



IN THE PURSUIT OF PROGRESS

REDUCING AGENT EXPERTS

# YOUR PARTNER IN ORGANOMETALLIC REDUCTION CHEMISTRY

Chiara Colletto, Business Development Manager

---

/CHEMATEK

# INTRODUCTION

---

/SECTION

01

## WHAT WE DO

Chematek is an industrial technology company that offers products, services, and solutions to the chemicals, lubricant and EPC sectors.

Powered by a central operating model and decades of global networks, we are your partner in the pursuit of progress.



FINE CHEMICALS



SYNHYDRID® & DERIVATIVES



REFINERY SERVICES



LUBRICANTS



EPC

**1978**

Chematek founded by Dr Giovanni Papandrea with Fine Chemicals division

**2000**

Chematek appointed exclusive worldwide distributor for Synhydrid®

**2008**

Plant capacity expansion for Synhydrid®

**2015**

Chematek opens in India - Papa Fine Chemicals.

**2022**

Chematek Inc launches as a specialist chemical supplier in North America.

**1983**

Introduction of new products – NaBH<sub>4</sub> and KBH<sub>4</sub> to Italian pharma industry

**2005**

Chematek opens in China as Topstar International

**2011**

New Milan HQ Warehouse and chemical laboratory to produce and test products.

**2018**

Piperhydride® introduced.

# A MULTI-LAYERED GLOBAL NETWORK



## EXPERIENCED REDUCTION CHEMISTRY PARTNER



### ITALIAN API HERITAGE

Supplying Italy's API hub since the 1980s — scaled borohydride reduction expertise.



### SYNHYDRID<sup>®</sup> EXCLUSIVITY

Global road-testing across substrates, solvents and industries — unmatched applied reduction intelligence.



### FULL-SPECTRUM MASTERY

Decades of hydride know-how — confident reductions from polar to non-polar.

## CDMOS

End-to-end support from route scouting and reagent substitution to tech transfer and scale-up.

## API MANUFACTURERS

Modernising legacy reductions, improving impurity profiles, and securing resilient supply.

## TOLLERS/CUSTOM MANUFACTURERS

Process-ready hydrides delivered with reliable global fulfilment.



## SECTOR EXPERTISE



PHARMACEUTICALS &  
BIOTECH



FINE & SPECIALTY  
CHEMICALS



FLAVOURS &  
FRAGRANCES



AGROCHEMICALS



ADVANCED  
MATERIALS &  
ELECTRONICS



HYDROGEN  
STORAGE AND  
RELEASE

---

/REDUCING AGENTS

# FULL-SPECTRUM REDUCTION CHEMISTRY

---

/SECTION

02

## PRODUCT RANGE

Unique range including  
exclusive products

## TECHNICAL SUPPORT & CUSTOM SYNTHESIS

Extensive reaction database  
and industry experience



## OUR SPECIALIST RANGE



**SYNHYDRID<sup>®</sup>** 22722-98-1

**Format**

Clear Liquid; 70% min Purity.

**Packaging**

200g lab samples; 15kg; 25kg; 50kg and 200kg steel drums; 1000kg returnable pressurized containers.

[Learn More](#)



**SODIUM BOROHYDRIDE** 16940-66-2

**Format & Packaging**

Solid - Powder: Alu-bags in drum (5\*10Kg)  
Solid - Granular: Alu-bags in drum (5\*10Kg)  
Liquid: 12% in 40% caustic soda: IBC (1-1.4tons), drums (25-200Kg)

[Learn More](#)



**POTASSIUM BOROHYDRIDE** 13762-51-1

**Format & Packaging**

Solid - Crystals: 50kg Alu-bags (5X10kg)

[Learn More](#)



**LITHIUM  
BOROHYDRIDE**

16949-15-8

**Format & Packaging**

Solid – Powder: Alu-bags in drum  
(10 x 1kg), (32 x 1kg)  
Liquid – 4M in THF: Drum (150kg)



**SODIUM CYANO-  
BOROHYDRIDE**

25895-60-7

**Format & Packaging**

Solid: Custom Packaging



**SODIUM  
TRIACETOXY-  
BOROHYDRIDE**

**Format & Packaging**

Solid: 25kg Drum  
(10\*2.5kg)

