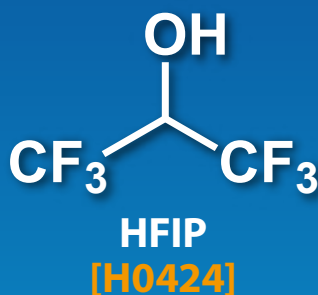


Fluorinated Alcohol with Unique Properties HFIP



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)

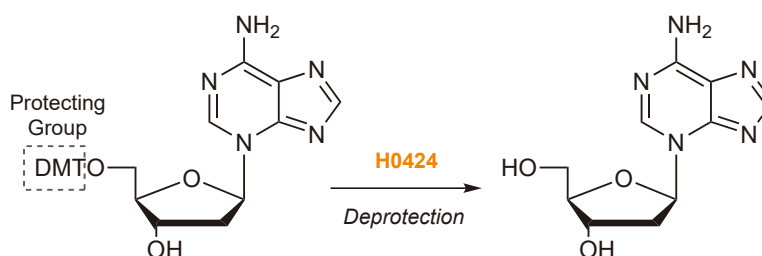
bp: 58.6°C mp: -4°C Density: 1.605 pKa: 9.3
 Polarity (E_T^N): 1.068 (vs $E_T^N(\text{Me}_4\text{Si}) = 0$, $E_T^N(\text{water}) = 1$)
 Nucleophilicity (N): -4.23 (vs $N(\text{EtOH}) = 0$)
 Hydrogen bond donor power (α): 1.96 (vs $\alpha(\text{EtOH}) = 0$)
 Hydrogen bond acceptor power (β): 0 (vs $\beta(\text{EtOH})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

Review

- 1) J.-P. Bégué, D. Bonnet-Delpon, B. Crousse, *Synlett* **2004**, 18.
- 2) A. J. Phillips, *e-EROS Encycl. Reagents Org. Synth.* **2010**, 1,1,1,3,3,3-Hexafluoro-2-propanol.

Applications 1

Deprotecting agent for nucleoside and nucleotide synthesis



N. J. Leonard, Neelima, *Tetrahedron Lett.* **1995**, 36, 7833.

Additive for oligonucleotides analysis by HPLC/ESI-MS

- A. Apffel, J. A. Chakel, S. Fischer, K. Lichtenwalter, W. S. Hancock, *Anal. Chem.* **1997**, 69, 1320.
 R. Erb, H. Oberacher, *Electrophoresis* **2014**, 35, 1226.

Hexafluoroisopropyl Alcohol (= HFIP)

25g / 100g / 500g [H0424]

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.

A. Berkessel, J. A. Adrio, *J. Am. Chem. Soc.* **2006**, 128, 13412.

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.

M. Yokota, D. Fujita, J. Ichikawa, *Org. Lett.* **2007**, 9, 4639.

Solvent for stabilizing radical cation

L. Ebersson, M. P. Hartshorn, O. Persson, F. Radner, *Chem. Commun.* **1996**, 2105.

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.

D. Wan, K. Satoh, M. Kamigaito, Y. Okamoto, *Macromolecules* **2005**, 38, 10397.

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

A. J. Hotelling, T. H. Mourey, K. G. Owens, *Anal. Chem.* **2005**, 77, 750.

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, K. Mizuno, Y. Goto, *Protein Sci.* **1997**, 6, 416.

D.-P. Hong, M. Hoshino, R. Kuboi, Y. Goto, *J. Am. Chem. Soc.* **1999**, 121, 8427.

Related Products

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.

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 784560
Fax : +44 (0)1865 784561
E-mail : Sales-UK@TCIchemicals.com

TCI Chemicals (India) Pvt. Ltd.

Tel : 1800 425 7889 / 044-2262 0909
Fax : 044-2262 8902
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
Fax : +81 (0)3-5640-8902
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.