

Ionic Liquids

Ionic Liquids (IL) represent a fascinating new class of solvents with unusual physical and chemical properties:

- Excellent solvating properties
- No measurable vapour pressure
- Non-flammability
- High thermal stability
- Low melting (up to 100° C) salts

One of the principal driving forces for research in this area is the need to find replacements for environmentally damaging solvents in a wide range of chemical processes. Solvents are high on the list of damaging chemicals for two simple reasons:

- used in large amounts
- usually volatile liquids that are difficult to contain.

Properties

The physical properties of ionic liquids result in a class of solvents that are useful in a variety of ways:

- Combinations of different anions and cations, make it is possible to generate a vast number of different ionic liquids, each with their own specific solvation properties.
- Ionic liquids are non-volatile and may be used in high vacuum systems which eliminates many containment problems.
- IL's possess very good solubility properties for a wide range of both inorganic and organic materials. Moreover, unusual combinations of reagents can be brought together in the same phase.
- Immiscible with a number of organic solvents and provide a non-aqueous, polar alternative for two-phase systems. Hydrophobic ionic liquids can also be used as immiscible polar phases with water.
- Often composed of poorly coordinating ions, IL's have the potential to be highly polar non-coordinating solvents, particularly important when using transition metal based catalysts.

Featured here are Alfa Aesar's range of imidazolium-, imidazolium-, pyridinium-, ammonium-, pyrrolidinium- ionic liquids.

Alfa Aesar Worldwide Sales Offices

NORTH AMERICA

Tel: 1-800-343-0660 or
1-978-521-6300
Fax: 1-800-322-4757
Email: info@alfa.com

GERMANY

Tel: 00800 4566 4566 or
+49-721-84007-280
Fax: 00800 4577 4577 or
+49-721-84007-300
Email: Eurosales@alfa.com

UNITED KINGDOM

Tel: 0800-801812 or
+44 (0)1524-850506
Fax: +44 (0)1524-850608
Email: UKsales@alfa.com

FRANCE

Tel: 03 88 62 26 90 or
0800 03 51 47
Fax: 0800 10 20 67
Email: frventes@alfa.com

INDIA

Tel: +91 (0)44 2815 4153
Fax: +91 (0)44 2815 4154
Email: India@alfa.com

CHINA

Tel: +86 (010) 8567-8600
Fax: +86 (010) 8567-8601
Email: saleschina@alfa-asia.com

KOREA

Tel: +82-2-3140-6000
Fax: +82-2-3140-6001
Email: saleskorea@alfa-asia.com

Ionic Liquids

Stock#	Description	Formula	CAS No
Disubstituted Imidazoles			
H26952	1-Allyl-3-methylimidazolium chloride, 99%	C ₇ H ₁₁ N ₂ Cl	65039-10-3
H27201	1-n-Butyl-3-methylimidazolium bromide, 99%	C ₈ H ₁₅ N ₂ Br	85100-77-2
L19749	1-n-Butyl-3-methylimidazolium chloride, 96%	C ₈ H ₁₅ ClN ₂	79917-90-1
H27074	1-n-Butyl-3-methylimidazolium hexafluoroantimonate, 99%	C ₈ H ₁₅ F ₆ N ₂ Sb	174645-81-9
L19086	1-n-Butyl-3-methylimidazolium hexafluorophosphate, 98+%	C ₈ H ₁₅ F ₆ N ₂ P	174501-64-5
H27336	1-n-Butyl-3-methylimidazolium methanesulfonate, 99%	C ₉ H ₁₈ N ₂ O ₃ S	342789-81-5
H27754	1-n-Butyl-3-methylimidazolium methylsulfate, 99%	C ₉ H ₁₈ N ₂ O ₄ S	401788-98-5
H27720	1-n-Butyl-3-methylimidazolium n-octylsulfate, 99%	C ₁₆ H ₃₂ N ₂ O ₄ S	445473-58-5
L19087	1-n-Butyl-3-methylimidazolium tetrafluoroborate, 98+%	C ₈ H ₁₅ BF ₄ N ₂	174501-65-6
L19765	1-n-Butyl-3-methylimidazolium trifluoromethanesulfonate, 99%	C ₉ H ₁₅ F ₃ N ₂ O ₃ S	174899-66-2
H27788	1,3-Dimethylimidazolium dimethylphosphate, 98%	C ₇ H ₁₅ N ₂ O ₄ P	
L19761	1-Ethyl-3-methylimidazolium bromide, 98+%	C ₆ H ₁₁ BrN	65039-08-9
H27651	1-Ethyl-3-methylimidazolium chloride, 99+%	C ₆ H ₁₁ N ₂ Cl	65039-09-0
H26901	1-Ethyl-3-methylimidazolium dicyanamide, 98%	C ₈ H ₁₁ N ₅	
H27400	1-Ethyl-3-methylimidazolium diethylphosphate, 98%	C ₁₀ H ₂₁ N ₂ O ₄ P	
H27571	1-Ethyl-3-methylimidazolium ethylsulfate, 99%	C ₈ H ₁₆ N ₂ O ₄ S	342573-75-5
L19762	1-Ethyl-3-methylimidazolium hexafluorophosphate, 98+%	C ₆ H ₁₁ F ₆ N ₂ P	155371-19-0
H27232	1-Ethyl-3-methylimidazolium hydrogensulfate, 98%	C ₆ H ₁₂ N ₂ O ₄ S	412009-61-1
H26913	1-Ethyl-3-methylimidazolium methanesulfonate, 99%	C ₇ H ₁₄ N ₂ O ₃ S	145022-45-3
L19763	1-Ethyl-3-methylimidazolium tetrafluoroborate, 98+%	C ₆ H ₁₁ BF ₄ N ₂	143314-16-3
L19764	1-Ethyl-3-methylimidazolium trifluoromethanesulfonate, 98+%	C ₇ H ₁₁ F ₃ N ₂ O ₃ S	145022-44-2

