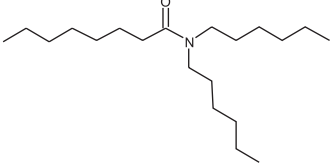
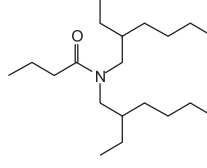
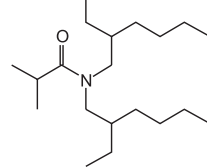
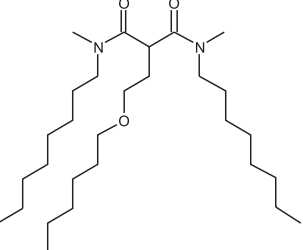
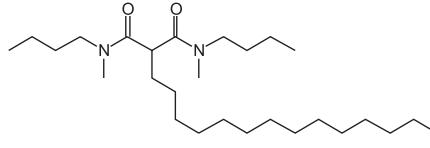
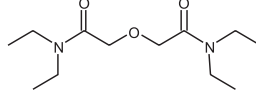
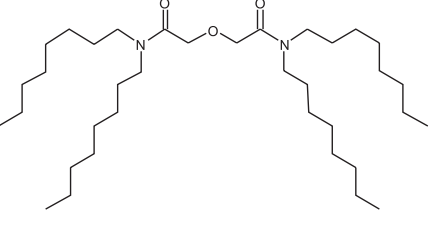
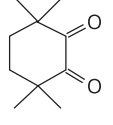
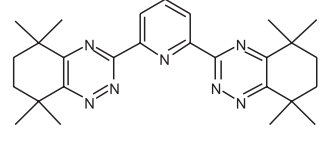
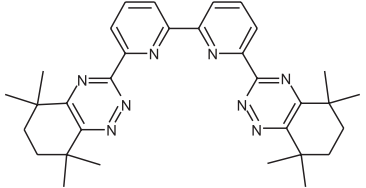
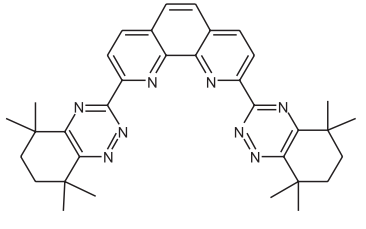
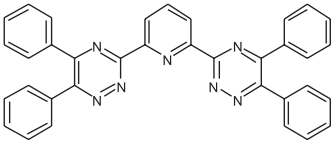
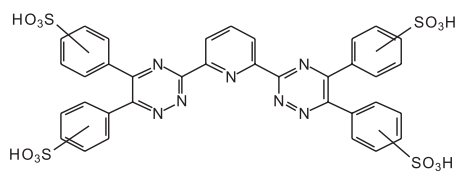
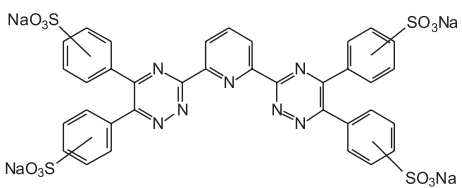


