



since 1998

# BOHEMI CHEMICALS

CHEMICALS FOR GLASS COATING







Bohemi Chemicals deals with chemical products for glass containers in particular we supply hot and cold end treatments.

Since 1998 we supply many glass producers in Europe, Africa, Middle East, Asia and South America.

Our philosophy is to supply a glass oriented selection of products with a main focus on quality



During 20 years we are committed to the development of products in the cold and hot end coating of the glass production chain.

Being a medium sized company allow us to personally follow each customer in its technical and commercial needs and for this reason, many glass manufacturers have chosen us instead of the big companies.

# Advantages over competitors

- Direct contact with Bohemi office for any necessity 365 days a year
- Specialization in cold and hot treatments
- Competitive in price and customer service without contract
- Approved food contact treatments in Europe and US
- Flexible structure of a medium-sized business
- No minimum quantity limit
- Management of CIF shipping all over the world
- Product approval by Heineken and Anheuser-Busch

# Company's Mission

## CUSTOMER SATISFACTION

- Fast Delivery
- Quality Products
- Direct Contact with our offices

## ENVIRONMENTAL PROTECTION

- Low Impact Production
- Recyclable Packaging
- Less Waste Material

## GLASS FOCUS

- 20 years of presence in the market
- Technical expertise



# Our products

- **BOHEMI STARTIN S (Hot Treatment)**

Pure MBTCI3 at 99% double stabilized so that can be used up to 1 year from purchase.

- **BOHEMI P4218 M (Cold Treatment High Quality)**

Cold treatment that requires less maintenance of equipment and avoids the formation of residues in filters, pipes and solenoids.

In addition we find a greater resistance to the scratches in the transport.

It is suitable for the treatment of standard quality bottles for beer and wine.

- **BOHEMI P1500 (Cold Treatment Superior Quality)**

High quality cold treatment suitable for precious liquor and champagne bottles.

- **BOHEMI P5010 (Sealing Glue)**

Innovative glue suitable for sealing glass containers, such as chocolate cream, yogurts and jams. Ensures no residues when the foil film is peeled off.

P5010 is applied to the container by the manufacturer and thermoactivated by the food producer once it is filled and the protective film has been placed.

- **TEMPVER (Thermoplastic Glass Paint)**

Applied by screen printing on a heated mold; it leaves a glossy finishing.

# BOHEMI STARTIN S

## Hot Treatment

Monobutyl trichloride (MBTCI3)

STARTIN S is double stabilized.

### PROPERTIES

- Seals the pathological microcracks of the newly created bottle
- Provides a homogeneous and strong layer of Tin
- Gives excellent grip for the cold coating treatments

### SPECIFICATION

Colour	Light to yellow
Tin content	min 41.0 %
Chloride content	min 36.0 %
MBTCI content	min 98.5 %
Di-content	max 0.3 %
Tri-content	n.d
Humidity	<0.01 %

### STORAGE

- Shelf life 12 months in original packaging.



# BOHEMI P4218 M

## High Quality Cold Treatment

Emulsion of polyethylene waxes  
High quality treatment for common bottles

### PROPERTIES:

- Cold final treatment for hollow glass containers
- Good protection during transportation and storage
- Provides adequate resistance to micro-cracks
- Versatility of application 80-150 ° C

### SPECIFICATIONS

Appearance:	Beige opalescent liquid
Solids content:	23 - 25%
PH:	9.3-10.3
Ionicity:	No -ionic
Viscosity:	32-40 seconds
Dilution rate	1-2%

### STORAGE

- Shelf life 12 months in original packaging.
- Storage temperature 5-30 ° C
- Bohemi P4218 M must be protected from frost during transportation and storage



