

## Technical Data Sheet

### BEROLAMINE 505 (BA-505)

#### General

Average Molecular Weight 135 gmol<sup>-1</sup>  
Hydroxyethyl piperazine CAS Reg. No.  
103-76-4  
Aminoethyl ethanolamine CAS Reg. No.  
111-41 -1  
Aminoethyl piperazine CAS Reg. No.  
140-31-8

IUPAC name: Reaction mass of: 2-(2-aminoethylamino)ethanol and 2-piperazin-1-ylethanol and 2-piperazin-1-ylethylamine

Berolamine-505 (BA-505; CAS 103-76-4/111-41-1/140-31-8) is an amine blend containing about 60% HEP, 15% AEP and 30% AEEA. BA-505 is commonly used as an asphalt additive..

#### Sales Specification

Characteristic	Unit	Specification	Methods of Analysis
Appearance	-	Clear liquid	200
Hydroxyethylpiperazine	w%	min 60	565
Aminoethylpiperazine	w%	max 15	565
Aminoethylethanolamine	w%	max 30	565
Water	w%	max 1.0	305

Methods of Analysis are available upon request.

In case of dispute, the listed Method of Analysis will be used as reference methods.

#### Physical and Chemical Properties

Property	Value	Property	Value
Form	Clear liquid	pH	11,5 at 25 % solution
Colour	colourless	Melting point/freezing point	> -20 °C
Odour	ammoniacal	Boiling point/boiling range	> 200 °C
Flammability (liquids)	Not classified as a flammability hazard	Flash point	135 °C Method: Pensky-Martens ISO 2719
Explosive properties	Not explosive	Ignition temperature	> 150 °C
Oxidizing properties	The substance or mixture is not classified as oxidizing	Vapour pressure	7 hPa at 20 °C
Solubility in other solvents	Soluble in ethanol	Density	1 050 kg/m <sup>3</sup> at 20 °C
		Relative density	1,05 at 20 °C
		Viscosity, dynamic	70 mPa.s at 50 °C

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