

BONDERITE® C-IC D-3000

September 2024

Product description

BONDERITE® C-IC D-3000 provides the following product characteristics:

Technology	Pickling
Product type	Acid cleaner
Application	Pickling stainless steel

BONDERITE® C-IC D-3000 is a liquid, yellowish product with acid character.

Application areas:

It is used in pickling weld metal and in general of the stainless-steel surface, which had suffered a thermal process. It is also used in satin finishing and scratch removal of stainless steel achieving a uniform matte finishing.

Technical data

Appearance	yellowish
Density, g/cm ³	1.3

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.

Operating data:

Concentration, % by volume	20 to 60
Temperature	room temperature
Immersion time, minutes	10 to 30

A passivation treatment must be carried out, if a high resistance to corrosion is needed, especially when the surface treated is exposed to an industrial atmosphere.

Bath make-up:

Fill the tank 1/3 with water and add under circulation: BONDERITE® C-IC D-3000 with the specified quantity bring volume to level by adding water to fixed value.

Bath control:

BONDERITE® C-IC D-3000 solution is controlled by the following analysis:

Titration of total acid:

1. Pour approximately 100 ml of deionized water into a clean 300 ml Erlenmeyer flask.
2. Add exactly 1 ml of BONDERITE® C-IC D-3000 bath solution.
3. Add approximately 10 drops of phenolphthalein indicator.
4. Titrate with sodium hydroxide 1N until the appearance of a pink solution.
5. Calculation: Concentration % V = $16.5 \times \text{ml of 1N sodium hydroxide}$.

In addition, we recommend occasionally doing the following analyses:

Titration of free acid:

1. Pour approximately 100 ml of deionized water into a clean 300 ml Erlenmeyer flask.
2. Add exactly 1 ml of BONDERITE® C-IC D-3000 bath solution.
3. Add approximately 10 drops of bromocresol green indicator.
4. Titrate with sodium hydroxide 1N until color change from yellow via green to blue.

In a new bath, the free acidity and the total acidity are almost the same. You will notice that the values drift apart as you use the bath. This is a indication of the age and condition of the bath.

Titration of the iron-(III)-content:

1. Pour approximately 50 ml of deionized water into a clean 300 ml Erlenmeyer flask.
2. Add exactly 1 ml of BONDERITE® C-IC D-3000 bath solution.
3. Add 5 ml of HCL solution 5 mol/l.
4. Add 10 ml Calciumchlorid solution 1 mol/l.
5. Add about 5 grams of potassium iodide and stir until dissolved.
6. Seal the flask and put it in a dark place for 5 min.
7. Titrate with Sodium Thiosulfate (Na₂S₂O₃) 0.1 N till color changes into light yellow.
8. Add about 10 drops of starch indicator and continue the titration until the color changes from black-dark to light green-colorless.
9. The added ml of 0.1 N Sodium Thiosulfate multiplied by the factor TF 5.5847 is equal to iron (III) in g/L.

If the iron (III)-content exceeds the given limit, then part or all of the BONDERITE® C-IC D-3000 bath must be replaced.

We recommend to discharge the bath when the iron (III)-content reaches 35-40 g/l.

Equipment:

BONDERITE® C-IC D-3000 is an acid product and should be used in iron tanks protected with anti-acid material.

Handling:

BONDERITE® C-IC D-3000 is an acidic product and therefore contact with skin and eyes must be avoided by using gloves, safety glasses as well as anti-acid clothing. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Classification:

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

Transport Regulations
Hazardous Information
Safety Regulations

Storage:

BONDERITE® C-IC D-3000 should be stored in a cool and away from alkaline products.

Disclaimer

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. Any liability in respect of the information in the Technical data sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1