

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 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, pyridinium, ammonium, pyrrolodinium-ionic liquids.

Disubstituted Imidazoles

Item	Description	CAS	Formula
H26952	1-Allyl-3-methylimidazolium chloride, 98%	65039-10-3	C ₇ H ₁₁ N ₂ Cl
H27201	1-n-Butyl-3-methylimidazolium bromide, 99%	85100-77-2	C ₈ H ₁₅ BrN ₂
L19749	1-n-Butyl-3-methylimidazolium chloride, 96%	79917-90-1	C ₈ H ₁₅ ClN ₂
H27074	1-n-Butyl-3-methylimidazolium hexafluoroantimonate, 99%	174645-81-9	C ₈ H ₁₅ F ₆ N ₂ Sb
L19086	1-n-Butyl-3-methylimidazolium hexafluorophosphate, 98+%	174501-64-5	C ₈ H ₁₅ F ₆ N ₂ P
H27336	1-n-Butyl-3-methylimidazolium methanesulfonate, 99%	342789-81-5	C ₉ H ₁₈ N ₂ O ₃ S
H27754	1-n-Butyl-3-methylimidazolium methylsulfate, 99%	401788-98-5	C ₉ H ₁₈ N ₂ O ₄ S
H27720	1-n-Butyl-3-methylimidazolium n-octylsulfate, 99%	445473-58-5	C ₁₆ H ₃₂ N ₂ O ₄ S
L19087	1-n-Butyl-3-methylimidazolium tetrafluoroborate, 98+%	174501-65-6	C ₈ H ₁₅ BF ₄ N ₂
L19765	1-n-Butyl-3-methylimidazolium trifluoromethanesulfonate, 99%	174899-66-2	C ₉ H ₁₅ F ₃ N ₂ O ₃ S
H27788	1,3-Dimethylimidazolium dimethylphosphate, 98%	654058-04-5	C ₇ H ₁₅ N ₂ O ₄ P
L19761	1-Ethyl-3-methylimidazolium bromide, 98+%	65039-08-9	C ₆ H ₁₁ BrN ₂
H27651	1-Ethyl-3-methylimidazolium chloride, 98+%	65039-09-0	C ₆ H ₁₁ N ₂ Cl

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H26901	1-Ethyl-3-methylimidazolium dicyanamide, 98%	370865-89-7	C ₈ H ₁₁ N ₅
H27400	1-Ethyl-3-methylimidazolium diethylphosphate, 98%	663199-29-9	C ₁₀ H ₂₁ N ₂ O ₄ P
H27571	1-Ethyl-3-methylimidazolium ethylsulfate, 99%	342573-75-5	C ₈ H ₁₆ N ₂ O ₄ S
L19762	1-Ethyl-3-methylimidazolium hexafluorophosphate, 98+%	155371-19-0	C ₆ H ₁₁ F ₆ N ₂ P
H27232	1-Ethyl-3-methylimidazolium hydrogen sulfate, 98%	412009-61-1	C ₆ H ₁₂ N ₂ O ₄ S
H26913	1-Ethyl-3-methylimidazolium methanesulfonate, 99%	145022-45-3	C ₇ H ₁₄ N ₂ O ₃ S
L19763	1-Ethyl-3-methylimidazolium tetrafluoroborate, 98+% (dry wt.), may cont. up to 3% water	143314-16-3	C ₆ H ₁₁ BF ₄ N ₂
L19764	1-Ethyl-3-methylimidazolium trifluoromethanesulfonate, 98+%	145022-44-2	C ₇ H ₁₁ F ₃ N ₂ O ₃ S
H27178	1-n-Hexyl-3-methylimidazolium chloride, 98%	171058-17-6	C ₁₀ H ₁₉ N ₂ Cl
H27272	1-n-Hexyl-3-methylimidazolium hexafluorophosphate, 99%	304680-35-1	C ₁₀ H ₁₉ F ₆ N ₂ P
H27548	1-n-Hexyl-3-methylimidazolium tetrafluoroborate, 99%	244193-50-8	C ₁₀ H ₁₉ BF ₄ N ₂
H27161	1-Methyl-3-n-octylimidazolium tetrafluoroborate, 99%	244193-52-0	C ₁₂ H ₂₃ BF ₄ N ₂
H27682	1-Methyl-3-n-propylimidazolium iodide, 98%	119171-18-5	C ₇ H ₁₃ IN ₂

Trisubstituted Imidazoles

Item	Description	CAS	Formula
H27270	1-Butyl-2,3-dimethylimidazolium chloride, 99%	98892-75-2	C ₉ H ₁₇ N ₂ Cl
H27827	1-Butyl-2,3-dimethylimidazolium hexafluorophosphate, 99%	227617-70-1	C ₉ H ₁₇ F ₆ N ₂ P
H27141	1-n-Butyl-2,3-dimethylimidazolium tetrafluoroborate, 99%	402846-78-0	C ₉ H ₁₇ F ₄ N ₂ B

Pyridines

Item	Description	CAS	Formula
H27496	1-n-Butyl-3-methylpyridinium hexafluorophosphate, 99%	845835-03-2	C ₁₀ H ₁₆ F ₆ NP
H27355	1-n-Butyl-4-methylpyridinium hexafluorophosphate, 99%	401788-99-6	C ₁₀ H ₁₆ F ₆ NP
H26983	1-n-Butyl-3-methylpyridinium tetrafluoroborate, 99%	597581-48-1	C ₁₀ H ₁₆ BF ₄ N
H27100	1-n-Butyl-4-methylpyridinium tetrafluoroborate, 99%	343952-33-0	C ₁₀ H ₁₆ BF ₄ N
H27116	Triethylsulfonium bis(trifluoromethylsulfonyl)imide, 98%	321746-49-0	(CF ₃ SO ₂) ₂ NS(CH ₂ CH ₃) ₃

Ammoniums

Item	Description	CAS	Formula
H27609	(2-Hydroxyethyl)trimethylammonium dimethylphosphate, 95%	118978-98-6	C ₇ H ₂₀ NO ₅ P

Pyrrolidines

Item	Description	CAS	Formula
H27177	1-n-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 98%	223437-11-4	C ₁₁ H ₂₀ F ₆ N ₂ O ₄ S ₂