

BiCAT[®]

Environmental Friendly Organo-Metallic Polyurethane Catalysts



The Shepherd Chemical Company has nearly 30 years of experience in synthesizing and manufacturing polyurethane catalysts for CASE applications, these catalysts can also be formulated to be effective for certain foam applications. In the early to 1980's we developed our BiCAT[®] line of polyurethane catalysts which enabled formulators and manufacturers to replace the prevailing, but toxic, mercury, lead and tin catalysts with a viable alternative. BiCAT[®] catalysts have passed SGS-RoHS tests and REACH Substances of Very High Concern (SVHC) tests.

Shepherd

The Shepherd Chemical Company
www.shepchem.com



● Bismuth catalysts

Product	Metal content
BiCAT [®] 8118(M)	16% Bi
BiCAT [®] 8108(M)	20% Bi
BiCAT [®] 8124(M)	28% Bi
BiCAT [®] 8106(M)	20% Bi
BiCAT [®] 8210(M)	28% Bi

Selective urethane gelling catalysts
 Better NCO selectivity than Tin → Better mechanical properties
 Gradual increase of viscosity (very short induction time)

● Zinc catalysts

Product	Metal content
BiCAT [®] Z(M)	19% Zn
BiCA T [®] 3228(M)	22% Zn

Slow reaction versus Bismuth and Tin catalysts
 Very efficient cross-linking catalysts → Tack-free surfaces

● Zirconium catalysts

Product	Metal content
BiCAT [®] 4130M	12% Zr
BiCA T [®] 4232M	18% Zr

High selectivity (better than Tin) for NCO/OH reaction
 Zirconium versus Tin: Less gassing, fewer pin-holes, longer pot-life, higher gloss

● Delayed action catalyst

Product	Metals
BiCAT [®] 2536	Ni blend

Relatively inactive at ambient temperature
 Thermally activated, effective at temperatures over 72 °C

● Combination catalysts

Product	Metals
BiCAT [®] 8(M)	Bi/Zn blend
BiCA T [®] 3184	Zn/Bi/Zr blend

High selectivity for NCO/OH reaction
 Efficient cross-linking catalysts → Tack-free surfaces, less gassing, fewer pin-holes, longer pot-life, higher gloss

* Note on the use of (M) for Mirecourt, France made products.





● Applications

Product	Coating	Adhesive	Sealant	Elastomer	TPU/CPU	Shoe sole	Auto parts Furniture	Hybrid SPUA	PU Resin
BiCAT [®] 8118(M)	▲	▲	▲	▲	▲	▲	▲	▲	▲
BiCAT [®] 8108(M)		▲	▲	▲	▲	▲	▲	▲	▲
BiCAT [®] 8124(M)		▲		▲					
BiCAT [®] 8106(M)		▲	▲						
BiCAT [®] 8210(M)	▲	▲							
BiCAT [®] Z(M)	▲	▲		▲	▲				
BiCAT [®] 3228(M)	▲			▲	▲				
BiCAT [®] 4130M	▲		▲						
BiCAT [®] 4232M	▲		▲						
BiCAT [®] 2536			▲	▲	▲		▲		
BiCAT [®] 8(M)	▲	▲		▲	▲			▲	
BiCAT [®] 3184		▲		▲			▲		▲

These products are formulated with customer flexibility in mind. The environmental friendly Bismuth, Zinc, Zirconium and nickel compounds are excellent choices for catalyzing coating, adhesive, sealant and elastomer. BiCAT[®] Catalysts are successful in one and two component systems for ambient cure or heat cure systems. We are one of the world's largest producers of Bismuth based metal chemistry. We can provide a single catalyst or combination of catalysts that will enable you to modify your pot life, mimic the cure profile of a mercury catalyst, or achieve any other performance characteristic you desire.

● Custom Metal Chemistry

Since 1916, we have developed an exceptional capacity for the custom design, development and manufacture of high quality metal compounds to meet our customers' specific needs. Because of our ability to manipulate, characterize and control a variety of product attributes, we are recognized as a leader in the development of custom metal catalysts. Please contact us if you have a need.



The Shepherd Chemical Company

4900 Beech Street
Norwood, Ohio 45212, USA
Tel: +1-513-731-1110
Fax: +1-513-731-1532
Email: salesinfo@shepchem.com
Web: www.shepchem.com

Shepherd Mirecourt S.a.r.l.

275 Rue De Lorraine
Juvaincourt – B.P. 47
88502 Mirecourt, France
Tel: +33-3-2937-8822
Fax: +33-3-2937-7070
Email: logistique@shepherd.fr

Shepherd Chemical Japan, Inc.

〒163-0704 東京都新宿区西新宿2-7-1
新宿第一生命ビル4F
Tel: +81-3-3344-3010
Fax: +81-3-3344-3027
Email: sales@shepherdjapan.com
Web: www.shepchem-japan.com

Shepherd China Shanghai Rep. Office

Room 902, Citigroup Tower, 33 Hua Yuan Shi Qiao Rd
Pudong, Shanghai 200120, China
Tel: +86-21-61639819
Fax: +86-21-51685092
Email: info@shepchem.com.cn
Web: www.shepchem.com.cn



The Shepherd Chemical Company

www.shepchem.com

www.shepchem.com.cn

www.shepchem-japan.com

