techniques for blackening engravings, etchings, prototype parts or for the quick touch-up of scratched or remachined black anodised surfaces.

The black finishes are of negligible thickness. Therefore, they produce essentially no dimensional changes in the finished part.

Use A-385 anywhere. No special equipment, control procedures, ventilation or heating.

Vary colour from rich pewter grey to deep black by dilution and dwell time. Results are uniform, consistent, repeatable, and stable under lacquer. Colourfast through age or sunlight.

Leave finish jet black to replace anodising or relieve and highlight to simulate pewter. Seal or lacquer for added richness and abrasion resistance.

- A. Blackens castings that cannot be anodised.
- B. Can replace anodising where metal-against-metal abrasion resistance is not required.

Non-caustic - an odourless preparation of mild, water-soluble chemicals.

#### IMMERSION FINISHING PROCEDURE

Items to be blackened must be thoroughly cleaned and deoxidised. Some experimentation should be done with properly prepared sample parts to determine the degree of cleaning and deoxidising required producing a uniform black finish.

Items to be blackened are contained in plastic dip baskets or hung on plastic coated racks or hooks, depending upon the shape, weight, and production requirements.

The aluminium surfaces to be finished must be free of oils and other soils as well as free of oxides prior to blackening and they may be removed either mechanically or chemically.

#### A. Mechanical Preparation

1. Sand or glass bead blasting is an excellent method of cleaning and deoxidising aluminium surfaces prior to blackening and will produce a non-reflective, very uniform and adherent black finish.
2. Rinse for a minimum of 30 seconds in a bottom fed overflowing cold-water rinse tank to remove residual blasting dust or cleaning solutions.



3. Blacken at room temperature in an A-385 solution. Prior to charging a production tank, some experimentation should be performed with properly prepared sample parts, using various dilutions of A-385 concentrate (1 to 5 parts distilled water) and different immersion times to determine the conditions and parameters required to produce the desired depth of black. As a starting point, dilute one (1) part A-385 concentrate with one (1) part distilled water. Determine by test the shortest immersion time necessary to produce the desired finish - usually 30 to 90 seconds. Required immersion times can be shortened or lengthened by varying the amount of water. Immersing the parts for an excessive amount of time will not increase the depth of blackness and may result in the formation of an undesirable smut or rub-off.
4. Rinse for a minimum of 30 seconds in a bottom fed overflowing cold-water rinse tank.
5. To enhance the depth of black, seal and impart corrosion resistance to the finish, immerse the parts while still wet from the preceding rinse in SD Klene Ox for a slightly oily finish, or Beeswax, for a gloss finish.

The addition of fresh concentrate will make up for volume loss from normal water evaporation. The active chemicals will not evaporate. The solution is depleted only through use. Immersion solutions can be kept at optimum strength indefinitely with only periodic filtering or sludge removal.

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#### CAUTION

The A385 concentrate and solutions are mildly acidic. Avoid contact with eyes, skin and clothing. Wear eye protection (glasses, goggles or face shield), protective rubber gloves and aprons, when preparing solutions and while working with the solutions. Do not mix the A385 concentrate or solutions with alkaline materials, or any other chemical substances. The A386 solutions are toxic if taken internally.