

Film Code	Date	Collected by	Glove used	Subject
1a-d	27/03/2013	M	Black XL Everlast	J
2a-d	27/03/2013	M	Black XL Everlast	J
3a-d	27/03/2013	M	Black XL Everlast	J
4a-d	27/03/2013	M	Black XL Everlast	J
5a-d	27/03/2013	M	Black XL Everlast	J
6a-d	27/03/2013	M	Black XL Everlast	J
7a-d	27/03/2013	M	Black XL Everlast	J
8a-d	27/03/2013	M	Black XL Everlast	J
1a-d	02/07/2013	M	Black XL Everlast	J
2a-d	02/07/2013	M	Black XL Everlast	J
3a-d	02/07/2013	M	Black XL Everlast	J
4a-d	02/07/2013	M	Black XL Everlast	J
5a-d	02/07/2013	M	Black XL Everlast	J
6a-d	02/07/2013	M	Black XL Everlast	J
7a-d	02/07/2013	M	Black XL Everlast	J
8a-d	02/07/2013	M	Black XL Everlast	J
1a-d	11/12/2013	A	Black XL Everlast	J
2a-d	11/12/2013	A	Black XL Everlast	J
3a-d	11/12/2013	A	Black XL Everlast	J
4a-d	11/12/2013	A	Black XL Everlast	J
5a-d	11/12/2013	A	Black XL Everlast	J
6a-d	11/12/2013	A	Black XL Everlast	J
7a-d	11/12/2013	A	Black XL Everlast	J
8a-d	11/12/2013	A	Black XL Everlast	J
1a-d	20/5/14	A	Black XL Everlast	J
2a-d	20/5/14	A	Black XL Everlast	J
3a-d	20/5/14	A	Black XL Everlast	J
4a-d	20/5/14	A	Black XL Everlast	J
5a-d	20/5/14	A	Black XL Everlast	J
6a-d	20/5/14	A	Black XL Everlast	J
7a-d	20/5/14	A	Black XL Everlast	J
8a-d	20/5/14	A	Black XL Everlast	J
1a-d	27/03/2013	J	Black XL Everlast	M
2a-d	27/03/2013	J	Black XL Everlast	M
3a-d	27/03/2013	J	Black XL Everlast	M
7a-d	27/03/2013	J	Black XL Everlast	M
8a-d	27/03/2013	J	Black XL Everlast	M
1a-d	02/07/2013	J	Black XL Everlast	M
2a-d	02/07/2013	J	Black XL Everlast	M
3a-d	02/07/2013	J	Black XL Everlast	M
4a-d	02/07/2013	J	Black XL Everlast	M
5a-d	02/07/2013	J	Black XL Everlast	M
6a-d	02/07/2013	J	Black XL Everlast	M
7a-d	02/07/2013	J	Black XL Everlast	M
8a-d	02/07/2013	J	Black XL Everlast	M
1a-d	20/5/14	J	Black XL Everlast	M
2a-d	20/5/14	J	Black XL Everlast	M
3a-d	20/5/14	J	Black XL Everlast	M
1a-d	02/07/2013	A	Black XL Everlast	M
2a-d	02/07/2013	A	Black XL Everlast	M

3a-d	02/07/2013	A	Black XL Everlast	M
4a-d	02/07/2013	A	Black XL Everlast	M
5a-d	02/07/2013	A	Black XL Everlast	M
6a-d	02/07/2013	A	Black XL Everlast	M
7a-d	02/07/2013	A	Black XL Everlast	M
8a-d	02/07/2013	A	Black XL Everlast	M
1a-d	20/5/14	A	Black XL Everlast	M
2a-d	20/5/14	A	Black XL Everlast	M
3a-d	20/5/14	A	Black XL Everlast	M
4a-d	20/5/14	A	Black XL Everlast	M
