

TECHNICAL DATA SHEET

UniPrep D 315 LL

Long Life, Low Temperature Soak Cleaning System

Manufacturer	Atotech Deutschland GmbH
Document No.	8082
Version	06
Version date	14. Nov.2022
Doc.-No.	8082
SAP-No.	1686980
IMDS-No.	not applicable
Products covered	UNIPREP D 315 LL (1685126) ACTIVATOR B2 (1681262) UNIPREP ANTIFOAM 100 (1687985) UNIPREP ANTIFOAM 250 (1688011)

CONTENTS

1 Process Information	1
2 Equipment	2
3 Make-Up	2
4 Working Parameters	2
5 Application Guidelines	3
Foam	3
Operating UniPrep® D 315 LL as a Long Life, Low Temperature Cleaning Process	3
Solution Replenishment	3
Aeration	3
Temperature	3
Filtration (Recommended)	3
6 Material No. for Make-Up and Maintenance Products	4
7 General Safety Precautions	4
8 Document History	4

1 Process Information

UniPrep® D 315 LL is a highly emulsifying, alkaline, low temperature soak cleaner for steel and copper substrates. It is suitable for many metal finishing applications and is ideal as an immersion cleaner prior to barrel and rack zinc plating. UniPrep® D 315 LL is designed to rapidly penetrate, lift off and emulsify a variety of soils such as greases, oils, carbonized material, phosphate coatings and drawing compounds.

- UniPrep D® 315 LL is formulated specifically for steel, cast iron, copper and magnesium. It is not recommended for use on zinc and aluminum alloys.
- UniPrep D® 315 LL is suitable as the first step in both paint pretreatment and pre-plating applications.
- UniPrep D® 315 LL is suitable for use as a long life cleaner. When used in conjunction with specially formulated additives, oils and other complex organics are degraded in-situ, resulting in an economical cleaning system with long cleaner life and steady-state performance.

Features	Benefits
Low operating temperature*	Energy savings
No hard chelators	Reduced waste water treatment costs
No phosphorous	
No boron	
No alkyl phenol ethoxylates (APE)	Complies with EC 648/2004

* Higher temperatures may be necessary for more difficult to remove soils.

2 Equipment

Tanks	Mild steel, Stainless steel, HDPE, Polypropylene, PVC or CPVC
Heating / Cooling	Stainless steel, PTFE, Titanium
Exhaust	Recommended (Removal of steam)
Pumps	Mild steel, Stainless steel, PVC or CPVC
Agitation	Recommended, to improve cleaning efficiency and improve in-situ oil degradation
Filtration	Recommended: Use 25 – 50 micron filter media

3 Make-Up

Make-Up of 100 l	Optimum	Range
Water	85 liter	75 – 95 liter
UniPrep® D 315 LL	15 liter	5 – 25 liter
Activator B2 (required for oil degradation)	75 ml	25 – 125 ml

- Fill tank with water to approximately 70 % of the volume.
- Add the required amount of UniPrep® D 315 LL.
- Add the required amount of Activator B2.*
- Fill tank to required working volume.
- Heat to operating temperature.
- The solution is ready to use.

* Do not combine Activator B2 with undiluted UniPrep® D 315 LL. The UniPrep® D 315 LL should be diluted prior to addition of Activator B2.

4 Working Parameters

UniPrep® D 315 LL (Operated as conventional cleaner)	Optimum	Range
Temperature	40 °C	*20 – 80 °C
Concentration	150 ml/l	50 – 250 ml/l
Dwell time	5 minutes	3 – 15 minutes
UniPrep® D 315 LL (Operated as long life, low temperature cleaner)	Optimum	Range
Temperature	40 °C	*20 – 50 °C
Concentration	100 ml/l	50 – 150 ml/l

UniPrep® D 315 LL (Operated as long life, low temperature cleaner)	Optimum	Range
Dwell time	5 minutes	3 – 15 minutes

**Temperature can play a critical role in cleaning performance. Prior to implementation in production, the operating temperature of UniPrep® D 315 LL should be verified that it will meet the application's cleaning performance requirement.*

5 Application Guidelines

Foam

UniPrep® D 315 LL is a moderately foaming soak cleaner. Applications with strong agitation may experience foaming. Use of UniPrep® Antifoam 250 or UniPrep® Antifoam 100 will rapidly reduce foam. It is highly recommended to have UniPrep® Antifoam available for the initial installation of UniPrep® D 315 LL.

