

## Product Data Sheet

### Dissolvine® M-40 PLUS

Dissolvine® M-40 PLUS is a solution of a high purity, versatile and readily biodegradable chelating agent in water. Dissolvine® M-40 PLUS has a majority (>50%) bio-based carbon content.

#### Applications

##### Household cleaning

- Dissolvine® M-40 PLUS effectively replaces phosphorous containing builders in dishwashing detergents.
- It enhances the cleaning power of a cleaner / detergent by sequestering hard water ions from water and dirt.
- It prevents the deactivation of surfactants from hard water metal ions.
- It also deactivates transition metal ions thus stabilizing detergents that contain peroxides.

##### Industrial & Institutional cleaning

- Dissolvine® M-40 PLUS forms stable, water-soluble metal complexes with all potentially harmful metal ions.
  - It dissolves existing and prevents new scales from causing problems in water circulation equipment (in e.g. the power, brewing, and sugar industries).
- Because of its low molecular weight this chelate performs very well in short contact cleaning.

#### Specifications

Checkpoint	Specification	Units	Method
Appearance	Clear, colorless to light	Yellow liquid	visual
Assay as MGDA-Na <sub>3</sub>	39.0 – 41.0	%	SMA 916.02
pH of a 1% w/v dilution	10.0 – 12.0		SMA 176.18
Density	1.28 – 1.32	g/ml	SMA 865.01
Assay NH <sub>3</sub>	80 max	mg/kg	SMA 186.02
Color	180 max	APHA	SMA 898.06
NTA-Na <sub>3</sub>	< 0.1	%	SMA 883.10

#### Main characteristics

Chelating values Dissolvine® M-40 PLUS are approximately (theoretical figures):

Metal ion	pH range	mg metal/g Dissolvine® M-40 PLUS
calcium	6 – 14	60
copper	1 - 11	95
ferric	0 - 8	80
Magnesium	7 – 11	35
Manganese	4 - 11	80
Zinc	2 - 11	95

#### Environmental aspects

Readily biodegradable, non-hazardous, Ecolabel compliant.  
COD: 290 mg/g

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<b>Chemical Name</b>	Methylglycine N,N-diacetic acid, trisodium salt
<b>Chemical formula</b>	MGDA- $\text{Na}_3$
<b>INCI name</b>	Trisodium Dicarboxymethyl Alaninate
<b>Structure</b>	
<b>Mol. Weight</b>	271.1
<b>REACH Number</b>	01-0000016977-53-****
<b>CAS number</b>	164462-16-2
<b>Packing</b>	For information on possible packing types and sizes, please contact your nearest Nouryon representative.
<b>Storage</b>	Store in original packing or in PVC, PP, PE, stainless steel or bituminized tanks. Avoid contact with aluminum, zinc, nickel, copper and copper alloys. It is advised to re-test the material after three years of storage.
<b>Further information</b>	For transport, handling and first aid instructions, please refer to the Safety Data Sheet, which is available on request. For samples, technical service and further information, please contact your nearest Nouryon representative or:
<b>Internet</b>	<a href="http://www.nouryon.com">www.nouryon.com</a>
<b>Addresses</b>	You can find the addresses of our offices at <a href="https://chelates.nouryon.com/locations/">https://chelates.nouryon.com/locations/</a>

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