5a-d	20/5/14	A	Black XL Everlast	M
6a-d	20/5/14	A	Black XL Everlast	M
7a-d	20/5/14	A	Black XL Everlast	M
8a-d	20/5/14	A	Black XL Everlast	M
6a-d	05/02/2013	A	Black Everlast XL	W
7a-d	05/02/2013	A	Black Everlast XL	W
1a-d	13/02/2013	A	Black Everlast XL	W
2a-d	13/02/2013	A	Black Everlast XL	W
3a-d	13/02/2013	A	Black Everlast XL	W
4a-d	13/02/2013	A	Black Everlast XL	W
5a-d	13/02/2013	A	Black Everlast XL	W
1a-d	20/5/14	A	Black Everlast XL	W
2a-d	20/5/14	A	Black Everlast XL	W
3a-d	20/5/14	A	Black Everlast XL	W
4a-d	20/5/14	A	Black Everlast XL	W
5a-d	20/5/14	A	Black Everlast XL	W
6a-d	20/5/14	A	Black Everlast XL	W
7a-d	20/5/14	A	Black Everlast XL	W
8a-d	20/5/14	A	Black Everlast XL	W
9a-d	20/5/14	A	Black Everlast XL	W
1a-d	07/01/2014	A	Black XL Everlast	W
3a-d	07/01/2014	A	Black XL Everlast	W
4a-d	07/01/2014	A	Black XL Everlast	W
5a-d	07/01/2014	A	Black XL Everlast	W
6a-d	07/01/2014	A	Black XL Everlast	W
7a-d	07/01/2014	A	Black XL Everlast	W
1a-d	20/5/14	A	Black XL Everlast	W
2a-d	20/5/14	A	Black XL Everlast	W
3a-d	20/5/14	A	Black XL Everlast	W
4a-d	20/5/14	A	Black XL Everlast	W
5a-d	20/5/14	A	Black XL Everlast	W
6a-d	20/5/14	A	Black XL Everlast	W
7a-d	20/5/14	A	Black XL Everlast	W
8a-d	20/5/14	A	Black XL Everlast	W
9a-d	20/5/14	A	Black XL Everlast	W
10a-d	20/5/14	A	Black XL Everlast	W

Sex	Wrapping Style	Hand tested	Knuckle a	Knuckle b	Knuckle c
m	4m black wrap only	r	235.0	220.0	106.0
m	4m black wrap only	r	216.0	173.0	102.0
m	4m black wrap only	r	109.0	199.0	137.0
m	4m black wrap only	r	161.0	173.0	122.0
m	4m black wrap only	r	163.0	173.0	104.0
m	4m black wrap only	r	180.0	211.0	87.0
m	4m black wrap only	r	180.0	182.0	39.0
m	4m black wrap only	r	173.0	181.0	99.0
m	4m black wrap only	r	167.0	176.0	24.0
m	4m black wrap only	r	180.0	180.0	68.0
m	4m black wrap only	r	163.0	141.0	75.0
m	4m black wrap only	r	132.0	126.0	58.0
m	4m black wrap only	r	154.0	140.0	30.0
m	4m black wrap only	r	195.0	191.0	57.0
m	4m black wrap only	r	199.0	195.0	70.0
m	4m black wrap only	r	201.0	201.0	69.0
m	4m black wrap only	r	108.0	127.0	73.0
m	4m black wrap only	r	121.0	143.0	31.0
m	4m black wrap only	r	149.0	100.0	96.0
m	4m black wrap only	r	153.0	128.0	104.0
m	4m black wrap only	r	120.0	174.0	31.0
m	4m black wrap only	r	114.0	127.0	91.0
