

**AMINE EQUIVALENT OF PREPOLYMER OF FLEXIBLE POLYURETHANE FOAM****Application**

This is a test for determining the amine equivalent (NCO) of prepolymer of flexible polyurethane foam.

**Apparatus Required****Automatic Burette with Desiccant Tubes**

100 mL. Catalog #BG 7540 or equivalent.

Source: Gardner Laboratory  
Bethesda, Maryland

**Pipettes**

(1) 20 mL

(1) 25 mL

**Analytical Balance**

Accurate to 1.0 mg.

**Erlenmeyer Flask**

500 mL, glass stoppered

**Steam Bath****Glass Stirring Rod**

Graduates - Cylindrical

(1) 1000 cc

(1) 500 CC

**Hypodermic Syringe**

10 mL

**Hood - Fume**

| Date       | Action  | Revisions                                  |
|------------|---------|--------------------------------------------|
|            |         |                                            |
| 2001 01 30 | Revised | Editorial – no technical change A. Cockman |
| 1992 04 30 |         |                                            |

Printed copies are uncontrolled

Page 1 of 3

Copyright © 2001, Ford Global Technologies, Inc.

**Chemicals Required**

Dibutyl Amine (Reagent Grade, Redistilled 2N)  
Toluene, Dry (Reagent Grade)  
Brom Cresol Green - Water Soluble  
Hydrochloric Acid .5 N - standardized by accepted method to +/- .001 N.  
Distilled Water  
Isopropyl Alcohol - Anhydrous (Reagent Grade)

**Preparation of Reagents**

**Dibutyl-Amine (2 Normal)**

Caution: Handle in fume hood.

Add by graduate 340 cc of dibutyl amine to the 1000 cc graduate. Dilute to 1000 cc with the dry toluene. Mix well and store in a brown bottle, away from any light.

**Note:** This quantity is sufficient for 30 - 40 tests.

**Indicator**

.1 gram brom cresol green, indicator grade. Dissolve in distilled water and dilute to 100 mL with distilled water.

**Conditioning and Test Conditions**

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

**Procedure**

Weigh the sample to be tested according to chart.

**Anticipated Amine Equivalent**

0 – 100  
100 – 250  
250 – 500  
500

**Sample SizeTolerance**

1 - 2 grams +/- 5 mg  
2 - 3 grams +/- 5 mg  
3 - 5 grams +/- 5 mg  
5 - 7 grams +/- 50 mg