

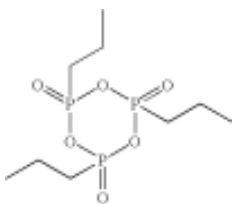
# Success in every molecule

## Specialty coupling-reagents and building blocks for R&D and scale-up processes

Looking for suitable, higher yield, less hazardous and more cost-efficient reagents for your synthesis? Look no further than EMD Millipore!

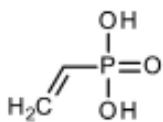
EMD Millipore now offers a range of new high performance coupling reagents and building blocks for R&D, scale-up and full scale manufacturing processes. With these special products, you are sure to achieve success in your pharmaceutical or fine chemical syntheses.

### T3P® (n-Propanephosphonic Acid Anhydride) – the coupling performance leader for amide/peptide bond formation



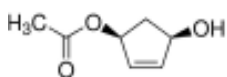
- Significantly higher yields (> 95 % compared to DCC/HOBt)
- Safe handling, non-toxic, no CMR, allergenic nor sensitizing properties
- Minimal epimerization during coupling, no additives required
- Broad functional group tolerance
- Easy purification as only water soluble by-products are formed from T3P®
- Mild reaction conditions and significant cost reductions compared to conventional reagents

### Vinylphosphonic Acids (VPA) – metal surface modifiers



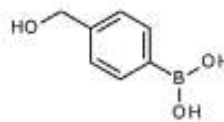
- Outstanding metal complexation properties
- Applicable as monomer, polymer and co-polymer
- Soluble in water and most organic solvents
- Corrosion and flame retardant
- Excellent heat and hydrolysis stability

### Chiral Cyclopentenol – stereo-specific API precursors



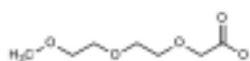
- Suitable for enantioselective synthesis
- Functional groups for further chemical modifications
- Both enantiomers available with purity > 99 %
- Safe synthesis of precursor

### Bifunctional Boronic Acids – versatile C-C coupling reagent



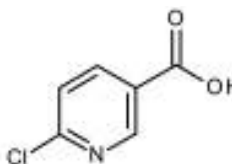
- Bifunctional compounds for various chemical applications
- Perfectly suitable for Suzuki and other carbon-carbon bond couplings under mild conditions
- Ideal for further chemical modification due to second chemical function

### Oxa Acids – bifunctional PEG-like modifiers



- Broad liquid range and application scope due to low melting and high boiling points
- Unique combination of lipophilic and hydrophilic properties
- High yields with no salts formed
- Water soluble and excellent heat stability
- Biologically degradable, non-toxic and environmentally friendly

### And last but not least, some exclusive Classical Heterocycles



- Nicotinic Acids and derivatives
- Piperazine and derivatives
- Multi-heteroatom heterocycles

## Ordering Information

Item	Product	CAS	Description
843818	5-(4-Fluorophenyl)pyridine-3-carboxylic acid	364064-17-5	Nicotinic acids & derivatives
843909	6-Chloronicotinic acid chloride	66608-11-5	Nicotinic acids & derivatives
843910	[2-(2-Methoxyethoxy)ethoxy] acetic acid	16024-57-1	Oxa acid & derivatives
843911	2,2'-[Oxybis(2,1-ethanedioxy)] bisacetic acid	13887-98-4	Oxa acid & derivatives
843912	Polyglycoldiacid 600	39927-08-7	Oxa acid & derivatives
843913	2,2'-[ethylenebis(oxy)] bisacetic acid	23243-68-7	Oxa acid & derivatives
843914	Vinylphosphonic acid (90 % solution)	1746-03-8	VPA
843915	Vinylphosphonic acid (80 % solution)	1746-03-8	VPA
843916	Dimethylvinyl phosphonate	4645-32-3	VPA derivative
843917	(1S, 4R)-(+)-4-Acetoxy-2-cyclopenten-1-ol	60410-16-4	Chiral cyclopentenol
843918	(1R, 4S)-(-)-4-Acetoxy-2-cyclopenten-1-ol 6	0176-77-4	Chiral cyclopentenol
843919	1-Methylpyrazole-4-boronic acid pinacol ester	761446-44-0	Bifunctional boronic acid & derivatives
843920	1-(Tetrahydro-2-furoyl) piperazine	63074-07-7	Heterocycles
843921	N-tert-Butyl-6-chloronicotinamide	115309-58-5	Heterocycles
843922	Neopentylamine	5813-64-9	Aliphatic amine
843923	6-Methoxynicotinic acid methylester	26218-80-4	Nicotinic acids & derivatives
843924	6-Chloro-N-methyl nicotinamide	54189-82-1	Nicotinic acids & derivatives
843925	1-(2,3-Dichlorophenyl) piperazine monohydrochloride	119532-26-2	Heterocycles
843926	4-Hydroxymethylphenyl boronic acid	59016-93-2	Bifunctional boronic acid & derivatives
843927	1-Methyl-1H-pyrazol-5-boronic acid pinacol ester	847818-74-0	Bifunctional boronic acid & derivatives
843928	5-Formylfurane-2-boronic acid	27329-70-0	Bifunctional boronic acid & derivatives
843929	1-(4-Hydroxyphenyl) piperazine	67914-60-7	Heterocycles
843930	1,2-Dihydro-2-oxonicotinic acid	609-71-2	Nicotinic acids & derivatives
843931	1-(4-Fluorophenyl) piperazine dihydrochloride	64090-19-3	Heterocycles
843932	1,6-Dihydro-6-oxo-3-pyridinecarboxylic acid	5006-66-6	Nicotinic acids & derivatives
843933	4-Formylphenyl boronic acid	87199-17-5	Bifunctional boronic acid & derivatives
843934	Chloriodomethane	593-71-5	Organohalogen
843935	6-Chloronicotinic acid	5326-23-8	Nicotinic acids & derivatives
843936	2-Aminopyridin-3-carboxylic acid	5345-47-1	Nicotinic acids & derivatives
843937	2-Chloronicotinic acid	2942-59-8	Nicotinic acids & derivatives
843938	2(1H)-pyrimidinone monohydrochloride	38353-09-2	Heterocycles
843939	2-Chloronicotinamide	10366-35-5	Heterocycles
843940	2-Chloro-3-pyridylamine	6298-19-7	Nicotinic acids & derivatives
843941	Ethyl-6-chloronicotinate	49608-01-7	Nicotinic acids & derivatives
843942	T3P® (50 % solution in Ethylacetate)	68957-94-8	T3P® coupling reagent
843943	T3P® (50 % solution in 2-Methyl-THF)	68957-94-8	T3P® coupling reagent
843944	T3P® (50 % solution in DMF)	68957-94-8	T3P® coupling reagent

To place an order, please contact your local EMD Millipore sales representative or call toll-free 1-866-645-5476

For technical assistance, please call toll-free 1-800-222-0342 ext 8152 or email [techservLE@emdmillipore.com](mailto:techservLE@emdmillipore.com)



EMD Millipore Corporation  
290 Concord Road  
Billerica, MA 01821  
Phone: (866) 645-5476  
Email: [LEorders@emdmillipore.com](mailto:LEorders@emdmillipore.com)

We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of their parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.