m	4m black wrap only	r	136.0	142.0	56.0
m	4m black wrap only	r	154.0	178.0	52.0
m	4m black wrap only	r	126.0	117.0	77.0
m	4m black wrap only	r	129.0	74.0	41.0
m	4m black wrap only	r	121.0	28.0	47.0
m	4m black wrap only	r	144.0	82.0	56.0
m	4m black wrap only	r	99.0	91.0	17.0
m	4m black wrap only	r	96.0	92.0	24.0
m	4m black wrap only	r	110.0	75.0	43.0
m	4m black wrap only	r	110.0	87.0	19.0
m	4m black wrap only	r	67.0	150.0	83.0
m	4m black wrap only	r	109.0	183.0	80.0
m	4m black wrap only	r	43.0	154.0	25.0
m	4m black wrap only	r	74.0	151.0	83.0
m	4m black wrap only	r	75.0	181.0	86.0
m	4m black wrap only	r	98.0	217.0	124.0
m	4m black wrap only	r	112.0	177.0	55.0
m	4m black wrap only	r	89.0	187.0	58.0
m	4m black wrap only	r	87.0	153.0	145.0
m	4m black wrap only	r	166.0	207.0	61.0
m	4m black wrap only	r	139.0	239.0	101.0
m	4m black wrap only	r	72.0	237.0	74.0
m	4m black wrap only	r	89.0	179.0	153.0
m	4m black wrap only	r	56.0	175.0	91.0
m	4m black wrap only	r	69.0	149.0	49.0
m	4m black wrap only	r	85.0	192.0	12.0
m	4m black wrap only	r	28.0	79.0	59.0
m	4m black wrap only	r	11.0	50.0	32.0

m	4m black wrap only	r	23.0	86.0	23.0
m	4m black wrap only	r	49.0	85.0	50.0
m	4m black wrap only	r	147.0	127.0	72.0
m	4m black wrap only	r	90.0	148.0	33.0
m	4m black wrap only	r	64.0	124.0	38.0
m	4m black wrap only	r	130.0	133.0	65.0
m	4m black wrap only	r	46.0	156.0	32.0
m	4m black wrap only	r	169.0	168.0	66.0
m	4m black wrap only	r	52.0	168.0	59.0
m	4m black wrap only	r	66.0	163.0	44.0
m	4m black wrap only	r	101.0	211.0	72.0
m	4m black wrap only	r	99.0	208.0	2.0
m	4m black wrap only	r	87.0	170.0	60.0
m	4m black wrap only	r	68.0	143.0	66.0
m	4m black wrap only	r	82.0	166.0	11.0
m	4m black wrap only	r	85.0	109.0	34.0
m	4m black wrap only	r	110.0	139.0	10.0
m	4m black wrap only	r	75.0	90.0	101.0
m	4m black wrap only	r	87.0	143.0	27.0
m	4m black wrap only	r	51.0	158.0	5.0
m	4m black wrap only	r	67.0	152.0	9.0
m	4m black wrap only	r	108.0	41.0	17.0
m	4m black wrap only	r	30.0	68.0	6.0
m	4m black wrap only	r	25.0	49.0	11.0
m	4m black wrap only	r	29.0	62.0	9.0
m	4m black wrap only	r	32.0	82.0	2.0
m	4m black wrap only	r	71.0	18.0	2.0
m	4m black wrap only	r	7.0	58.0	19.0
m	4m black wrap only	r	69.0	74.0	9.0
m	4m black wrap only	r	99.0	114.0	14.0
m	4m black wrap only	r	79.0	93.0	27.0
