

QUALITY DEFINITIONS OF DEMINERALISED WATER DELIVERED BY HATENBOER-NEPTUNUS BV – LOCATION HN-01, DORDRECHT

Demineralised (demiwater) = Deionised Water for technical pure water applications and not suitable for human consumption.

Name/Parameter (symbol)	Expressed in	Deionised water / Demineralised Water		
		minimum	maximum	average
Conductivity at 20 °C (EC)	$\mu\text{S}/\text{cm}^{-1}$		<0.2	<0.06
Degassed conductivity at 20 °C (EC)	$\mu\text{S}/\text{cm}^{-1}$		<0.2	<0.06
Silicate (SiO_2)	mg/l		<0.03	0.002
Total Dissolved Solids (TDS)	mg/l		N.A	N.A
Iron (Fe)	mg/l		<0.1	<0.005
Copper (Cu)	mg/l		<0.05	<0.005
Ammonia (NH_3)	mg/l		<2	<0.010
Total Organic Carbon (TOC)	mg/l		N.A	0.002 - 0.010
Turbidity	NTU		N.A	N.A
Sodium (Na^+)	mg/l		N.A	<0.020
Sulphate (SO_4)	mg/l		N.A	N.A
Chloride (Cl^-)	mg/l		N.A	<0.010
Free/Total Chlorine (Cl_2)	mg/l		N.A	N.A
Temperature	°C	3	40	12
Calcium	mg/l		N.A	<0.010
Magnesium	mg/l		N.A	<0.005
Acidity/Alkalinity	pH at 25 °C	5.5	7.5	7.0
Hardness	mmol/l		<0.04	0
Bacteria	CFU/ml		<50	0

The physical/chemical quality of the product (= demineralised water) as stated above is valid at the product loading station for trucks only. Explanation: 1 ppm (part per million) = 1 mg/l. $\mu\text{S}/\text{cm}^{-1}$ = microSiemens per centimeter. The demiwater buffers are atmospheric tanks, in which CO_2 dissolves and raises the conductivity. Therefore conductivity-values are given for demiwater with and without the dissolved CO_2 (degassed). The demiwater is produced by filtration->softening->reverse osmosis (RO)->mixed beds, turbidity as well as all (cat- & an) ions are removed far below the limits of measuring. TOC is much lower than guaranteed value due to RO. Sulphate is far below the measuring limit for the applied technology, also if the silica limit is maintained, sulphate cannot be emitted from the mixed beds in measurable quantities, therefore it is neither a contract value nor a measured parameter. The water is not chlorinated. Any free chlorine present in the raw feed water would not pass through the installation. Therefore this value is considered inapplicable.

Hatenboer-Neptunus water supply cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product. The delivery of goods and services of Hatendoer-Neptunus BV are subject to the General Conditions that have been deposited with the Court of Rotterdam (54/2014) and with the Chamber of Commerce Rotterdam, the Netherlands, under number 24043767. "These conditions can be consulted on the website of H.N. (www.hatenboer-neptunus.com) and will be sent upon first written request without charges. The applicability of principal's and/or counterpart's general terms and conditions is explicitly rejected by Hatendoer-Neptunus b.v.