



**Figure 1.** SEM view of FLAT-EDGE FILLER (top, left). **Figure 2.** Example of a prepared mount using FLAT-EDGE FILLER in EPOXIDE (bottom, left). **Figure 3.** Use of FLAT-EDGE FILLER results in completely flat field from edge inward. Annealed 5140 alloy steel at 500x with Nital etch (right).

# BUEHLER® FLAT-EDGE FILLER

## For Better Edge Retention with Castable Resins

Buehler proprietary FLAT-EDGE FILLER is a mixture of fine globular ceramic oxides designed to improve castable resin (cold mounting) abrasion resistance and edge retention.

The hardness of this filler is approximately 750 HV which is compatible with polishing of metals. This is much better than alumina filler, which at 1800 HV is too hard for grinding and polishing metals.

Buehler FLAT-EDGE FILLER is chemically resistant and will not cause galvanic interactions during etching, as can happen when using certain plated metals for edge protection.

**Catalog No. 20-8196 0.5kg (1.1lbs)**

### Instructions for use

1. Mix up epoxy (Buehler EPOXIDE®, EPO-KWIK®, EPO-COLOR®, or EPO-THIN®) as per instructions on epoxy container
2. Pour approximately ¼ of epoxy volume into a separate container and weigh (set aside the remaining ¾ volume of epoxy for use in filling up the mount later)
3. To the small ¼ volume of epoxy add 50% by weight, the flat-edge filler (one half part filler to one part epoxy)
4. Mix thoroughly together with stirring stick (approximately 1 minute)
5. Place the specimen into a mounting cup such as a SAMPL-KUP® and pour in filled epoxy mixture
6. Fill up the remainder of the mount with the normal unfilled epoxy
7. Allow to cure completely before preparing the sample as normal

**Note:** Addition of the filler will slow down the cure cycle. If desired, place the mount in an oven at 80-100°F (27-38°C) to cure more quickly.

*For additional information on our FLAT-EDGE FILLER, please consult your nearest Buehler office.*

*Buehler continuously makes product improvements; therefore, technical specifications are subject to change without notice.*

© 1999 BUEHLER LTD. Printed in U.S.A. .3M0799 FN01124

BUEHLER ANALYST®  
SECTION

7



**BUEHLER**

BUEHLER LTD. – Worldwide Headquarters  
41 Waukegan Road • P.O. Box 1  
Lake Bluff, Illinois 60044-1699 USA  
Tel: 847/295-6500 • Fax: 847/295-7979  
Sales: 1/800/BUEHLER • 1/800/283-4537  
Web Site: <http://www.buehlerltd.com>

WIRTZ-BUEHLER GMBH  
In der Steele 2 • 40599 Düsseldorf  
Postfach 16 03 55 • 40566 Düsseldorf  
Telefon: (+49) 0211/974100 • Telefax: (+49) 0211/974/1079

KRAUTKRAMER FRANCE – BUEHLER Division  
68, Chemin des Ormeaux  
69760 Limonest  
Téléphone: (+33) 04/72/17/92/50 • Télécopie: (+33) 04/78/47/56/98

BUEHLER KRAUTKRAMER  
Milburn Hill Road • University of Warwick Science Park  
Coventry CV4 7HS United Kingdom  
Tel: (+44) (0) 24 7669 2242 • Fax: (+44) (0) 24 7669 3032

