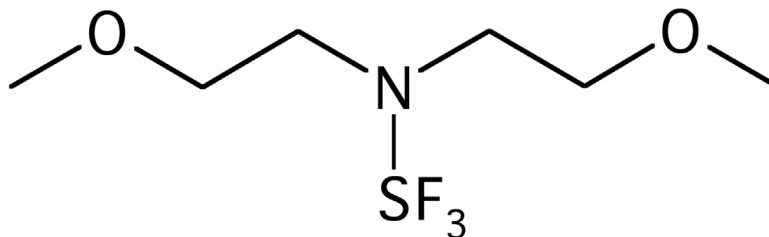


Deoxo-Fluor™ FLUORINATING REAGENT



Deoxo-Fluor™ is a versatile, easy-to-use, nucleophilic fluorinating reagent with enhanced safety features. It rapidly “deoxofluorinates” a wide variety of alcohols, aldehydes and ketones under mild conditions to yield the corresponding fluorinated compounds with efficiency and selectivity. Deoxo-Fluor reagent is thermally less sensitive than DAST, the traditional deoxofluorinating agent, and is thus more amenable to large-scale use (see *Summary of Applications and Thermal Stability Data*).

Deoxo-Fluor reagent is packaged in convenient quantities for R&D evaluation and commercial manufacturing. Technical assistance is available to provide a solution to your fluorination challenge. Call 800-233-4334 to review your process with our fluorination experts.

Physical Properties

Molecular Formula:	C ₆ H ₁₄ F ₃ NO ₂ S
Molecular Weight:	221.23 g/mol
Appearance:	Dark yellow liquid at room temperature
Melting Point:	Not determined
Boiling Point:	Dec.
Flash Point:	No flash observed up to 100°C
Density:	1.2 g/mL

Chemical Properties

Reactivity:	Alcohols, aldehydes and ketones; reacts violently with H ₂ O to form HF
Activity for C-OH:	85.9 g of active F/Kg or 4.5 mmol of F/g of Deoxo-Fluor reagent
Activity for C=O:	171.8 g of F/Kg or 9.0 mmol of F/g of Deoxo-Fluor reagent
Purity:	>95% F-Active
Solubility:	Hexane, ethers, halogenated organics, toluene and other organic solvents
Compatibility:	Stainless steel, Hastelloy®, Monel®, PTFE; HDPE; glass not recommended
Stability:	Stable at room temperature in the absence of moisture
Decomposition:	>95°C by ARC

Safety Precautions

Storage: For long-term storage, refrigerate and store under nitrogen

Handling: Work in an inert, anhydrous atmosphere

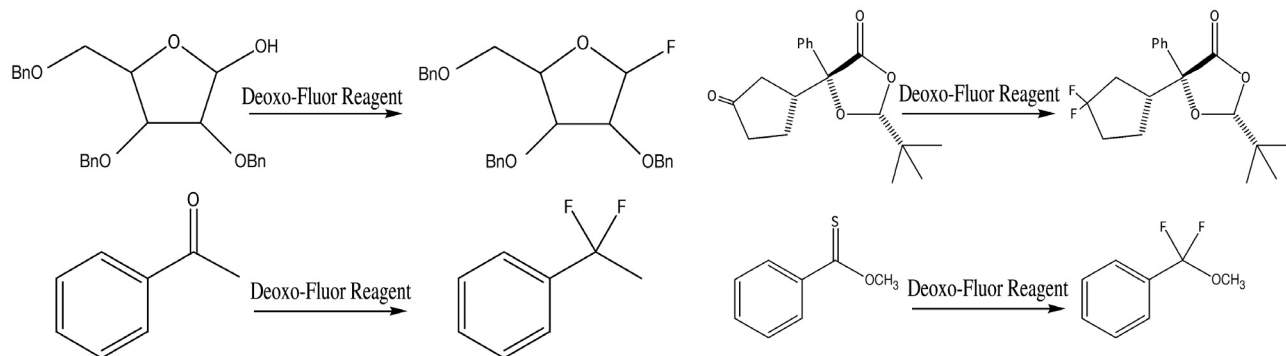
Precautions: Harmful if swallowed, inhaled or absorbed through the skin

First Aid Measures: Flush eyes and skin with copious amounts of water for at least 15 minutes. Contact a physician.

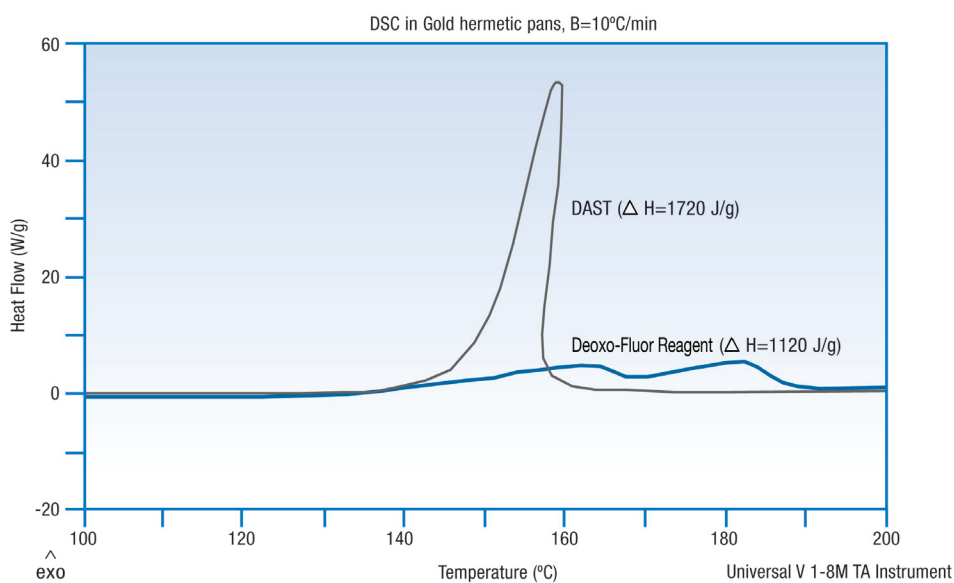


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Summary of Fluorination Applications of Deoxo-Fluor™ Reagent



Thermal Stability of Deoxo-Fluor Reagent vs Other Reagent



References

1. G. S. Lal, G.P. Pez, R.J. Pesaresi and F.M. Prozonc, *Chem. Comm.*, 1999, 215
2. G. S. Lal, G.P. Pez, R.J. Pesaresi, F.M. Prozonc and H. Cheng, *J. Org. Chem.*, 1999, 64, 7048
3. G. S. Lal, E. Lobach and A. Evans, *J. Org. Chem.*, 2000, 65, 4830
4. R. P. Singh, B. Twamley and J. M. Shreeve, *J. Org. Chem.*, 2002, 67, 1918
5. For a comprehensive review, see R. P. Singh and J. M. Shreeve, *Synthesis*, 2002, 2561.

Deoxo-Fluor is a trademark of Air Products and Chemicals, Inc. Additionally, as such, it is covered by a composition of matter patent.
 Hastelloy is a registered trademark of Haynes International Incorporated.
 Monel is a registered trademark of Special Metals Corporation.

For product information, contact us at: **800-233-4334**

Helping You Achieve Breakthrough Success



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