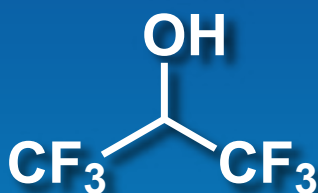


Fluorinated Alcohol with Unique Properties HFIP



Hexafluoroisopropyl Alcohol
(= HFIP)
25g / 100g / 500g
[H0424]

Features

- Highly polar, thermally stable, UV transparent
- Miscible with water and polar organic solvents
- Low nucleophilicity
- Strong solvating power through hydrogen bonds

Physical Properties (from literature)

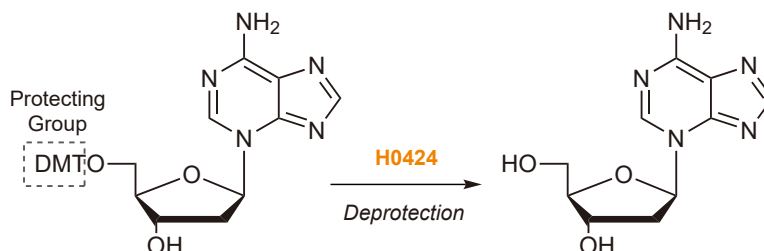
bp: 58.6°C mp: -4°C Density: 1.605 pKa: 9.3
Polarity (E_T^N): 1.068 (vs $E_T^N(\text{Me}_4\text{Si}) = 0$, $E_T^N(\text{water}) = 1$)
Nucleophilicity (N): -4.23 (vs $N(\text{EtOH}) = 0$)
Hydrogen bond donor power (α): 1.96 (vs $\alpha(\text{EtOH}) = 0$)
Hydrogen bond acceptor power (β): 0 (vs $\beta(\text{EtOH}) = 0.77$)

Review

- 1) J.-P. Bégué, D. Bonnet-Delpon, B. Crousse, *Synlett* **2004**, 18. <https://doi.org/10.1055/s-2003-44973>
- 2) A. J. Phillips, J. J. Roach, *e-EROS* **2010**. <https://doi.org/10.1002/047084289X.rn01164.pub2>

Applications 1

Deprotecting agent for nucleoside and nucleotide synthesis



N. J. Leonard, Neelima, *Tetrahedron Lett.* **1995**, 36, 7833. [https://doi.org/10.1016/0040-4039\(95\)01673-6](https://doi.org/10.1016/0040-4039(95)01673-6)

Additive for oligonucleotides analysis by HPLC/ESI-MS

A. Apffel, W. S. Hancock, *et al.*, *Anal. Chem.* **1997**, 69, 1320. <https://doi.org/10.1021/ac960916h>
R. Erb, H. Oberacher, *Electrophoresis* **2014**, 35, 1226. <https://doi.org/10.1002/elps.201300269>

Fluorinated Alcohol with Unique Properties: HFIP

Applications 2

Solvent for olefin epoxidation by hydrogen peroxide

M. C. A. van Vliet, I. W. C. E. Arends, R. A. Sheldon, *Synlett* **2001**, 2, 248. <https://doi.org/10.1055/s-2001-10766>
A. Berkessel, J. A. Adrio, *J. Am. Chem. Soc.* **2006**, 128, 13412. <https://doi.org/10.1021/ja0620181>

Solvent for catalytic oxidation

J.-E. Bäckvall, A. Berkessel, *Modern Oxidation Methods*, 2nd ed., ed. by J.-E. Bäckvall, Wiley-VCH, Weinheim, Germany, **2010**, Chap. 4, pp. 117-145.

Solvent for metal-catalyzed cyclization

A. Saito, A. Kanno, Y. Hanzawa, *Angew. Chem. Int. Ed.* **2007**, 46, 3931. <https://doi.org/10.1002/anie.200605162>
M. Yokota, D. Fujita, J. Ichikawa, *Org. Lett.* **2007**, 9, 4639. <https://doi.org/10.1021/ol702279w>

Solvent for stabilizing radical cation

L. Ebersson, M. P. Hartshorn, O. Persson, F. Radner, *Chem. Commun.* **1996**, 2105. <https://doi.org/10.1039/CC9960002105>
Organofluorine Chemistry, ed. by K. Uneyama, John Wiley & Sons, Florida, **2008**, pp. 180-184.

Solvent for radical polymerization

K. Yamada, T. Nakano, Y. Okamoto, *J. Polym. Sci. A Polym.* **1999**, 37, 2677.
[https://doi.org/10.1002/\(SICI\)1099-0518\(19990715\)37:14%3C2677::AID-POLA43%3E3.0.CO;2-F](https://doi.org/10.1002/(SICI)1099-0518(19990715)37:14%3C2677::AID-POLA43%3E3.0.CO;2-F)
D. Wan, K. Satoh, M. Kamigaito, Y. Okamoto, *Macromolecules* **2005**, 38, 10397. <https://doi.org/10.1021/ma0515230>

Solvent for MALDI-TOF-MS or GPC/SEC analysis of polymers

A. J. Hoteling, T. H. Mourey, K. G. Owens, *Anal. Chem.* **2005**, 77, 750. <https://doi.org/10.1021/ac048525n>
Encyclopedia of Chromatography, 2nd ed., ed. by J. Cazes, CRC Press, Florida, **2005**, pp. 1305-1314.

Stabilizer for α -helical conformation in unfolded proteins and peptides

N. Hirota, Y. Goto, K. Mizuno, *Protein Sci.* **1997**, 6, 416. <https://doi.org/10.1002/pro.5560060218>
D.-P. Hong, M. Hoshino, R. Kuboi, Y. Goto, *J. Am. Chem. Soc.* **1999**, 121, 8427. <https://doi.org/10.1021/ja990833t>

Related Products

HFIP [for HPLC]	100g	[H1793]
2,2,2-Trifluoroethanol (= TFE)	25g / 100g / 500g	[T0435]
Trifluoroacetic Acid (= TFA)	25g / 100g / 500g	[T0431]
Trifluoroacetic Acid Sodium Salt	25g / 100g / 500g	[T1336]

For further information please refer to our website at www.TCIchemicals.com. ▶▶▶

TCI HFIP



Ordering and Customer Service

TCI AMERICA

Tel : 800-423-8616 / 503-283-1681
Fax : 888-520-1075 / 503-283-1987
E-mail : Sales-US@TCIchemicals.com

TCI EUROPE N.V.

Tel : +32 (0)3 735 07 00
Fax : +32 (0)3 735 07 01
E-mail : Sales-EU@TCIchemicals.com

TCI Deutschland GmbH

Tel : +49 (0)6196 64053-00
Fax : +49 (0)6196 64053-01
E-mail : Sales-DE@TCIchemicals.com

Tokyo Chemical Industry UK Ltd.

Tel : +44 (0)1865 78 45 60
E-mail : Sales-UK@TCIchemicals.com

TCI Chemicals (India) Pvt. Ltd.

Tel : 1800 425 7889 / 044-2262 0909
E-mail : Sales-IN@TCIchemicals.com

梯希爱(上海)化成工业发展有限公司

Tel : 800-988-0390 / 021-67121386
Fax : 021-6712-1385
E-mail : Sales-CN@TCIchemicals.com

TOKYO CHEMICAL INDUSTRY CO., LTD.

Tel : +81 (0)3-5640-8878
E-mail : globalbusiness@TCIchemicals.com

Availability, price or specification of the listed products are subject to change without prior notice. Reproduction forbidden without the prior written consent of Tokyo Chemical Industry Co., Ltd.