---

/ A SAFER ALTERNATIVE TO LAH

SYNHYDRID<sup>®</sup>

# SYNHYDRID<sup>®</sup>

## PRODUCT INFORMATION

<b>Chemical Name</b>	Sodium bis(2-methoxyethoxy) aluminium hydride
<b>CAS Number</b>	22722-98-1
<b>Linear Formula</b>	$\text{NaAlH}_2(\text{OCH}_2\text{CH}_2\text{OCH}_3)_2$
<b>Molecular Weight</b>	202.16
<b>Appearance</b>	Clear Liquid
<b>Purity</b>	70% min
<b>Chemical Structure</b>	

## APPLICATIONS & USES

Synhydrid<sup>®</sup> is a **highly versatile organometallic reducing agent** that is **safe and easy to handle**. It is best known for several classic transformations and for its ability to replace more reactive and hazardous chemicals such as Lithium Aluminium Hydride (LAH).

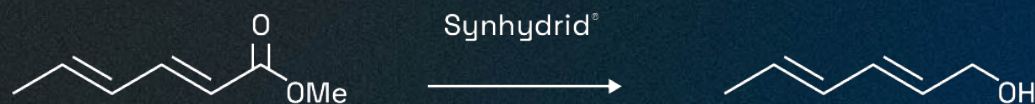
It is well known and fully commercialised, with well documented uses and handling at large scale.

Its inherent stability, reactivity and ease of handling – even in areas of high humidity, make it the reagent of choice for organometallic reductions.