# BOHEMI P1500

## Superior Quality Cold Treatment

Emulsion of waxes and copolymers

Superior quality treatment for valuable bottles

### PROPERTIES

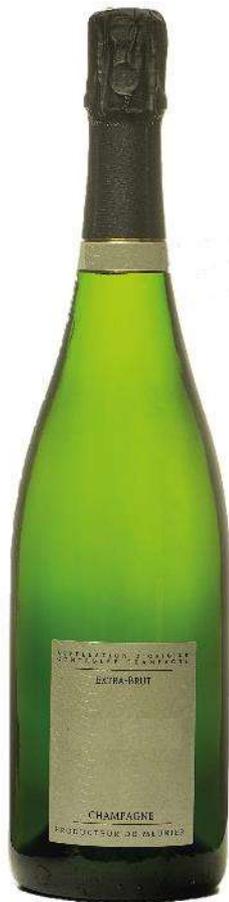
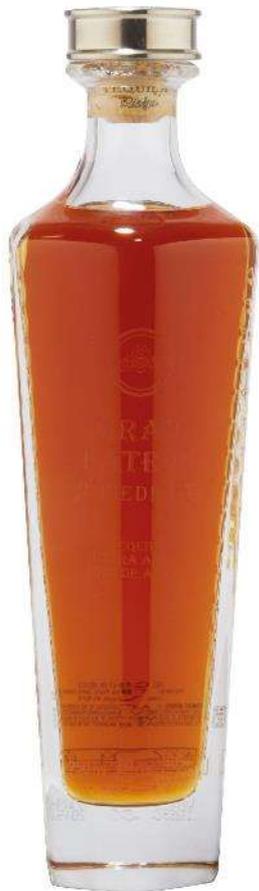
- Provides good resistance to wet and dry scratching
- Provides excellent protection during transportation and storage
- Guarantees an optimum sliding surface
- Glass containers temperature 80-150 C °
- Constant scratch resistance at different dilution percentage

### SPECIFICATIONS

Appearance	White liquid
Solids content:	20 - 22%
PH (at 20 ° C)	6-8
Viscosity:	25 -40 seconds
Dilution	1-3% with demineralized water

### STORAGE

- 12 months in original packaging
- Storage temperature 5-30 C °
- Bohemi P1500 must be protected from frost during transport and storage



# BOHEMI EN21

## Cold Treatments for Glassware

Aqueous dispersion based on waxes

Cold treatment for tableware with best quality - cost ratio

### PROPERTIES

- Provides scratch resistance to glass, jars and flask
- Suitable for glass chalice (separated stem-bowl production)
- Results in a very smooth layer with a high surface gloss

### SPECIFICATIONS

Appearance:	Beige opalescent liquid
Solids content:	19 - 21%
PH:	6-8
Viscosity:	29-49 seconds
Dilution Rate:	1-3 % with demineralized water
Glass Temperature range:	60-130 °C

### STORAGE

- 12 months in original packaging
- Storage temperature 5-35 C °
- EN21 must be protected from frost during transport and storage



# BOHEMI P5010

## (Sealing Glue)

### PROPERTIES

P5010 is a protective coating that can be used as heat sealable coating with good flexibility in many substrates such as metal, glass and plastic such as polyethylene.

Provides a transparent film that is resistant to water, solvents, greases and oils.

After the drying of the film is complete, the recommended thermal sealing temperature is 90 to 130 ° C.

### SPECIFICATIONS

Appearance:	White liquid
Solids content:	24 - 26%
PH (at 20 ° C):	8 - 10
Viscosity:	<1000 Mpa.s

### APPLICATION

It can be applied pure or diluted with demineralized water.

It is necessary to maintain a pH greater than or equal to 7.

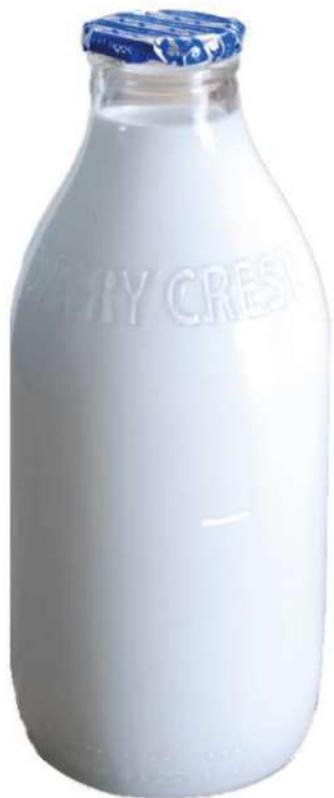
Drying takes place from room temperature to 120 ° C.

### FOOD LEGISLATION

Its formula respects many food agreements, including Regulation (LIE) No 10/2011 on plastic materials intended to come in contact with foodstuffs.

### STORAGE

- 6 months in original packaging
- Storage temperature 5-35 C °
- P5010 must be protected from frost during transport and storage



# TEMPVER

## (Glass Paint)

### PROPERTIES

Zinc borosilicate frit with inorganic pigment in thermoplastic medium.

Available in different colours with a glossy finishing.

Heavy metal free.

### SPECIFICATIONS

Appearance:	White
Density:	1.9 ± 0.1 kg/IH (at 20 ° C)
Viscosity:	6±2 Pa.s (@ 70°C)

### APPLICATION

It has to be applied by screen printing with a recommended screen mesh 62T - 120T.

Printing temperature 70-90° C.

No drying.