m	4m black wrap only	r	114.0	159.0	18.0
m	4m black wrap only	r	89.0	156.0	21.0
m	4m black wrap only	r	138.0	70.0	11.0
m	4m black wrap only	r	122.0	89.0	40.0
m	4m black wrap only	r	132.0	100.0	12.0
m	4m black wrap only	r	119.0	39.0	5.0
m	4m black wrap only	r	42.0	39.0	4.0
m	4m black wrap only	r	78.0	50.0	15.0
m	4m black wrap only	r	36.0	65.0	8.0
m	4m black wrap only	r	28.0	56.0	5.0
m	4m black wrap only	r	15.0	24.0	1.0
m	4m black wrap only	r	43.0	27.0	2.0
m	4m black wrap only	r	94.0	27.0	9.0
m	4m black wrap only	r	56.0	47.0	1.0
m	4m black wrap only	r	8.0	25.0	9.0

Knuckle d	Punch Power	Total Load (N)	Knuckle a % of TL	Knuckle b % of TL
179.0	116.7	740.0	31.8%	29.7%
182.0	120.8	673.0	32.1%	25.7%
156.0	106.7	601.0	18.1%	33.1%
156.0	108.6	612.0	26.3%	28.3%
110.0	112.7	550.0	29.6%	31.5%
179.0	110.7	657.0	27.4%	32.1%
141.0	114.7	542.0	33.2%	33.6%
141.0	115	594.0	29.1%	30.5%
129.0	126.8	496.0	33.7%	35.5%
112.0	132.8	540.0	33.3%	33.3%
136.0	120.8	515.0	31.7%	27.4%
114.0	128.8	430.0	30.7%	29.3%
83.0	100.7	407.0	37.8%	34.4%
132.0	126.8	575.0	33.9%	33.2%
132.0	100.7	596.0	33.4%	32.7%
131.0	112.7	602.0	33.4%	33.4%
121.0	94.6	429.0	25.2%	29.6%
100.0	112.7	395.0	30.6%	36.2%
119.0	116.7	464.0	32.1%	21.6%
68.0	112.7	453.0	33.8%	28.3%
132.0	110.7	457.0	26.3%	38.1%
88.0	90.6	420.0	27.1%	30.2%
69.0	96.6	403.0	33.7%	35.2%
109.0	106.7	493.0	31.2%	36.1%
19.0	128.8	339.0	37.2%	34.5%
22.0	114.7	266.0	48.5%	27.8%
88.0	112.7	284.0	42.6%	9.9%
76.0	112.7	358.0	40.2%	22.9%
52.0	102.6	259.0	38.2%	35.1%
68.0	116.7	280.0	34.3%	32.9%
67.0	128.8	295.0	37.3%	25.4%
107.0	143.2	323.0	34.1%	26.9%
78.0	78.4	378.0	17.7%	39.7%
142.0	82.5	514.0	21.2%	35.6%
119.0	84.6	341.0	12.6%	45.2%
45.0	86.5	353.0	21.0%	42.8%
61.0	88.5	403.0	18.6%	44.9%
108.0	78.4	547.0	17.9%	39.7%
29.0	86.5	373.0	30.0%	47.5%
62.0	82.5	396.0	22.5%	47.2%
87.0	86.5	472.0	18.4%	32.4%
85.0	96.6	519.0	32.0%	39.9%
104.0	88.5	583.0	23.8%	41.0%
82.0	76.5	465.0	15.5%	51.0%
75.0	90.6	496.0	17.9%	36.1%
61.0	96.6	383.0	14.6%	45.7%
66.0	84.6	333.0	20.7%	44.7%
56.0	92.6	345.0	24.6%	55.7%
10.0	58.3	176.0	15.9%	44.9%
28.0	74.5	121.0	9.1%	41.3%

23.0	84.6	155.0	14.8%	55.5%
36.0	80.5	220.0	22.3%	38.6%
37.0	86.5	383.0	38.4%	33.2%
41.0	106.7	312.0	28.8%	47.4%
29.0	88.5	255.0	25.1%	48.6%
122.0	94.6	450.0	28.9%	29.6%