Operating UniPrep® D 315 LL as a Long Life, Low Temperature Cleaning Process

NOTE: UniPrep® D 315 LL can be operated as a long life, low temperature cleaning process. In order for in-situ oil degradation to occur effectively, the following operational guidelines must be followed:

Solution Replenishment

UniPrep® D 315 LL solution will be consumed by soil loading and by solution drag-out. Concentration should be determined by titration and replenished at least once per operating shift.

To maintain optimum oil degradation efficiency, it is necessary to replenish Activator B2 on a regular basis; 50 % of initial make-up dose of Activator B2 must be added once per week. Failure to add Activator B2 will result in the loss of in-situ oil degradation, which will reduce bath life.

Aeration

An oxygenated (aerobic) environment is required for proper oil degradation to occur. Air injection or other aeration methods must be provided continuously including weekends and shutdowns. Without proper oxygenation, oil degradation will be diminished and unpleasant odors can occur.

Temperature

The operating temperature range is 20 – 50 °C. Temperatures in excess of 50 °C should be avoided as they are detrimental to the oil degradation mechanism, and can result in reduced bath life. In the event that temperature exceeds 50 °C, the temperature controller should be repaired as quickly as possible. Once proper temperature control is restored, Activator B2 should be added, at the original make-up dosage, to re-establish the in-situ oil degradation capabilities.

Filtration (Recommended)

When operated as a Long life, Low temperature cleaner, UniPrep® D 315 LL provides extended solution life by degrading organic contaminants. Some contaminants entering the cleaner are inorganic particulates that will not be degraded. Filtration is recommended to remove these particulates.

A well designed filtration system can provide the following process benefits.

- Removes inorganic particulates from cleaning solution.
- Provides aeration (oxygen) necessary for in-situ oil degradation.

Pump recirculation through a 25 micron polypropylene filter bag is typically sufficient. To provide aeration, the return from the filter should discharge above solution level.

6 Material No. for Make-Up and Maintenance Products

PRODUCT	MATERIAL NO.
UNIPREP D 315 LL	1685126
ACTIVATOR B2	1681262
UNIPREP ANTIFOAM 100	1687985
UNIPREP ANTIFOAM 250	1688011

7 General Safety Precautions

Avoid direct contact with this material. Do not inhale associated mist or vapors. Wash contaminated clothing before reuse. Refer to Safety Data Sheet (SDS) for specific precautions before handling this material and for first aid recommendations. As applicable, keep exposure below the limits recommended by the appropriate regional regulatory agencies.

For further information regarding safe handling of the product please refer to the corresponding SDS. The SDS is provided as part of the ordering process. If you don't have a copy of the SDS for a product then it can be obtained, on request, from the appropriate regional Atotech office.

8 Document History

Current revision status	Date	Change against last version:
01	04. Aug.2016	New
02	22. Aug.2016	Sales Product
03	07. Dec.2017	Application changed
04	11. July.2018	Activators changed
05	06. Dec.2018	New format; Update Wastewater Recommendation
06	14. Nov.2022	Chapter 4: Temperature changed

Literal transcription of the manufacturer's original document (Atotech Deutschland GmbH · Doc. 8082 · v06). Content verified automatically against the original — text, values, formulas and highlighted warnings — on 03.09.2026. Approved on 03.09.2026.

Document reproduced by REYM from the technical data sheet of Atotech Deutschland GmbH, document 8082 version 06 dated 14. Nov.2022, preserving the original text. The technical content belongs to the manufacturer.

Manufacturer's notice: This sheet shall serve for your information. The content of the sheet is based on our best knowledge. We do not undertake any duty to advise. The contents of the sheet shall not be considered as an agreement on condition and quality of the goods delivered. The decision to use our products for its production purposes is the responsibility of our customer. We can accept liability only for the quality of our products at delivery. If difficulties arise in the application of our products, we propose that you contact our technical service department.

P.O. Box: 21 07 80 10507 Berlin, Germany Erasmusstraße 20 10553 Berlin, Germany · phone +49 (0) 30 349 85 0 fax +49 (0) 30 349 85 777