

Technical White Paper

CASE PROTECTION & MATERIALS ANALYSIS

June 2007



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TABLE OF CONTENTS

Need for Notebook Protection	1
Test Introduction	2
Shoulder Strap Strength Test	3
Abrasion Test	4
Drop Test	5
Case Weight Test	6
Summary	7





NEED FOR NOTEBOOK PROTECTION

IDC forecasts that notebook shipments will overtake desktop shipments in 2007. This continuing desire for greater mobility drives companies and PC users to purchase notebooks as their primary PC.



U.S. Desktop vs. Notebook Revenues as a Percentage

Data source: IDC, December 2006

Over 210 million business professionals who travel each year¹ are familiar with the scenario of traveling to and from the airport, where notebooks and carrying cases are often subject to drops and being crammed into tight spaces such as overhead compartments. And with 80% of all critical data being held on employee PCs¹ companies are spending \$10.2 billion in disaster recovery of critical business data due to accidental PC damage during transit.²

In understanding the parallelism between the rise of notebook shipments and the increasing demand for better notebook protection, Targus exceeds the needs of notebook users by offering cases which are both reliable and protective against daily wear and tear.



¹IDC, 2005 ²MegaNet, 2005



TEST INTRODUCTION

To further support that the Targus Corporate Traveler is one of the lightest and most protective cases in the market, Targus enlisted two reputable and independent testing firms—Lansmont and MGA Research—to conduct various comprehensive tests:

- 1. Shoulder strap strength
- 2. Materials abrasion
- 3. Drop test
- 4. Case weight

Each test compared the Targus Corporate Traveler case to its competition:

MANUFACTURER	MODEL
Brenthaven®	Triload
CODi®	Ambassador
CODi	Diplomat
Targus®	Corporate Traveler



SHOULDER STRAP STRENGTH TEST

Every day use can affect the strength of shoulder straps over time. All Targus Corporate Traveler cases feature the Equalizer[®] II shoulder strap, which is ergonomically designed for comfort and outperforms its competition in durability. Results of the Shoulder Strap Strength Test reveal the Targus Equalizer II strap is more than 1.5 times stronger than its nearest competitor.

Methodology:

Each end of the shoulder strap was affixed to weights. Starting at 22 pounds, the straps were pulled 250 times; after which, another 22 pounds were added. For each weight increase of 22 pounds, the strap was pulled another 250 times. This process was repeated until the point of failure. **The higher the number, the stronger the shoulder strap**.



Competitor hook damage



Hook broke at 132 pounds

Competitor strap damage



Strap material tore at 110 pounds





ABRASION TEST

The American Society for Testing and Materials (ASTM Test # D3884 Taber Abrasion) test is important in determining the durability of material, and its ability to withstand daily wear and tear. Targus Corporate Traveler cases are constructed of durable 1680D ballistic nylon, which is both lightweight and strong. The abrasion test concluded that Targus' Corporate Traveler cases outperformed the competition.

Methodology:

Abrasion testing was done by rotating a nylon test sample, on a vertical axis, against two revolving abrading wheels. 500g weights were added to each wheel arm for more intense abrasion. The abrading wheels revolved in 1,000 cycle intervals, scraping against the material, until the material showed wear. **The higher the cycle number, the better the resistance to abrasion.**



Nylon test sample showing signs of wear and tear





Test conducted at MGA Research Corporation



DROP TEST

Protecting the notebook and its contents are the most important elements in the performance of a notebook case. Every day, notebooks are subject to shock and vibration, which could lead to substantial damage to the hard drive and screen. The best cases prevent potential damage by reducing impact to the notebook. A drop test measures the G force (a force resulting from acceleration such as gravity) that is experienced when a computer is dropped.

Methodology:

An acrylic 5.2 pound notebook mock-up was instrumented with a tri-axial accelerometer and was inserted into each of the sample cases. Each sample case was then subjected to free-fall drops on each side (bottom, left, right, front, back) at a 36-inch height. **The** *lower the Gs, the less impact or damage to the notebook.*



Data Represents Drop Result Averages





CASE WEIGHT TEST

Targus' patented SafePORT[®] Air Cushion System provides up to 2.4 times the protection of foam cushioning without adding unnecessary weight. Compared to other case companies, Corporate Traveler cases provide more than twice the notebook protection while still weighing about the same or less than other brands.







SUMMARY

As the #1 leader across nearly all test categories, Targus' Corporate Traveler cases surpass the competition in strap strength, resistance to abrasion, and shock resistance, making it the best overall business traveler notebook case.

Manufacturer	Test Placement					
	Shoulder Strap Strength	Abrasion	Drop Test	Case Weight	Overall Rating	
Targus Corporate Traveler	#1	#1	#1	#2	#1	
Brenthaven Triload	#2	#2	#2	#3	#2	
CODi Ambassador	#3	#3	#3	#4	#4	
CODi Diplomat	#3	#3	#4	#1	#3	