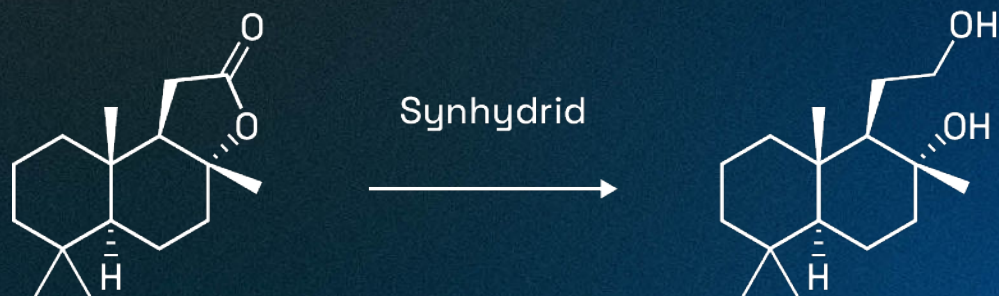


# SYNHYDRID<sup>®</sup>

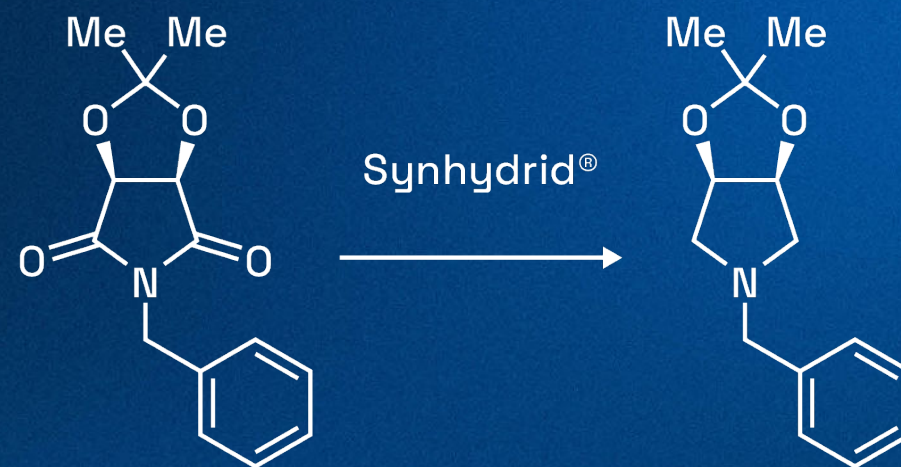
## AG-CHEM: SORBYL ACETATE



## F&F: TIMBERLOVE<sup>®</sup> (AMBROXIDE)

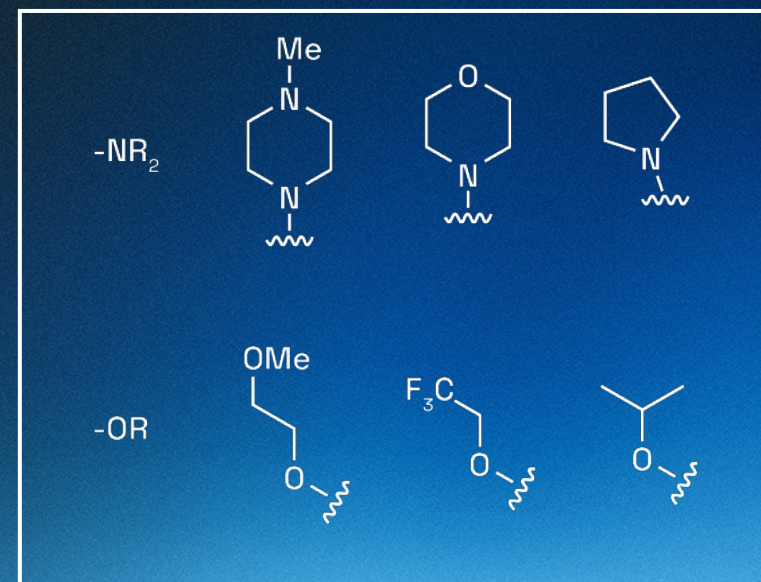
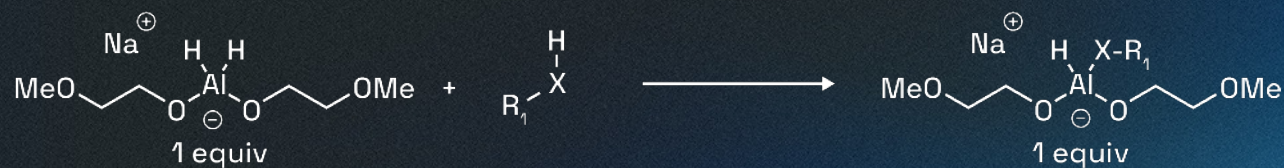


