

## Abuse Test Parameters for Physical and Mechanical Test of Major Toy Safety Standards

Tests	Age (Months)	Australia/New Zealand/ China AS/NZS ISO 8124-1/ GB6675.2	Canada Toys Regulations	Europe EN71 Part 1	Japan ST 2016 Part 1	USA CPSC / ASTM F963
Drop	0 to ≤ 18 > 18 to ≤ 36 > 36 to ≤ 168	138 ± 5 cm, 10 drops 93 ± 5 cm, 4 drops 93 ± 5 cm, 4 drops (≥ 36 to ≤ 96 months) random orientation	136.7 cm ± 0.5 cm, 136.7 cm ± 0.5 cm (< 3 yrs) 90.9 cm ± 0.5 cm (≥ 3 yrs) 4 drops in most onerous angle	850 ± 50 mm, 5 drops (≤ 168 months) most onerous angle	138 ± 5 cm, 10 drops (< 18 months) 93 ± 50 mm, 4 drops (≥ 18 to < 96 months)	4.5 ft ± 0.5 in (137 cm) 10 drops 3 ft ± 0.5 in (91 cm) 4 drops 3 ft ± 0.5 in (91 cm) 4 drops (> 36 to ≤ 96 months) random orientation
Compression	0 to ≤ 18 > 18 to ≤ 36 > 36 to ≤ 168	114N ± 2.0N 114N ± 2.0N 136N ± 2.0N (up to 96 months)	10 lbs (44.5 N)	110 ± 5 N (24.7 lbs) 110 ± 5 N (24.7 lbs) 110 ± 5 N (24.7 lbs)	110 ± 5 N through a 30 ± 1.5 mm disc (< 36 months)	20 ± 0.5 lbs (89.0 ± 2 N) 25 ± 0.5 lbs (111.3 ± 2 N) 30 ± 0.5 lbs (133.5 ± 2 N) (> 36 to ≤ 96 months)
Torque	0 to ≤ 18 > 18 to ≤ 36 > 36 to ≤ 168	0.45N.m ± 0.02 N.m 0.45N.m ± 0.02 N.m 0.45N.m ± 0.02 N.m (up to 96 months) until torque is reached or 180° rotation	For rattle: 8.85 in-pound	0.34 Nm (3.5 kg-cm) or a rotation of 180°	0.45 Nm or a rotation of 180° (< 36 months)	2 ± 0.2 in-lbs (2.3 ± 0.2 kg-cm) 3 ± 0.2 in-lbs (3.5 ± 0.2 kg-cm) 4 ± 0.2 in-lbs (4.6 ± 0.2 kg-cm) (> 36 to ≤ 96 mths)
Tension	0 to ≤ 18 > 18 to ≤ 36 > 36 to ≤ 168	70N ± 2N 70N ± 2N 70N ± 2N (up to 96 months)	For eye/nose, 32 mm (1¼ inches) or less in its greatest dimension: 20 lbs (9 kg) For rattle: 50 N (11.23 lbs) Others: 10 lbs (44.5 N)	≤ 6 mm: 50 ± 2 N (11.2 lbs) > 6 mm: 90 ± 2 N (20.2 lbs) Seams, Pompom: 70 ± 2 N Protective: 60 ± 2 N Cardboard: 25 ± 2 N	70 ± 2 N (< 36 months)	10 ± 0.5 lbs (44.5 ± 2 N) 15 ± 0.5 lbs (66.8 ± 2 N) 15 ± 0.5 lbs (66.8 ± 2 N) (> 36 to ≤ 96 months)
Flexure*	0 to ≤ 18 > 18 to ≤ 36 > 36 to ≤ 168	70N ± 2N 70N ± 2N 70N ± 2N (up to 96 months)	-	70 ± 2 N (15.7 lbs) (≤ 168 months)	70 ± 2 N	10 ± 0.5 lbs (44.5 ± 2 N) 15 ± 0.5 lbs (66.8 ± 2 N) 15 ± 0.5 lbs (66.8 ± 2 N) (> 36 to ≤ 96 months)
Bite	0 to ≤ 18 > 18 to ≤ 36 > 36 to ≤ 168	-	-	-	11 kg (< 18 months) For toy with external dimension ≤ 32 mm and depth ≥ 6 mm.	For CPSC only 25 lbs (11.35 kgf) 50 lbs (22.74kgf) 100 lbs (45.5 kgf) (> 36 to ≤ 96 months)

\* 1 cycle per 2 sec, with a rest of 60 sec after each 10 cycles, for 30 cycles; Two 120° arc bends constitute one cycle.