



**BAUTECH CHEMICAL
INDUSTRIES L.L.C.**

BAUCOAT HP

**ELASTOMERIC WATERPROOF & PROTECTIVE COATING
BASED ON POLYURETHANE DISPERSION (PUD)**

TECHNICAL SUBMISSION



BAUTECH CHEMICAL INDUSTRIES, P.O. BOX: 23054, AJMAN, UNITED ARAB EMIRATES
TEL: +9716 7441150 FAX: +9716 7441120, Email: marketing@bautechindustries.com



**BAUTECH CHEMICAL
INDUSTRIES L.L.C.**

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BAUTECH CHEMICAL INDUSTRIES L.L.C.

COMPANY PROFILE

Company Information and Contact Details

- Business Name : Bautech Chemical Industries L.L.C
- Business Address : Al Jurf Industrial – 3
P.O.Box – 23054
Ajman
United Arab Emirates
- Phone : +97167441150
- Fax : +97167441120
- Primary Line of Business : Manufacture of Construction Chemicals and
Specialty Coatings
- Total No of Employees : 14

Bautech Chemical Industries L.L.C is in the business of manufacturing Construction and Specialty Chemicals and cater to the needs and requirements of the entire Middle East and African (MENA) region from our base in Ajman, UAE.

Our company is driven by a dynamic group of highly experienced professionals in the chemical sector with extensive expertise in manufacturing Construction & Specialty chemicals. Our mission is to manufacture high quality products and continuously work towards achieving technological innovations that improve performance and customer experience. We are an **ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007 Certified Company.**

We have developed a range of products in Construction & Specialty Chemicals to meet the needs and demands of our clients. The following line of products are available with us:

- INDUSTRIAL FLOORING
- CONCRETE REPAIR
- TILE ADHESIVES AND GROUTS
- SURFACE TREATMENT
- PROTECTIVE COATING
- SEALANTS
- PRECISION GROUTS

Please visit our website, www.bautechindustries.com for further info regarding the above.



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BAUTECH CHEMICAL INDUSTRIES L.L.C.

TECHNICAL DATA SHEET

BAUCOAT HP

Elastomeric Waterproof & Protective Coating Based on Polyurethane Dispersion (PUD)

DESCRIPTION

BAUCOAT HP is a liquid applied elastomeric waterproof and protective coating based on polyurethane dispersion (PUD)

The polyurethane is modified with specially selected polymers to form a tough, flexible and durable coating. It is completely free of hazardous ingredients.

TYPICAL USES

Waterproofing or vapor barrier protection of exposed roofs, domes, terraces, balconies, corrugated sheets and wet areas like kitchens, bathrooms & toilets

ADVANTAGES

- Ready to use / apply single component product
- Forms a highly elastomeric, tough and resilient membrane.
- Environment friendly
- Fast surface hardness, no tack surface, low dirt pick-up.
- Excellent crack bridging properties
- Exhibits high resistance to weather conditions and good resistance to UV radiation

- Good adhesion and elastic recovery. Excellent resistance to water and vapor.
- Good chemical resistance against diluted acids, oil, salts, bacteria and common fuels.

TECHNICAL PROPERTIES

Color	White, Green, Grey (As per requirements)
Solid Content [%]	> 60
SRI (Solar Reflective Index)	> 80 (White)
Elongation [%]	400 (+/- 30)
Tensile Strength [N/mm ²]	2 (+/- 0.2)
Pull Off Adhesion [N/mm ²] (at concrete failure)	1.20
Peel Off Adhesion [N/mm]	2.0
Crack Bridging [mm]	1.5
Hydrostatic Pressure @ 5bar (60m)	No leakage
Chemical Resistance	Dilute acids & alkalis, sea water
Full cure [days]	7
Application Temperature [°C]	5 to 35
Service Temperature [°C]	-20 to 70

(The properties shown below were obtained under laboratory conditions).

All values given are subject to 10% tolerance



APPLICATION INSTRUCTION

Surface Preparation

Surfaces must be cleaned and made free of dust, dirt, moss, oil, grease and other loose particles. This can be achieved by grit/sand/shot blasting. As a minimum, vigorous wire brushing should be employed. All pin holes and surface defects shall be repaired with a suitable concrete repair mortar.