32.0	72.4	266.0	17.3%	58.6%
105.0	74.5	508.0	33.3%	33.1%
78.0	80.5	357.0	14.6%	47.1%
45.0	78.4	318.0	20.8%	51.3%
59.0	74.5	443.0	22.8%	47.6%
64.0	70.5	373.0	26.5%	55.8%
59.0	76.5	376.0	23.1%	45.2%
91.0	66.4	368.0	18.5%	38.9%
116.0	138.8	375.0	21.9%	44.3%
116.0	169.0	344.0	24.7%	31.7%
108.0	136.9	367.0	30.0%	37.9%
15.0	140.9	281.0	26.7%	32.0%
92.0	165	349.0	24.9%	41.0%
96.0	122.8	310.0	16.5%	51.0%
144.0	152.9	372.0	18.0%	40.9%
25.0	169	191.0	56.5%	21.5%
31.0	237.9	135.0	22.2%	50.4%
12.0	210.2	97.0	25.8%	50.5%
28.0	154.9	128.0	22.7%	48.4%
48.0	175.1	164.0	19.5%	50.0%
13.0	201.1	104.0	68.3%	17.3%
10.0	180.7	94.0	7.4%	61.7%
28.0	201.1	180.0	38.3%	41.1%
28.0	183.1	255.0	38.8%	44.7%
28.0	167.1	227.0	34.8%	41.0%
30.0	222	321.0	35.5%	49.5%
131.0	207.3	397.0	22.4%	39.3%
78.0	259	297.0	46.5%	23.6%
77.0	179.1	328.0	37.2%	27.1%
70.0	231.4	314.0	42.0%	31.8%
18.0	183.4	181.0	65.7%	21.5%
40.0	177.1	125.0	33.6%	31.2%
9.0	168.9	152.0	51.3%	32.9%
7.0	157.0	116.0	31.0%	56.0%
11.0	190.6	100.0	28.0%	56.0%
24.0	140.9	64.0	23.4%	37.5%
10.0	161.0	82.0	52.4%	32.9%
18.0	187.2	148.0	63.5%	18.2%
20.0	189.7	124.0	45.2%	37.9%
12.0	200.5	54.0	14.8%	46.3%

Knuckle c % of TL	Knuckle d % of TL
14.3%	24.2%
15.2%	27.0%
22.8%	26.0%
19.9%	25.5%
18.9%	20.0%
13.2%	27.2%
7.2%	26.0%
16.7%	23.7%
4.8%	26.0%
12.6%	20.7%
14.6%	26.4%
13.5%	26.5%
7.4%	20.4%
9.9%	23.0%
11.7%	22.1%
11.5%	21.8%
17.0%	28.2%
7.8%	25.3%
20.7%	25.6%
23.0%	15.0%
6.8%	28.9%
21.7%	21.0%
13.9%	17.1%
10.5%	22.1%
22.7%	5.6%
15.4%	8.3%
16.5%	31.0%
15.6%	21.2%
6.6%	20.1%
8.6%	24.3%
14.6%	22.7%
5.9%	33.1%
22.0%	20.6%
15.6%	27.6%
7.3%	34.9%
23.5%	12.7%
21.3%	15.1%
22.7%	19.7%
14.7%	7.8%
14.6%	15.7%
30.7%	18.4%
11.8%	16.4%
17.3%	17.8%
15.9%	17.6%
30.8%	15.1%
23.8%	15.9%
14.7%	19.8%
3.5%	16.2%
33.5%	5.7%
26.4%	23.1%

14.8%	14.8%
22.7%	16.4%
18.8%	9.7%
10.6%	13.1%
14.9%	11.4%
14.4%	27.1%
12.0%	12.0%
13.0%	20.7%
16.5%	21.8%
13.8%	14.2%
16.3%	13.3%
0.5%	17.2%
16.0%	15.7%
17.9%	24.7%
2.9%	30.9%
9.9%	33.7%
2.7%	29.4%
35.9%	5.3%
7.7%	26.4%
1.6%	31.0%
2.4%	38.7%
8.9%	13.1%
4.4%	23.0%
11.3%	12.4%
7.0%	21.9%
1.2%	29.3%
1.9%	12.5%
20.2%	10.6%
5.0%	15.6%
5.5%	11.0%
11.9%	12.3%
5.6%	9.3%
5.3%	33.0%
3.7%	26.3%
12.2%	23.5%
3.8%	22.3%
2.8%	9.9%
3.2%	32.0%
9.9%	5.9%
6.9%	6.0%
5.0%	11.0%
1.6%	37.5%
2.4%	12.2%
6.1%	12.2%
0.8%	16.1%
16.7%	22.2%