### FOOD LEGISLATION

Its formula respects many food agreements, including Regulation (LIE) No 10/2011 on plastic - food contact.

### STORAGE

- 12 months in original packaging
- Storage temperature 5-35 C °
- Tempver must be protected from humidity during transport and storage



# Common quality problems

## • DROP IN THE SCRATCH RESISTANCE

**CAUSES:** - Dirty spraying guns  
- Too high dilution  
- Wrong guns orientation

**SOLUTIONS:** - Increase hot deposition and homogeneity  
- Increase the temperature of application  
- Increase the concentration :

## • LABELLING ISSUES

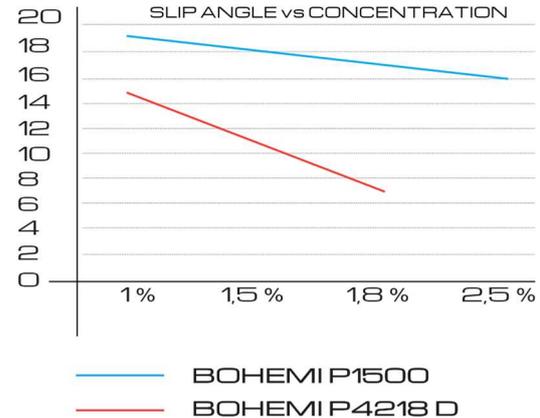
**CAUSES:** - Humidity in the plant  
- Incompatible glue  
- Application speed

**SOLUTIONS:** - Surface tension should be  $\geq 38$  DYN  
- More homogeneous deposition  
- Increase the concentration :

## • BACTERIA PROLIFERATION IN THE FILTER

**CAUSES:** - Non filtered tap water  
- No scheduled cleaning

**SOLUTIONS:** - Bohemi P4218 D (double sterilized)  
- Cleaning pipes with alcohol



	BOHEMI P1500			BOHEMI P4218 D			COMPETITOR		
DILUTION %	1,00%	1,80%	2,50%	1,00%	1,80%	2,50%	1,00%	1,80%	2,50%
APPLICATION TEMPERATURE	>80°C			>80°C			>120 or 130°C		
SCRATCH	4	7	10	5	8	NA	4	7	NA
LABELLING DIFFICULTY	+++			++			+		
SLIP ANGLE (°)	>15			>10			>10		
SURFACE TENSION (DYN)	>40			$\geq 38$			$\geq 38$		

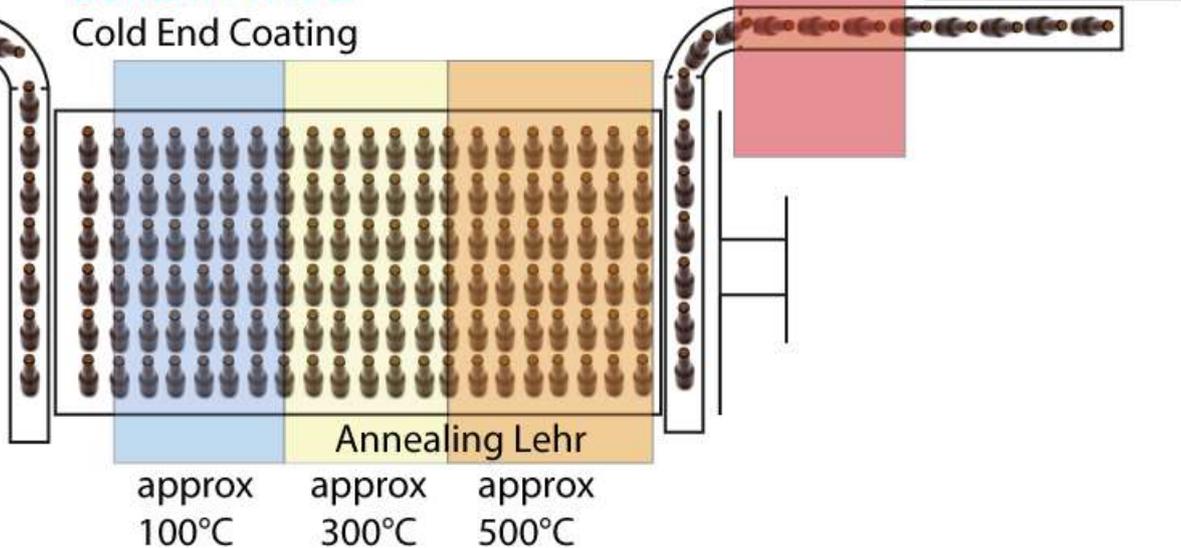
**BOHEMI P5010**  
Sealing Glue

**BOHEMI P4218 D**  
Cold End Coating

**STARTIN S**  
Hot End Coating

550°C

FORMING  
MACHINE



# Shipping modality

We have always a stock of the entire products range in our warehouse located in Milan (Italy) to ensure immediate delivery.