## PHARMA: INGLIFORIB



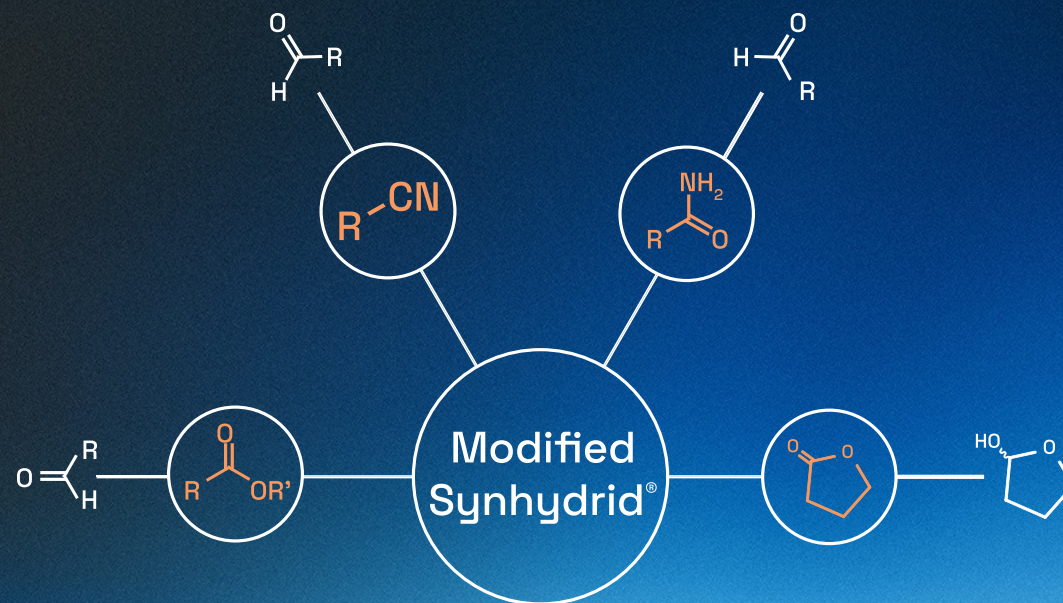
/ A SAFER REPLACEMENT TO DIBAL

# MODIFIED SYNHYDRID<sup>®</sup>: PIPERHYDRIDE<sup>®</sup>



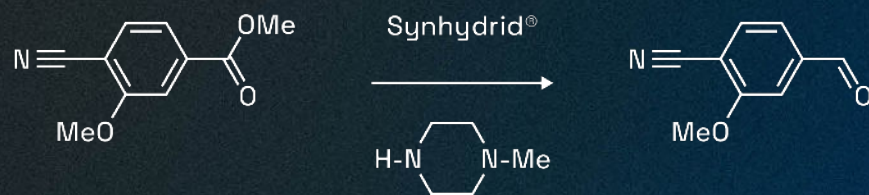
/ A SAFER REPLACEMENT TO DIBAL

# MODIFIED SYNHYDRID<sup>®</sup>: PIPERHYDRIDE<sup>®</sup>

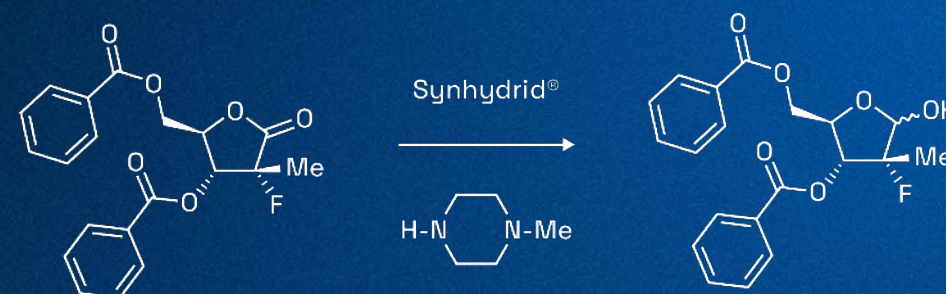


# MODIFIED SYNHYDRID<sup>®</sup>

## SYNTHESIS OF INTERMEDIATE



## PHARMA: SOFOSBUVIR

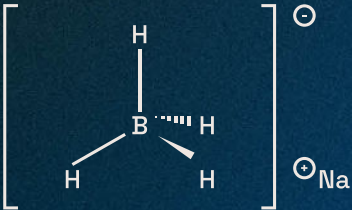


---

/ REDUCING AGENTS

# SODIUM BOROHYDRIDE

# SODIUM BOROHYDRIDE

PRODUCT INFORMATION	
Chemical Name	Sodium Borohydride
CAS Number	16940-66-2
Linear Formula	NaBH <sub>4</sub>
Molecular Weight	37.83
Appearance	White Crystalline Powder or White Granular
Purity	>98.0%
Chemical Structure	

## APPLICATIONS & USES

With mild reducing power and high selectivity, Sodium Borohydride is most typically used for converting highly reactive ketones and aldehydes to alcohols.

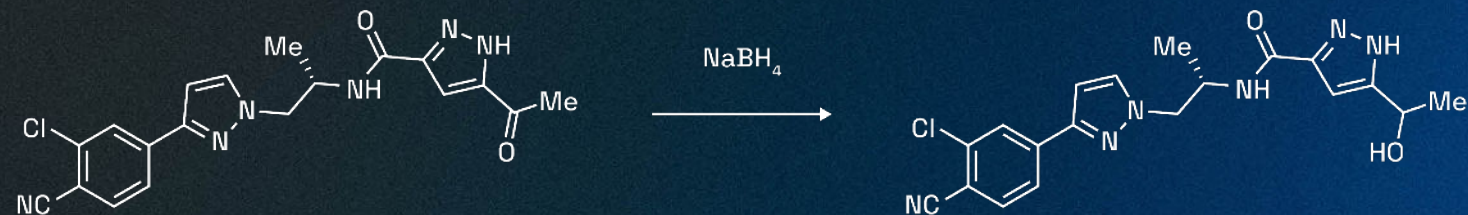
Generally used in protic solvents (water, methanol, ethanol).

We also sell 12% NaBH<sub>4</sub> in aqueous caustic solution.

