

BONDERITE C-AK L-60

Known as Novaclean L 60

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PRODUCT DESCRIPTION

BONDERITE C-AK L-60 provides the following product characteristics:

Technology	Industrial Cleaner
Product Type	Alkaline Cleaner
Application	Parts Cleaning
Concentration, mL/L	30 to 70
Operation Temperature °C	20 to 90

Application Areas:

BONDERITE C-AK L-60 is a liquid, strong alkaline product for the cleaning of metallic surfaces.

BONDERITE C-AK L-60 is used for both chemical cleaning (with a surfactant additive) or electrolytic cleaning.

BONDERITE C-AK L-60 is used also by spray application or in ultrasonic tanks with the appropriate additive.

BONDERITE C-AK L-60 is used also for the phosphate or soap removal in the cold forming operation.

BONDERITE C-AK L-60 is used for the cleaning of metallic surfaces prior to electroplating or chemical plating, prior to enamelling or prior to organic coating.

BONDERITE C-AK L-60 is particularly designed for ferrous and copper alloys. Do not use on light metals (aluminium alloys).

TECHNICAL DATA

Appearance	colourless to pale yellow, clear liquid
Density, g/cm ³	~1.47
pH-value: (in a solution of 10 g/L)	~13

DIRECTIONS FOR USE

Preliminary Statement:

Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions and contact Henkel for analytical support.

Bath Make-up:

The BONDERITE C-AK L-60 process can be applied by dip, by spray or in ultrasonic tanks.

The working parameters are:

1. Cleaning by dip:

Concentration:	
BONDERITE C-AK L-60	35 to 70 ml/l (50 to 100 g/l)
Detergent additive:	2 to 10 ml/l
Temperature:	50 to 90 °C
Treatment time	5 to 15 min

It is recommended to maintain a light agitation, for example with compressed air, in order to renew the cleaning solution in contact with the metallic surface to be cleaned. Be carefull, too much agitation may generates foam.

2. Cleaning in ultrasonic tanks:

Concentration:	
BONDERITE C-AK L-60:	30 to 60 ml/l
Detergent additive:	2 to 5 ml/l
Temperature:	50 to 70 °C
Treatment time	2 to 5 min

3. Electrolytic cleaning:

Concentration	40 to 70 ml/l
Temperature:	20 to 60 °C
Treatment time	1 to 5 min
Current density	2 to 10 A/dm ²

BONDERITE C-AK L-60 is used for anodic electrocleaning of steel surfaces.

BONDERITE C-AK L-60 can be used at ambient temperature (20 to 25°C), but an increase of temperature increases its efficiency, particularly because it increases the conductivity of the cleaning solution.

4. Cleaning by spray:

Concentration:	
BONDERITE C-AK L-60:	10 to 30 ml/l
Detergent additive:	1 to 3 ml/l
Temperature:	30 to 70 °C
Treatment time	1 to 5 min
Pressure	1.5 to 2 bar

The choice of the detergent additive depends of the working temperature.

Note: Some different working conditions may be recommended by our technical engineer depending of your specific requirements.

Equipment notes:

The tank and heating system should be made of steel or stainless steel.

Do not use aluminium or copper alloys.

An extraction of the vapours is recommended.

Bath Control:Free alkalinity:

- Take a sample of the bath and cool it down to room temperature.
- Pipette 10 mL of bath solution into an Erlenmeyer flask and add 50 mL Deionised water.
- Add 3 to 5 drops of phenolphthalein indicator.
- Titrate the solution with 1 N hydrochloric acid.
- The endpoint will be shown by a colour change from colourless to pink.
- The consumption of 1 N hydrochloric acid in mL is equal to the point of free alkalinity.

Results:

Free alkalinity (number of points) = V

Concentration BONDERITE C-AK L-60 (mL/L) = V x 10.8

Concentration BONDERITE C-AK L-60 (g/L) = V x 16

Bath adjustments:

The bath concentration is maintained constant by regular additions of BONDERITE C-AK L-60, preferably with a dosing pump and if necessary by punctual additions.

A bath at a concentration of 50 mL/L has a free alkalinity of about 4.6 points.

The free alkalinity is increased by 1 point, by addition of 10.8 mL/L (16 g/L) BONDERITE C-AK L-60.

The addition of detergent additive is made in proportion of the quantity of BONDERITE C-AK L-60 added.

However, in case of parts difficult to clean, it is necessary to add some more detergent additive in order to solve a temporary problem.

When a de-oiler or an ultra-filtration system is used, some of the detergent additive is collected together with the oil removed.

The addition of detergent additive should correct this situation.

Classification:

Please refer to the corresponding **Material Safety Data Sheets** for details on:

Hazards identification

Transport information

Regulatory information

Storage:

Recommended Storage Temperature 4 to 35°C

Shelf-life, months 24

(in unopened original packaging)

ADDITIONAL INFORMATION**Disclaimer****Note:**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 0.1