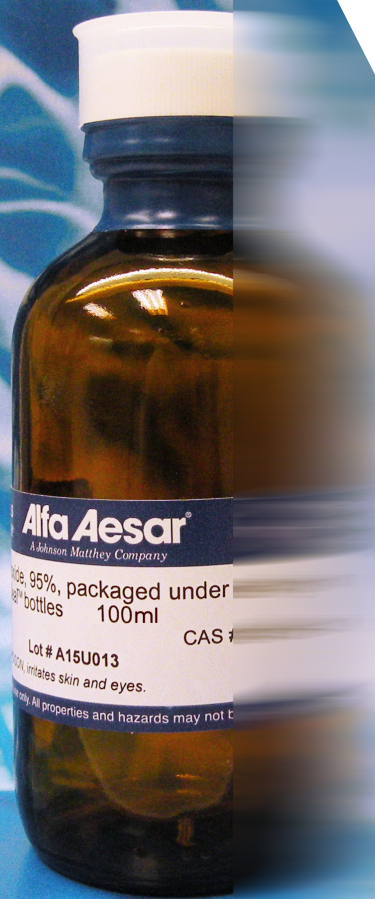


Introducing

# Active Dry™ Anhydrous Solvents

Featuring the Active Dry™  
Low Maintenance Drying System



[www.alfa.com](http://www.alfa.com)

**Alfa Aesar**<sup>®</sup>  
A Johnson Matthey Company

# Active Dry™

## Efficient and Reliable Drying

The new Active Dry™ alkali metal silica gel system (Na-SG(I)\*) is an efficient drying agent and impurity remover for solvents and anionic polymerization processes. Developed by SiGNa Chemistry and offered by Alfa Aesar, Active Dry™ provides drying performance on par with other recognized methods with the added benefit of not requiring a post-drying and post-purifying workup.

Commonly used drying agents require distillation to remove traces of the agent, which may affect the polymerization reaction. Standard drying procedures are also a tedious limiting factor in the development of anionic polymerization both at laboratory and industrial production scales.

\*Na-SG(I) is Stock #44893 Sodium-silica gel, 35-40% sodium metal in silica gel, Stage I; Developed by SiGNa Chemistry, winner of the 2008 Presidential Green Chemistry Challenge Award.



Winner of the  
2008 Presidential  
Green Chemistry  
Challenge Award

## Comparitive Benefits of Various Drying Agents

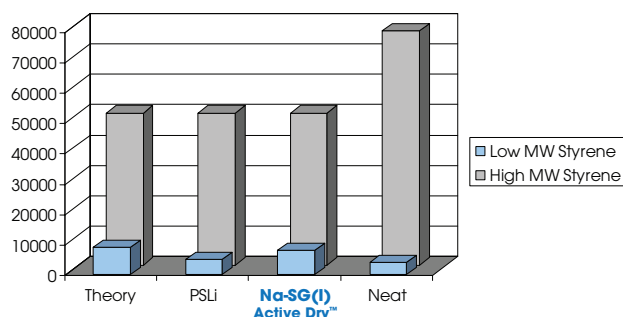
Drying Agent	Solution	Safety	Efficiency	Cost
Organo-Lithium	solvent	+	-	-
Sodium metal	solvent	-	-	++
Na/K alloys	solvent	--	++	-
Dialkylmagnesium	solvent/monomers	-	+/-	+/-
Trialkyl Aluminum	solvent/monomers	-	+/-	+/-
Activated Al <sub>2</sub> O <sub>3</sub>	solvent/monomers	++	-	+
Active Dry™	solvent/monomers	++	++	+

## Method Comparison

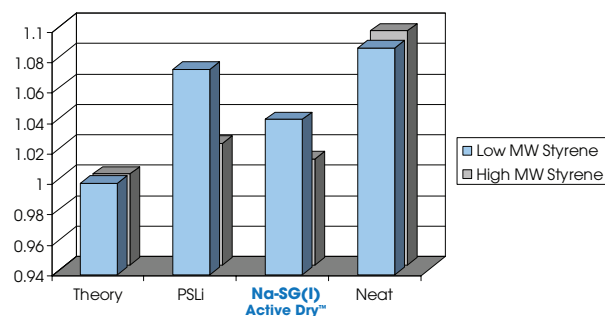
To demonstrate the removal of water and other impurities, numerous solvents used in anionic polymerizations were contacted with Active Dry™ Stage I Na-SG (Na-SG(I)). The following charts use cyclohexene as an example and show Active Dry™ side by side with conventional methods.

Efficacy was measured by performing standard anionic polymerization tests using an alkyllithium initiator. The key outputs were molecular weight of the polymer (MW) and the polydispersity of the product mixture (PD).

