

Product Information:	Product:	Sodium hydride, 60% dispersion in mineral oil, in soluble bags, in resealable cans
	Acros code number:	33214-0000
	CAS number:	7646-69-7
	EINECS number:	231-587-3
	TSCA:	listed
	MDL code number:	MFC00003471
	Molecular formula:	HNa
	Molecular weight:	23.99 g/mol

Typical Properties:	Appearance:	light grey tacky powder
	Package:	



Assay:	57 – 63 % NaH
Melting point of NaH:	425 °C (decomposition)
Flash point of mineral oil:	165 °C
Particle size:	5 – 50 µm
Bulk density:	approx. 0.60 g/cm ³
Solubility:	reacts with water, and ethanol
Stability:	stable in dry air up to 230 °C

General Information: Sodium hydride is a very strong base used for condensation reactions like Claisen^{1,2,3} and Dieckmann^{4,5} condensation, for C, N, O-alkylation, acylation, Aldol addition, synthesis of sodium alcoholates and sodium borohydride, etc.. Since NaH is sensitive to air and humidity, this product has been packaged in bags* which are soluble in common aprotic organic solvents (see below table), and which makes it easy to bring it directly into a chemical reactor without any complicate handling procedure before.

* Material: Poly(styrene-co-butadiene); Thickness: ~60 μm

Solvent	Appearance of the solution at 25 °C	Result
Cyclohexane	clear	suitable
tert-Butyl methyl ether	clear	suitable
Diethyl ether	turbid	suitable
N,N-Dimethylacetamide	turbid	suitable
N,N-Dimethylformamide	turbid	suitable
Ethylene glycol dimethyl ether	clear	suitable
Heptane	bigger parts (turbid at 60 °C)	moderately suitable
Hexane	bigger parts (clear at 60 °C)	moderately suitable
2-Methyltetrahydrofuran	clear	suitable
Tetrahydrofuran	clear	suitable
Toluene	clear	suitable

Please notice that Sodium hydride reacts vigorously with water evolving hydrogen ($H_{298} = -132 \text{ kJ/mole}$).

Storage Conditions: Store in a cool dry place (water free area); store in a tightly closed container; keep under a nitrogen blanket.

Material Safety Data Sheet: A Material Safety Data Sheet (MSDS) according to EU guideline 91/155/EWG can be downloaded from our website <http://www.acros.com>

Literature: Fieser: 1, 1075; 2, 382; 4, 452; 5, 610; 6, 541; 7, 335; 8, 458; 9, 427; 11, 486; 12, 447; 14, 288; 16, 307.
 Merck: 11, 8573; 12, 8770; 13, 8699, 14, 8625

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3. Y. Tamaru et al.: **Stereoselective Generation of Z-Enolates of Thioamides: Its Application to Diastereoselective Aldol Condensations and Thio-Claisen Rearrangements**, *J. Am. Chem. Soc.*, **1980**, 102, 7806-8.
4. S. Torii et al.: **A Convenient Approach to 1,4-Dihydro-4-oxo-3-quinoline carboxylates by Electro-Oxidative Formation of Enamine Moiety**, *Tetrahedron*, **1991**, 47(4/5), 665-74.
5. G.D. Cuny et al.: **Utilization of a Tandem Michael-Dieckmann Reaction to Synthesize Orixalone A**, *Letters in Organic Chem.*, **2006**, 3(1), 68-72.
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Note:

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