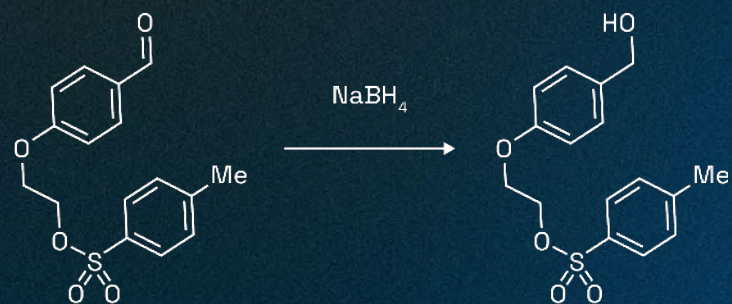


# SODIUM BOROHYDRIDE

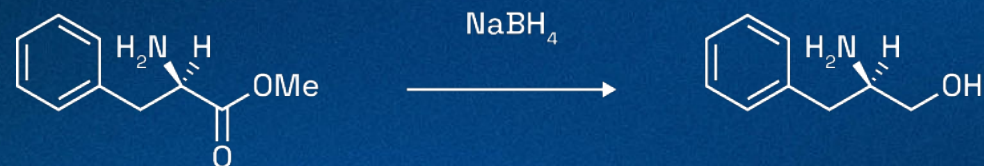
## PHARMA: DAROLUTAMIDE



## PHARMA: BAZEDOXIFENE



## PHARMA: SOLRIAMFETOL

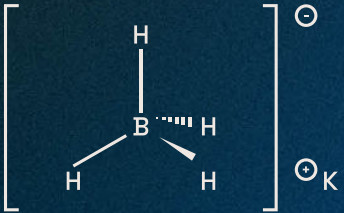


---

/ REDUCING AGENTS

# POTASSIUM BOROHYDRIDE

# POTASSIUM BOROHYDRIDE

PRODUCT INFORMATION	
Chemical Name	Potassium Tetrahydroborate
CAS Number	13762-51-1
Linear Formula	$\text{KBH}_4$
Molecular Weight	53.94
Appearance	White Crystals
Purity	>97.0%
Chemical Structure	

## APPLICATIONS & USES

With mild reducing power and high selectivity, Potassium Borohydride it is used for converting the highly reactive ketones and aldehydes to alcohols.

Generally used in protic solvents, such as water.



# POTASSIUM BOROHYDRIDE

## PHARMA: TAMANDARIN ANALOGUES



## PHARMA: TETRANDINE



---

/CHEMATEK

# PERFORMANCE OVERVIEW

---

/SECTION

03



/CHEMATEK

# TECHNICAL SUPPORT & CUSTOM SYNTHESIS

/SECTION

04

## REDUCTION STEP TECHNICAL SUPPORT

Our BD and R&D team are **dedicated to supporting Synhydrid<sup>®</sup>, Modified Synhydrid<sup>®</sup>, Sodium and Potassium Borohydride** used in chemical synthesis also to replace LAH and DIBAL.

Through confidential collaborations, we **support customers** in the optimisation of **targeted organometallic reduction steps**, accelerating both marketed and pipeline products development with tailored solution that enhance efficiency and safety.

Yield improvements and safety issues for customers are of the highest priority to Chematek.



### YIELD IMPROVEMENTS

Our aim is to achieve an improvement in production yields using more targeted and effective organometallic reducing agents on the functional group of interest.



### GREATER SAFETY

We aim to introduce a new safer alternative to commonly used reducing agents (LAH and DIBAL) thus improving process safety and reliability minimizing the use of hazardous materials.

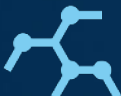
## REDUCTION STEP CUSTOM SYNTHESIS



50 YEARS OF  
EXPERIENCE



KNOWLEDGE-BACKED  
DEVELOPMENT



ADVANCED R&D  
INFRASTRUCTURE



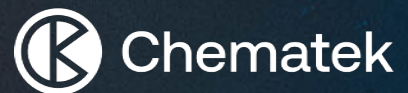
STRATEGICALLY  
POSITIONED  
CDMO-NETWORK



SECURE IP AND DATA  
MANAGEMENT

We offer **custom synthesis** services focused on **organometallic reduction chemistry**, supporting the design and development of tailored reduction steps to meet your specific requirements.

By applying our advanced knowledge through our global network of trusted CDMO partners, we manage the full scale-up process—from **laboratory development to commercial manufacturing**—ensuring continuity, quality, and regulatory alignment at every stage.



IN THE PURSUIT OF PROGRESS

REDUCING AGENTS

THANK YOU!  
COME AND MEET US AT  
BOOTH 1002

[chematek.com](http://chematek.com)

Complete guide  
to Synhydrid<sup>®</sup>



Synhydrid v  
Sodium Borohydride



Synhydrid v  
LAH & DIBAL



OPRD Publication





IN THE PURSUIT OF PROGRESS

REDUCING AGENTS

# CONTACT US

**Christian Papandrea**  
CEO, Chematek Inc.  
[cp@chematek.com](mailto:cp@chematek.com)

**Lorenzo Valoti**  
Sales Manager, North America  
[lorenzo.valoti@chematek.com](mailto:lorenzo.valoti@chematek.com)

**Riccardo Libori**  
Synhydrid® Division Director  
[libori@chematek.com](mailto:libori@chematek.com)

**Chiara Colletto**  
Business Development Manager  
[chiara.colletto@chematek.com](mailto:chiara.colletto@chematek.com)