Styrene Molecular Weight in Dried Cyclohexene



Styrene Polydispersity in Dried Cyclohexene



# Active Dry™ Solvents

## Now in Stock

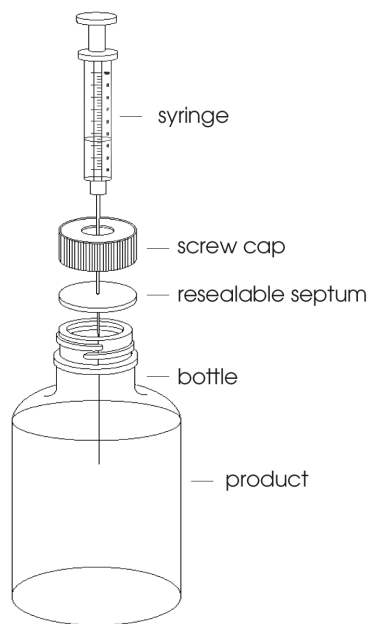
Alfa Aesar is pleased to introduce the new line of Active Dry™ solvents, now in stock in various sizes.

Each bottle of Active Dry™ solvent contains a small amount of Sodium-silica gel, 35-40% sodium metal in silica gel, Stage I (Na-SG(I)), in inert packaging. The Na-SG(I) acts as a stabilizer without harming or influencing the chemistry being performed. The Active Dry™ system ensures that the material is anhydrous upon receipt and remains anhydrous through repeated use. Each Active Dry™ solvent is also sealed using Alfa Aesar's exclusive ChemSeal™ septum caps (see below).

Try Active Dry™ solvents from Alfa Aesar for less hassle and worry.



Stock #	Description	Size	Price (\$)
45786	Benzene, anhydrous, 99.9%, Active Dry™, packaged under Argon in resealable ChemSeal bottles	100ml 1L	26.20 40.50
45933	n-Heptane, anhydrous, Active Dry™, packaged under Argon in resealable ChemSeal bottles	250ml 1L	29.90 58.70
45787	n-Hexane, anhydrous, Active Dry™, packaged under Argon in resealable ChemSeal bottles	250ml 1L	29.90 58.70
45828	n-Pentane, anhydrous, 99.8+%, Active Dry™, packaged under Argon in resealable ChemSeal bottles	250ml 1L	20.00 49.50
45829	Tetrahydrofuran, anhydrous, 99.8+%, BHT-free, Active Dry™, packaged under Argon in resealable ChemSeal bottles	100ml 1L	28.00 75.00
45934	Toluene, anhydrous, 99.8%, Active Dry™, packaged under Argon in resealable ChemSeal bottles	100ml 1L	19.00 37.90



## ChemSeal™

Specially designed for air, oxygen, moisture sensitive and volatile compounds, ChemSeal™ packaging allows the user to sample liquids through the resealable septum. Using a syringe, a volumetric quantity can be sampled and transferred to your reaction medium without exposure to moisture or oxygen. Dozens of solvents are offered in ChemSeal Packaging. Search *ChemSeal* at [www.alfa.com](http://www.alfa.com) or contact us for a full listing.

[www.alfa.com](http://www.alfa.com)

Introducing

# Active Dry™ Anhydrous Solvents

## **Alfa Aesar North America**

(International Sales Headquarters)  
26 Parkridge Road  
Ward Hill, MA 01835 USA  
Tel: 1-800-343-0660 or 1-978-521-6300  
Fax: 1-800-322-4757 or 1-978-521-6350  
Email: info@alfa.com

## **Alfa Aesar United Kingdom**

Shore Road  
Port of Heysham Industrial Park  
Heysham LA3 2XY  
England  
Tel: 0800-801812 or +44 (0)1524 850506  
Fax: +44 (0)1524 850608  
Email: uksales@alfa.com

## **Alfa Aesar Germany**

Postbox 11 07 65  
76057 Karlsruhe  
Germany  
Tel: +49 721 84007 115  
Fax: +49 721 84007 201  
Email: EuroBulk@alfa.com

## **Alfa Aesar France**

2 allée d'Oslo  
67300 Schiltigheim  
France  
Tel: 0800 03 51 47 or +33 (0)3 8862 2690  
Fax: 0800 10 20 67 or +33 (0)3 8862 6864  
Email: FrVentes@alfa.com

## **Alfa Aesar China**

Room 1509  
CBD International Building  
No. 16 Yong'An Dong Li  
Chao Yang District, Beijing, China 100022  
Tel: 800-810-6000 or 86 (010)-8567-8600  
or 400 610 6006  
Bulk Sales: 800 810 6006  
Fax: 86 (010)-8567-8601  
Email: saleschina@alfa-asia.com

## **Alfa Aesar Korea**

101-3701, Lotte Castle President O-Dong  
467, Gongduk-Dong, Mapo-Gu  
Seoul, 121-805, Korea  
Tel: +82-2-3140-6000  
Fax: +82-2-3140-6002  
Email: saleskorea@alfa-asia.com

## **Alfa Aesar India**

(Johnson Matthey Chemicals India Pvt. Ltd.)  
Kandlakoyya Village  
Medchal Mandal  
R R District  
Hyderabad - 501401  
Andhra Pradesh, India  
Tel: +91 8008 812424 or +91 8008 812525  
or +91 8008 812626  
Fax: +91 8418 260060  
Email: India@alfa.com

**Alfa Aesar**®  
*A Johnson Matthey Company*