We can organize both naval and aerial shipment depending on the urgency of the order and on your necessities.

## TYPE OF CONTAINERS

- Barrel 20 kg: used for sending product tests
- Barrel 60 kg: principal shipping units arranged on pallets; can be inserted directly into the cold and hot tunnel without the need to wash the equipment. (Barrel 45Kg for Startin S)
- Container 1000 kg: maximum size container to minimize the handling of exhausted barrels





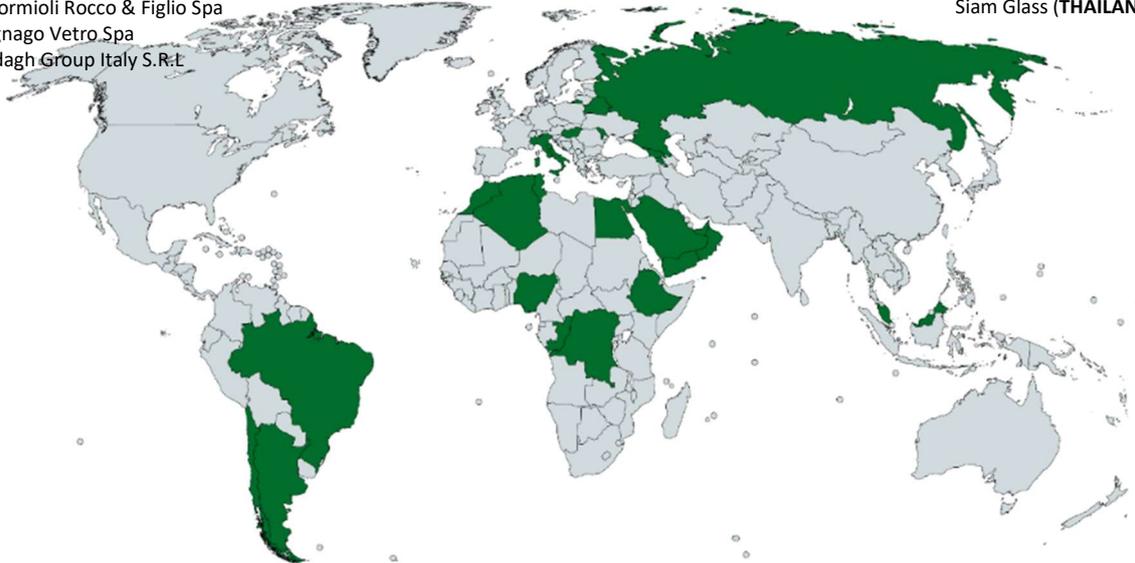
# Principal Customers

## EUROPE:

Verralia Italia  
Vetropack Vetropack Italia Srl  
Bormioli Rocco Bormioli Rocco & Figlio Spa  
Zignago Vetro Zignago Vetro Spa  
Ardagh Group Ardagh Group Italy S.R.L.

## ASIA:

Jg Containers Sdn (**MALESIA**)  
Siam Glass (**THAILANDIA**)



## SOUTH AMERICA:

Saint Gobain Vidros Sa (**BRASIL**)  
Cattorini Hnos Saicf Ei (**ARGENTINA**)

## AFRICA:

Sevam (**MOROCCO**)  
Alver (**ALGERIA**)  
Sotuver (**TUNISIA**)

## MIDDLE EAST

Frigoglass Jebel Ali Fze (**UNITED ARAB EMIRATES**)  
MSaaed Mahmood Saeed Glass Industry Company (**SAUDI ARABIA**)  
Majan Glass Company S.A.O.G. (**OMAN**)

# Team Bohemi

President  
ENRICO QUARLERI

Sales Manager  
FABRIZIO SCESA

Technical Assistance  
FULVIO SARA'

Quality and Health Manager  
ENG. MASSARA

Area Manager Sud America  
ALBERTO VERNAZZA

Product Manager  
GIULIO VALLI

Administration  
ALICE GILARDELLI

Customer Service  
SARA GERARDINI

Communication Manager  
GIULIA SCESA

## Name

BOHEMI CHEMICALS s.r.l

## Address

Via Grazia Deledda, 39  
20080 Zibido San Giacomo  
Milano ITALY

## Phone

+39 0290005047

## Fax

+39 02 90005684

## E-mail

bohemi@bohemicchemicals.com

## Website

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



**TNO**