Priming

BAUCOAT HP does not require priming as such and can directly be applied onto the substrate surface. In case of highly porous surface, a priming coat is recommended to seal the pores and stabilize the surface.

The primer coat can be produced on site by diluting BAUCOAT HP with water (20% by weight) . Apply the primer coat @ 4m²/ Kg and allow to dry.

The primer coat also functions as an adhesion promoter for the top coats. It can be applied by a brush, roller or airless spray and allowed to dry completely before the application of subsequent coats.

Mixing

BAUCOAT HP is a single component product but mix the contents of the pail thoroughly prior to application to remove any sediment. A slow speed drill and suitable paddle mixer shall be used to avoid the formation of air bubbles.

Application

The coating can be applied with a brush, roller or airless spray and shall be applied in a minimum of 2 coats. Apply the first coat of undiluted material at a coverage rate of **1kg/m²/coat** to get an approximate dry film thickness of 0.5 mm. It is important to ensure that each coat is completely cured before applying subsequent coats. The second coat should be applied at right

angle to the first at the same coverage rate, to ensure a full unbroken coating to the substrate.

CURING

BAUCOAT HP will achieve its full strength after a curing period of 7 days.

PACKAGING

25 Kg Pails & 200 Kg Drum

COVERAGE

1Kg /m² at 0.5 mm thickness.

Two coats will give a combined thickness of 1mm

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight, clear of the ground on pallets and protect from extreme temperatures. In tropical climate the product must be stored in air-conditioned environment (<25°C).

Shelf life is 12 months when stored as above.



PRECAUTIONS

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn.

Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance

immediately. There are no known health hazards associated with BAUCOAT HP.

Clean all the tools with water after use. Hardened materials can be removed mechanically only. Allow the waste to cure. Seal it into a suitable container and bury in landfill as per local regulations.





BAUTECH CHEMICAL INDUSTRIES L.L.C.

METHOD STATEMENT

BAUCOAT HP

Highly Elastomeric Acrylic Waterproofing & Protective Coating

1. Product Description

BAUCOAT HP is single component highly elastomeric, acrylic waterproofing and protective coating.

2. Substrate Requirement

- All surfaces must be structurally sound, clean, free from dust, oil and any traces of foreign materials that may affect adhesion of the waterproof coating on the substrate.
- Brick, block and concrete walls/ floors must be allowed to cure for a minimum of 4 weeks prior to application of BAUCOAT HP.
- Cement render and screed must be allowed to cure for at least 7 days and finished to semi-smooth finish with a wood float. After curing, a thorough check on the soundness in adhesion of the screed and render should be carried out. All substrate defects should be properly rectified.
- Painted surface must be scrapped to expose the original substrate for the waterproofing application.
- The trueness of the background surface required for the substrate beds should be such that, when checked with a 2m straightedge, any gap under the straightedge between points of contact does not exceed 3mm.
- Thoroughly dampen the substrate with water and allow access to drain away.
- In case of metal substrate, rust scales to be removed using wire brush.
- Ensure a minimum slope of 1 in 100 is already provided



3. Application of BAUCOAT HP

- Make sure that all substrate requirements are met, such as temperature, moisture content of the prepared substrate (preferably below 5%) etc.
- Mix the bucket/drum thoroughly prior to application to remove the sediments.
- Dilute BAUCOAT HP with 20% water to be used as primer coat on the substrate and allow it to dry for about 3-4 hours.
- Once the surface is dry, clean the surface and apply BAUCOAT HP at 1 kg per square meter. For spray application, dilute BAUCOAT HP with 5% of water to reduce the viscosity.
- Allow the surface to dry for 4-5 hours.
- Apply the second coat at 1 kg per square meter in right angle to the first coat.
- Allow the coating to cure fully for 72 hours to achieve its full properties.
- Once the coating is cured completely, it should be checked for its adhesion to the substrate. For this mark a square of 5cm x 5cm randomly on the surface.
- Cut the square with a knife diagonally across the square. Rip the coating and check the thickness with Vernier calipers, to see if the dry film has an average thickness of 1mm.
- Once these tests are done, reapply BAUCOAT HP over those portions, in accordance with the regular procedure.

