

<b>Product Information:</b>	<b>Product:</b>	Sodium hydride, 60% dispersion in mineral oil, in soluble bags
	Acros code number:	18986-0000
	CAS number:	7646-69-7
	EINECS number:	231-587-3
	TSCA:	listed
	MDL code number:	MFCD00003471
	Molecular formula:	HNa
	Molecular weight:	23.99 g/mol

<b>Typical Properties:</b>	<b>Appearance:</b>	light grey tacky powder
	<b>Package:</b>	



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 <sup>3</sup>
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<sup>1,2,3</sup> and Dieckmann<sup>4,5</sup> 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 ( $H_{298} = -132$  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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2. F.W. Swamer et al.: **Claisen Acylations and Carboethoxylations of Ketones and Esters by Means of Sodium Hydride**, *J. Am. Chem. Soc.*, 1950, 72, 1352-6.
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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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*The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments. Neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.*