* Larger quantities available on request inquiries: products@technocomm.co.uk	Abbreviation Ligand Name CAS Number	Purity	Quantity*	Additional Information
	DHOA N,N-Dihexyl octanamide 75397-93-2	99% by HPLC	10g-10Kg	All batch data include HPLC, NMR and microanalysis
	DEHBA N,N-di(2-ethylhexyl) butyramide 112724-94-4	99% by HPLC	10g-10kg	Potential substitute for TBP in the PUREX process ^{1,2} All batch data include NMR and microanalysis
	DEHIBA N,N-di(2-ethyl hexyl) isobutyramide 112724-95-5	99% by HPLC	10g-10kg	Potential substitute for TBP in the PUREX process ^{1,2} All batch data include NMR and microanalysis
	DMDOHEMA 2-[2-(hexyloxy)ethyl]-N,N'-dimethyl-N,N'-dioctylpropanediamide 107513-23-5	99% by HPLC	10g-10Kg	First generation ligand for co-extraction of actinides and lanthanides from PUREX raffinate ^{3,4} Phase-transfer agent for the SANEX process ⁵ All batch data include HPLC, NMR and microanalysis
	DMBDTMA N,N'-dimethyl-N,N'-dibutyltetradecylmalonamide 145631-80-7	99% by HPLC	10g-10Kg	Ligand for co-extraction of actinides and lanthanides from PUREX raffinate ⁴ All batch data include NMR and microanalysis
	TEDGA N,N,N',N'-tetraethyl-diglycolamide 77077-06-6	99% by HPLC	10g-10Kg	All batch data include HPLC, NMR and microanalysis
	TODGA N,N,N',N'-Tetraoctyl-diglycolamide 342794-43-8	99% by HPLC	10g-10Kg	Current European reference ligand for co-extraction of actinides and lanthanides from PUREX raffinate ⁶ Phase-transfer agent for SANEX type processes ⁷ All batch data include HPLC, NMR and microanalysis
	TMCD 3,3,6,6-tetramethyl-cyclohexane-1,2-dione 20651-89-2	98% by HPLC	10g-10Kg	Key intermediate in the synthesis of CyMe ₄ ligands All batch data include HPLC and NMR
	CyMe₄-BTP 2,6-Bis(5,5,8,8-tetramethyl-5,6,7,8-tetrahydro-1,2,4-benzotriazin-3-yl)pyridine 910128-67-5	98% by HPLC	10-100g	First generation ligand for actinide/lanthanide separation with improved chemical stability ⁸ All batch data include HPLC and NMR
	CyMe₄-BTBP 6,6'-Bis(5,5,8,8-tetramethyl-5,6,7,8-tetrahydro-1,2,4-benzotriazin-3-yl)-2,2'-bipyridine 886970-80-5	98% by HPLC	10-100g	Current European reference ligand for actinide/lanthanide separation ⁹ Efficacy demonstrated on genuine raffinate ⁵ All batch data include HPLC and NMR
	CyMe₄-BTPhen 2,9-Bis(5,5,8,8-tetramethyl-5,6,7,8-tetrahydro-1,2,4-benzotriazin-3-yl)-1,10-phenanthroline 1276186-76-5	98% by HPLC	10-100g	Next generation pre-organized ligand for actinide/lanthanide separation with improved efficiency and extraction kinetics ¹⁰ All batch data include HPLC and NMR
	Tetraphenyl-BTP 2,6-Bis(5,6-diphenyl-1,2,4-triazin-3-yl)pyridine 35171-28-9	98% by HPLC	10g-10Kg	Highly selective lipophilic extraction agent for the SANEX process ^{11,12,13} All batch data include NMR and microanalysis
	Tetraphenyl-BTP, tetrasulfonic acid 2,6-Bis[5,6-di(hydroxy sulfonylphenyl)-1,2,4-triazin-3-yl]pyridine, free acid 732933-59-4	98% by HPLC	10g-10Kg	Hydrophilic ligand for the selective aqueous complexation of actinides - a suitable candidate for the i-SANEX process development ^{13,14} All batch data include NMR and microanalysis
	Tetraphenyl-BTP, tetrasulfonic acid (Na salt) 2,6-Bis[5,6-di(hydroxysulfonylphenyl)-1,2,4-triazin-3-yl]pyridine, tetrasodium salt** 1415648-05-3	98% by HPLC	10g-10Kg	** Tetra ammonium salt also available Hydrophilic ligand for the selective aqueous complexation of actinides - a suitable candidate for the i-SANEX process development ^{13,14} All batch data include NMR and microanalysis

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References

- G. Thiollot and C. Musikas, *Solvent Extraction and Ion Exchange*, **1989**, 7 (5), 813-827.
- C. Musikas, N. Condaminés and C. Cullerdtier, *Analytical Sciences*, **1991**, VOL. 7 SUPPLEMENT, 11-16
- D. Serrano-Purroy, P. Baron, B. Christiansen, R. Malmbeck, C. Sorel, J.-P. Glatz, *Radichim. Acta* **2005**, 93, 351-355.
- For a review, see: (a) Z. Kolarik, *Chem. Rev.* **2008**, 108, 4208-4252. (b) F. W. Lewis, M. J. Hudson, L. M. Harwood, *Synlett*, **2011**, 2609-2632.
- D. Magnusson, B. Christiansen, M. R. S. Foreman, A. Geist, J.-P. Glatz, R. Malmbeck, G. Modolo, D. Serrano-Purroy, C. Sorel, *Solvent Extr. Ion Exch.* **2009**, 27, 97-106.
- D. Magnusson, B. Christiansen, J.-P. Glatz, R. Malmbeck, G. Modolo, D. Serrano-Purroy, C. Sorel, *Solvent Extr. Ion Exch.* **2009**, 27, 26-35.
- A. Wilden, C. Schreinemachers, M. Sypula, G. Modolo, *Solvent Extr. Ion Exch.* **2011**, 29, 190-212.
- M. J. Hudson, C. E. Boucher, D. Braekers, J. F. Desreux, M. G. B. Drew, M. R. St. J. Foreman, L. M. Harwood, C. Hill, C. Madio, F. Marken, T. G. A. Youngs, *New J. Chem.* **2006**, 30, 1171-1183.
- A. Geist, C. Hill, G. Modolo, M. R. St. J. Foreman, M. Weigl, K. Gompper, M. J. Hudson, C. Madio, *Solvent Extr. Ion Exch.* **2006**, 24, 463-483.
- F. W. Lewis, L. M. Harwood, M. J. Hudson, M. G. B. Drew, J. F. Desreux, G. Vidick, N. Bouslimani, G. Modolo, A. Wilden, M. Sypula, T.-H. Vu, J.-P. Simonin, *J. Am. Chem. Soc.* **2011**, 133, 13093-13102.
- A. Geist, U. Müllich, D. Magnusson, P. Kaden, G. Modolo, A. Wilden and T. Zevaco, *Solvent Extr. Ion Exch.* **2012**, 30, 433-444.
- F.H. Case, *Journal of Heterocyclic Chem.* **1971**, 8 (6), 1043-1046.
- G. L. Traister and A. A. Schilt, *Analytical Chemistry*, **1976**, Vol. 48, No. 8, 1216-1220.
- European Patent Application EP 2377861A1, U. Müllich, A. Geist, and T. Zevaco.