4. Post Application

- Conduct ponding test by filling up to 50mm of water for 48 hours to ensure leak free terrace.



1) **PRODUCT AND COMPANY IDENTIFICATION** Distributed by: BAUTECH Chemical Industries LLC
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Web: www.bautechindustries.com

2) **COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical characterization Acrylic Emulsion (**CAS No.25085-34-1**) Water (**CAS No, 7732-18-5**) Pigments & additives.
Hazardous ingredients N/A. Ingredients deemed non hazardous
Chemical name HS CODE: 3209.1090

3) **POTENTIAL HAZARDS**

Primary hazard Non-Flammable & Non Toxic
Secondary hazard May be irritant to skin and eyes contact

4) **FIRST AID MEASURES**

Inhalation N/A
Eye Contact Wash with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.
Skin Contact Remove contaminated clothing and wipe affected skin with dry cloth then wash with soap and water. Seek medical attention if irritation persists.
Ingestion DO NOT INDUCE VOMITING because of risk of aspiration. Give 200-300mls (half pint) of water to drink. Seek immediate medical attention.

NOTE TO PHYSICIANS.

Treat observation and supportive measures as indicated by the patient's conditions. See section 11 Toxicological information.

5) **FIRE FIGHTING MEASURES**

Extinguishing Media N/A Non flammable
Not to be used None
Combustion products N/A



6) ACCIDENTAL RELEASE MEASURES

Personal Protection during Spill	Wear goggles, gloves and overalls. Spillage causes slippery surfaces.
Precautions to Protect Environment	Prevent ingress to drains and water-courses. If polluted water enters water-courses inform relevant authorities immediately.
Spillage Clean Up Methods After spillage / leakage	Absorb spillage with earth or sand. Take up with an absorbent material e.g. sand, sawdust and collect in a disposal bags. Please refer to local rules and regulations for disposal.

7) HANDLING AND STORAGE

Usage Precautions	Ensure adequate ventilation. Avoid contact with the eyes and skin. When using DO NOT eat, drink or smoke.
Storage Criteria	Keep in cool ventilated area. Keep containers sealed.

8) EXPOSURE CONTROLS / PERSONAL PROTECTION

INGREDIENT.	Blend of Water, Styrene Acrylic co polymer pigments and additives.
CAS No.	Acrylic Emulsion (CAS No.25852-37) Water (CAS No, 7732-18-5)
Personal Protective Equipment	Wear goggles giving complete eye protection. Wear nitrile gloves. In cases of insufficient ventilation wear self-contained respiratory equipment.
Hygienic Work Routines	Keep working clothes separate and do not take home. Use good personal hygiene practices. Wash hands after handling product.

9) PHYSICAL AND CHEMICAL PROPERTIES

Form	Thixotropic Paste
Color	Milky White
Odor	Aromatic
Change in physical state	No statement possible
Density	1.25 +/- 0.02 kg/ltr
Vapor pressure, mbar (°C)	N/A
Solubility in water	Water soluble
pH	6 to 9
Boiling Point, °C	100 °C
Flash Point	N/A
Ignition temperature	N/A



Thermal decomposition	N/A
Explosion limits	N/A
VOC content	25 g/lit.
10 STABILITY AND REACTIVITY	
Stability	Stable under normal conditions.
Materials to Avoid	N/A.
Conditions to avoid in use	N/A
Hazardous reactions	N/A

11) **INFORMATION ON TOXICITY**

Skin Contact	Prolonged skin contact will cause irritation.
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12) **INFORMATION ON ECOLOGICAL EFFECTS**

Environmental Hazards	Harmful to aquatic organisms. (R52). May cause harmful effects to aquatic environment. (R53).
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Degradability	Not readily biodegradable
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13) **DISPOSAL**

Disposal	This product and its container must be disposed of as a hazardous waste. DO NOT empty into drains or waterways.
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14) **TRANSPORT**

DOT	:	Not restricted.
TDG	:	Not restricted for road or rail.
ICAO	:	Not restricted
IATA	:	Not restricted
IMDG/IMO	:	Not restricted
Other Information		Regarded as non- hazardous for transport.



