

# Balanced Beam Scrape Adhesion and Mar Tester

Used to perform scrape adhesion and mar resistance (scratch hardness) tests of coatings and surfaces of various materials.

- For differentiating the degree of adhesion of coatings to substrates
- Provides relative ratings for a series of coated panels

This instrument consists of a pivoted beam with a 45° stylus holder, weight post and holder for supporting the total test load mounted on one end. On the other end of the beam is a counterweight. A cam is rotated to lower and raise the stylus and a sample bed mounted on ball bearings is used to move the test panel against the stationary stylus.

## Scrape Adhesion Test

The stylus used for scrape adhesion is a 1.6 mm (0.0625 inch) drill rod, bent to a 180° loop with 6.5 mm (0.256 inch) OD, hardened, buffed and chrome plated. Supplied with the tester is a set of twelve slotted weights with storage rack. In the adhesion test, weights are applied in 0.5 kg increments to a maximum of 10 kg.



## Mar Resistance Test

By moving a free edge of the test film against the needle under a variable load expressed in grams, mar-resistance is determined as the minimum load in grams required to cut through the film to the substrate. In the mar (scratch resistance) test, weights can be applied in increments from 10 grams to a maximum of 12 kg.

### Standards

<b>ASTM</b>	D 2197, D 2248, D 2454, D 5178
<b>FTMS</b>	141a, Method 6303.1
<b>General Electric</b>	F50TF7-S1
<b>Company Spec.</b>	
<b>Military Spec.</b>	MIL-P-7788H

### Ordering Information

Cat. No.	Description
<b>5780</b>	Balanced Beam Adhesion/Mar Tester

#### Comes complete with:

Tester  
 Loop stylus and needle stylus;  
 Weight post and holder  
 Weight rack and set of 12 weights:  
 1 x 10gm, 2 x 20gm; 1 x 50gm; 1 x 100gm; 2 x 200gm;  
 1 x 500gm; 1 x 1000gm; 2 x 2000gm; 1 x 5000gm;  
 Operating instructions

### Technical Specifications

	Dimensions	Net Weight	Shipping Weight
	203 x 610 x 381 mm (8 x 24 x 15 in)	23.1 kg (51 lbs)	25.9 kg (57 lbs)

### Ordering Information

Cat. No.	Description
<b>5781</b>	Loop Stylus
<b>5782</b>	Needle Stylus
<b>5783</b>	Rod Stylus
<b>5784</b>	Ball Point 1/8 in
<b>5785</b>	Ball Point 1/16 in
<b>5786</b>	Spit stylus
<b>1611</b>	Hoffman Scratch Tool
<b>5787</b>	Stylus Holder
<b>6977</b>	Weight Set
<b>6972</b>	Weight 1000 gm
<b>6974</b>	Weight 2000 gm
<b>6976</b>	Weight 5000 gm

### Accessories

Replacement; U shaped stylus
Replacement needle stylus: 0.15 mm (0.006 inch) diameter
Tungsten steel, 1.6 mm (0.064 inch) diameter
3.2 mm (1/8 inch) ball
1.6 mm (1/16 inch) ball
Larger diameter needle stylus, 60° point, 1.9 mm (0.077 inch) diameter
To perform the Hoffman scratch test
Replacement Cylindrical steel rod
Replacement; 1 x 10 gm; 2 x 20 gm; 1 x 50 gm; 1 x 100 gm; 2 x 200 gm; 1 x 500 gm
Replacement; 1 x 1000 gm
Replacement; 1 x 2000 gm
Replacement; 1 x 5000 gm