



GREEN SOLVENTS

FOR SUSTAINABLE CHEMISTRY



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We support the concept of Green Chemistry and the growing awareness of the environmental impacts of chemical products and their production processes. Green Solvents are a vital part of sustainable chemistry. Besides obvious “green” solvents such as water and ethanol, CHEMSOLUTE® contains “green” alternatives to commonly used solvents.

Paul Anastas and John C. Warner developed the practice of Green Chemistry by formulating the 12 principles of the US Environmental Protection Agency (EPA):



GREEN CHEMISTRY - THE 12 PRINCIPLES

- Waste prevention instead of treating or cleaning up waste
- Atom economy and atom efficiency
- Less hazardous chemical syntheses
- Design safer chemicals
- Safer solvents and auxiliaries
- Design for energy efficiency
- Use of renewable feedstocks
- Reduce derivatives
- Catalytic reagents instead of stoichiometric reagents
- Design products for degradation
- Real-time analysis for pollution prevention
- Inherently safer chemistry for accident prevention

GREEN SOLVENTS AS AN ALTERNATIVE TO:

Art. no.	Description	DCM (Dichloromethane)	THF (Tetrahydrofuran)	DMSO (Dimethyl sulfoxide)	DMF (Dimethylformamide)	MTBE (tert-Butyl methyl ether)	1,4-Dioxane	Diethyl ether	Toluene	Xylene	HMPT (Hexamethyl-phosphoric triamide)	Petroleum derivatives
2497	CPME (Cyclopentylmethylether)		x			x	x	x				
2327	DMPU (N,N'-Dimethylpropylene urea)				x						x	
2314	1,3 Dioxolane	x	x	x					x	x		
1180	1,3-Propanediol											x
1474	2-Methyltetrahydrofuran	x	x									
1483	2-Methyltetrahydrofuran	x	x									

CYCLOPENTYLMETHYLETHER FOR SYNTHESIS, PURE (MIN. 99.9%)

- C₆H₁₂O
- CAS-No. 5614-37-9

- Density (20 °C) 0.86 g/cm³
- Molar mass 100.16 g/mol



Specification

- Colourless liquid
- Melting point < -140 °C
- Boiling point 106 °C
- Refractive index (20 °C) 1.4199–1.4219
- Water (KF) max. 100 mg/kg
- Colour (Hazen) max. 10
- Peroxides max. 50 meq/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2497.1000
5 l	Plastic canister	2497.5000

N,N'-DIMETHYLPROPYLENE UREA FOR SYNTHESIS, PURE (MIN. 99.0%)

- C₆H₁₂N₂O
- CAS-No. 7226-23-5

- Density (20 °C) 1.06 g/cm³
- Molar mass 128.17 g/mol



Specification

- Clear, colourless to light yellow liquid
- Boiling point 247 °C
- Refractive index (20 °C) 1.4883–1.4913
- Water (KF) max. 1000 mg/kg

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2327.0500
1 l	Glass bottle	2327.1000

1,3-DIOXOLANE FOR SYNTHESIS, PURE (MIN. 99.9%)

- C₃H₆O₂
- CAS-No. 646-06-0

- Density (20 °C) 1.06 g/cm³
- Molar mass 74.08 g/mol



Specification

- Colourless liquid
- Melting point -26.4 °C
- Boiling point 75 °C
- Refractive index (20 °C) 1.3980–1.4020
- Colour (Hazen) max. 10
- Water (KF) max. 150 mg/kg
- Peroxides (as H₂O₂) max. 10 mg/kg
- Stabilized with BHT appr. 75 mg/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2314.1000
5 l	Plastic canister	2314.5000

1,3-PROPANEDIOL FOR SYNTHESIS, PURE

- C₃H₈O₂
- CAS-No. 504-63-2

- Density (20 °C) 1.054 g/cm³
- Molar mass 76.09 g/mol



Specification

- Clear, viscous liquid
- Melting point -26 °C
- Boiling point 213 °C
- Identity (IR) complies
- Refractive index (20 °C) 1.438–1.442
- Water (KF) max. 1000 mg/kg
- Colour (Hazen) max. 15

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1180.1000
5 l	Plastic canister	1180.5000

2-METHYLTETRAHYDROFURAN

- C₅H₁₀O
- CAS-No. 96-47-9
- Density (20 °C) 0.855 g/cm³
- Molar mass 29.02 g/mol



Specification

- Colourless liquid
- Melting point -136 °C
- Boiling point 80.2 °C

2-METHYLTETRAHYDROFURAN FOR SYNTHESIS, PURE (MIN. 99.9 %)

Specification

- Refractive index (20 °C) 1.404–1.408
- Water (KF) max. 300 mg/kg
- Peroxides (as H₂O₂) max. 100 mg/kg
- Stabilized with ionol 150–400 mg/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1483.1000
2.5 l	Glass bottle	1483.2500
5 l	Plastic canister	1483.5000

2-METHYLTETRAHYDROFURAN FOR HPLC, ISOCRATIC (MIN. 99.5 % (UNSTAB.))

Specification

- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.404–1.408
- Water (KF) max. 200 mg/kg
- Non-volatile substances max. 5 mg/kg
- Peroxides (as H₂O₂) max. 300 mg/kg
- UV transmittance at 240 nm min. 30 %
- UV transmittance at 250 nm min. 50 %
- UV transmittance at 260 nm min. 70 %
- UV transmittance at 280 nm min. 90 %
- UV transmittance from 310 nm min. 98 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1474.1000
2.5 l	Glass bottle	1474.2500

Germany

Tel.: 0800 4393784
Fax: 0800 8443937
sales@thgeyer.de

Scandinavia

Tel.: +45 4630 0030
sales@thgeyer.dk
Tel.: +46 8 6030200
sales@thgeyer.se

Poland

Tel.: +48 2242764-64
Fax: +48 2242764-74
sales@thgeyer.pl

Other countries

Tel.: +49 7159 1637-823
Fax: +49 7159 18417
sales@thgeyer.com