15) REGULATIONS

Labelling

Symbol

R Phrases

S Phrases

clear indication and identification of materials

None

May cause sensitization to skin contact

After contact with skin, wash immediately with water and soap. Wear suitable PPE's for protection.

16) FURTHER INFORMATION

Whilst the descriptions, designs data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further you expressly understand and agree that the descriptions, data and information given or results obtained, all such being given and accepted at your risk.

Approved:

MSDS VERSION: 01

Date: MAY 2018

Last Revision: MAY 2019



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WIMPEY LABORATORIES مختبرات ويمبي

TEST REPORT ON TENSILE STRENGTH & ELONGATION

Client	Bautech Chemical Industries L.L.C P.O.Box : 23054 Ajman, UAE.		
Sample Description	BAUCOAT HP	Lab Report No.	WLRP20-1822/2
Source	Bautech Chemical Industries L.L.C	Sample No.	WSP20-1822/2
Client's Ref.	BAUCOAT HP (Applied Sample)	Date Received	05/07/2020
Curing and test condition	Temperature: 23°C Relative Humidity: 50%	Casting Date	29/06/2020
Sampling Method	ASTM D412-16	Curing Time	7 days
Test Method	ASTM D412-16	Date Tested	06/07/2020
Specimen Type	Test Method A – Die C	Date Reported	07/07/2020
Rate of Speed	500 mm/minute	Tested By	SI

Test Results

Specimen Number	Width (mm)	Thickness (mm)	Maximum Force (N)	Tensile Strength (N/mm ²)	Elongation (%)
1	6.0	0.87	11.9	2.280	444
2	6.0	0.88	11.4	2.159	419
3	6.0	0.82	10.8	2.195	398
4	6.0	0.90	11.8	2.185	510
5	6.0	0.81	10.6	2.181	410
Average				2.200	436

Remarks: Sample prepared by client.

Signed for and on behalf of Wimpey Laboratories

Visakh S Nair
Laboratory Supervisor

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TEST REPORT ON CRACK BRIDGING ABILITY

Client	Bautech Chemical Industries LLC. P.O Box: 23054, Ajman, UAE.		
Project Name	N.G	Lab Report No.	WLRP20-2677
Sample Description	Baucoat HP	Sample No.	WSP20-2677
Source	Bautech Chemical Industries LLC.	Date Received	29/09/2020
Test Method	ASTM C1305/C1305M-16	Casting Date	03/10/2020
Nature of Substrate	Concrete	Date Tested	24/10/2020
Substrate Dimension(mm)	75 W x 150 L	Date Reported	24/10/2020
Sampling Conditioning	Temperature: 23°C Relative Humidity: 50%	No. of coat & Method of application	2 Coat, Brush
Test Condition	Temperature: 23°C Relative Humidity: 50%	Tested By	SU

Test Results

Test	Crack width (mm)	Observation
Crack Bridging Ability	1.7	No sign of cracks, loss of adhesion or any other type of failure was observed after completion of the up and down movement.

Remarks: None.

Signed for and on behalf of Wimpey Laboratories

S. Sarath Kumar
Senior Technician

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WIMPEY LABORATORIES مختبرات ويمبي

TEST REPORT ON TEAR STRENGTH

Client	Bautech Chemical Industries LLC. P.O.Box: 23054, Ajman, UAE.		
Sample Description	Baucoat HP	Lab Report No.	WLRP20-3131
Source	Bautech Chemical Industries LLC.	Sample No.	WSP20-3131
Client Reference	N.G	Date Received	01/11/2020
Test Method	ASTM D624-12	Casting date	25/10/2020
Curing Conditioned	23°C and 50% R. Humidity	Curing time	7 Days
Type of machine used	UTM Machine H25KT	Date Tested	01/11/2020
Type of test piece	Type C (die cut)	Date Reported	01/11/2020
Room Temperature	23°C	Sample brought in by	Client
Relative Humidity	50%	Speed of Testing	500 mm/minute
Type of Grips used	Self-Tightening Roller Grips	Tested By	SI