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Tel: 1-800-343-0660 or
1-978-521-6300
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GERMANY
Tel: 00800 4566 4566 or
+49-721-84007-280
Fax: 00800 4577 4577 or
+49-721-84007-300
Email: Eurosales@alfa.com

UNITED KINGDOM
Tel: 0800-801812 or
+44 (0)1524-850506
Fax: +44 (0)1524-850608
Email: UKsales@alfa.com

FRANCE
Tel: 03 88 62 26 90 or
0800 03 51 47
Fax: 0800 10 20 67
Email: frventes@alfa.com

INDIA
Tel: +91 (0)44 2815 4153
Fax: +91 (0)44 2815 4154
Email: India@alfa.com

CHINA
Tel: +86 (010) 8567-8600
Fax: +86 (010) 8567-8601
Email: saleschina@alfa-asia.com

KOREA
Tel: +82-2-3140-6000
Fax: +82-2-3140-6001
Email: saleskorea@alfa-asia.com

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Disubstituted Imidazoles cont't			
H27178	1-Hexyl-3-methylimidazolium chloride, 98%	C ₁₀ H ₁₉ N ₂ Cl	171058-17-6
H27272	1-Hexyl-3-methylimidazolium hexafluorophosphate, 99%	C ₁₀ H ₁₉ F ₆ N ₂ P	304680-35-1
H27548	1-Hexyl-3-methylimidazolium tetrafluoroborate, 99%	C ₁₀ H ₁₉ F ₄ N ₂ B	244193-50-8
H27161	1-Methyl-3-octylimidazolium tetrafluoroborate, 99%	C ₁₂ H ₂₃ F ₄ N ₂ B	244193-52-0
H27682	1-Methyl-3-propylimidazolium iodide, 98%	C ₇ H ₁₃ IN ₂	
Trisubstituted Imidazoles			
H27270	1-Butyl-2,3-dimethylimidazolium chloride, 99%	C ₉ H ₁₇ N ₂ Cl	98892-75-2
H27827	1-Butyl-2,3-dimethylimidazolium hexafluorophosphate, 99%	C ₉ H ₁₇ F ₆ N ₂ P	227617-70-1
H27141	1-Butyl-2,3-dimethylimidazolium tetrafluoroborate, 99%	C ₉ H ₁₇ F ₄ N ₂ B	402846-78-0
Pyridines			
H27496	1-n-Butyl-3-methylpyridinium hexafluorophosphate, 99%	C ₁₀ H ₁₆ F ₆ NP	
H27355	1-n-Butyl-4-methylpyridinium hexafluorophosphate, 99%	C ₁₀ H ₁₆ F ₆ NP	401788-99-6
H26983	1-n-Butyl-3-methylpyridinium tetrafluoroborate, 99%	C ₁₀ H ₁₆ BF ₄ N	
H27100	1-n-Butyl-4-methylpyridinium tetrafluoroborate, 99%	C ₁₀ H ₁₆ F ₄ NB	343952-33-0
H27116	Triethylsulfonium bis(trifluoromethylsulfonyl)imide, 98%	C ₈ H ₁₅ F ₆ O ₄ S ₃	321746-49-0
Ammoniums			
H27609	(2-Hydroxyethyl)trimethylammonium dimethylphosphate, 95%	C ₇ H ₂₀ NO ₅ P	
Pyrrolidines			
H27177	1-n-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 98%	C ₁₁ H ₂₀ F ₆ N ₂ N ₂ O ₄ S ₂	223437-11-4

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Tel: 00800 4566 4566 or
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Fax: 00800 4577 4577 or
+49-721-84007-300
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Tel: 0800-801812 or
+44 (0)1524-850506
Fax: +44 (0)1524-850608
Email: UKsales@alfa.com

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Tel: 03 88 62 26 90 or
0800 03 51 47
Fax: 0800 10 20 67
Email: frventes@alfa.com

INDIA
Tel: +91 (0)44 2815 4153
Fax: +91 (0)44 2815 4154
Email: India@alfa.com

CHINA
Tel: +86 (010) 8567-8600
Fax: +86 (010) 8567-8601
Email: saleschina@alfa-asia.com

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Tel: +82-2-3140-6000
Fax: +82-2-3140-6001
Email: saleskorea@alfa-asia.com