Lab Test Results

Cheap vs. Expensive Bike Helmets

Testing Procedure - CPSC

- Helmet #1: High level impact
  - CPSC standard velocity
    - Flat anvil (x2)
    - Hemi anvil (x2)
  - Helmet #2: Low level impact
  - 50% of CPSC standard velocity
    - Flat anvil (x2)
    - Hemi anvil (x2)

Tested on J headform

Testing Procedure - NOCSAE

- Helmet #3
  - High level impacts (CPSC)
    - Flat anvil (x1)
    - Hemi anvil (x1)
  - Low level impacts (50% CPSC)
    - Flat anvil (x1)
    - Hemi anvil (x1)

    Tested on medium NOCSAE headform

Results – High level impacts flat anvil

- Monorail

helmet	peak acceleration	Severity Index
A	174	1186
B	196	1399
C	189	1286
D	174	1192
E	189	1350
F	194	1352

- NOCSAE

helmet	Peak Acceleration	Severity Index
A	134	642
B	147	873
C	177	974
D	147	840
E	174	885
F	176	1103

Results – low level impacts flat anvil

- Monorail

helmet	peak acceleration	Severity Index
A	83	220
B	97	263
C	88	224
D	80	196
E	84	168
F	93	231

- NOCSAE

helmet	Peak Acceleration	Severity Index
A	78	166
B	75	140
C	77	159
D	90	185
E	83	170
F	78	152

Results – high level impacts hemi anvil

- Monorail

helmet	peak acceleration	Severity Index
A	95	344
B	97	376
C	160	578
D	100	252
E	83	297
F	96	346

- NOCSAE

helmet	Peak Acceleration	Severity Index
A	87	340
B	87	234
C	105	457
D	75	260
E	99	418
F	83	343

Results – low level impacts hemi anvil

- Monorail

helmet	peak acceleration	Severity Index
A	49	74
B	51	71
C	47	73
D	43	54
E	42	55
F	51	72

- NOCSAE

helmet	Peak Acceleration	Severity Index
A	47	73
B	47	85
C	43	54
D	55	61
E	48	86
F	47	77