Test Results

Specimen Number	Specimen Thickness (mm)	Maximum Force (N)	Tear Strength (N/mm)
1	1.18	21.3	18.0
2	1.19	23.0	19.3
3	1.23	22.5	18.3
4	1.22	23.0	18.8
5	1.19	21.8	18.3
Average			18.5
Standard Deviation			0.52

Remarks: None

Signed for and on behalf of Wimpey Laboratories

S. Sarath Kumar
Senior Technician

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TEST REPORT ON ADHESION IN PEEL

Client	Bautech Chemical Industries L.L.C P.O.Box : 23054 Ajman, UAE.		
Sample Description	Baucoat HP	Lab Report No.	WLRP20-3189/1
Source	Bautech Chemical Industries L.L.C	Sample No.	WSP20-3189
Test condition	Temperature: 23°C Relative Humidity: 50%	Date Received	05/11/2020
Test Specification	ASTM C957/C957M-17	Casting Date	08/11/2020
Test Method	ASTM C794-18	Curing Time	7 Days
Substrate Used	Concrete	Date Tested	15/11/2020
Primer Used	N/A	Date Reported	17/11/2020
Rate of Speed	50 mm/minute	Tested By	SP
Curing Condition	7 days normal curing at 23°C & 50% RH		

Test Results

Test	Width (mm)	Maximum Force (N)	Peel Strength (N/mm)
Adhesion in Peel	25.0	69.5	2.78
	25.0	72.6	2.90
	25.0	81.9	3.28
	25.0	89.6	3.58
	25.0	85.8	3.43
Average		79.9	3.19

Remarks: None.

Signed for and on behalf of Wimpey Laboratories

S. Sarath Kumar
Senior Technician

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TEST REPORT ON PULL-OFF ADHESION STRENGTH

Client	Bautech Chemical Industries L.L.C. P.O.Box: 23054, Ajman, UAE.		
Project Name	N.G	Lab Report No.	WLRP20-3189/2
Sample Description	Baucoat HP	Sample No.	WSP20-3189
Source	Bautech Chemical Industries L.L.C	Date Received	05/11/2020
Client Reference	N.G	Date Tested	15/11/2020
Consultant	N.G	Date Reported	16/11/2020
Contractor	N.G	Cast Date	08/11/2020
Test Method	ASTM D4541-17	Sampling Date & Sampling Time	N.G
Test Type	Type 5-Self Aligning Tester	Substrate Used	Concrete
Machine Details	Manufacturer: Elcometer Model: F510-50T Serial Number: WA22213.	Adhesive Used	Two Component Epoxy
Location	In-House	Age of Test	7 Days
Test Temperature & Relative Humidity	23°C & 50%	Tested By	SP

Test Procedure

The general pull-off test is performed by securing a loading fixture (dolly, stud) normal (perpendicular) to the surface of the coating with an adhesive. After the adhesive is cured, a testing apparatus is attached to the loading fixture and aligned to apply tension normal to the test surface. The force applied to the loading fixture is then gradually increased and monitored until either a plug of material is detached, or a specified value is reached. When a plug of material is detached the exposed surface represents the plane of limiting strength within the system. The nature of the failure is qualified in accordance with the percent of adhesive and cohesive failures, and the actual interfaces and layers involved.

The pull-off strength is computed based on the maximum indicated load

Description	RESULTS		
	1	2	3
Test Number	1	2	3
Test Position	Vertical	Vertical	Vertical
Diameter of Dolly (mm)	20	20	20
Max. Load Applied (N)	747.3	756.7	785.0
Pull off Strength (N/mm ²)	2.38	2.41	2.50
Average Pull off Strength (N/mm ²)	2.43		
Mode of Failure	Cohesive failure observed from Sample		

Remarks: None.

Signed for and on behalf of Wimpey Laboratories,

S. Sarathy Kumar,
Senior Technician

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