

Consumer Product Safety Commission

§ 1513.1

TABLE 1 TO PART 1512—MINIMUM CANDLEPOWER PER INCIDENT FOOT-CANDLE FOR CLEAR REFLECTOR<sup>1</sup>

Observation angle	Front, rear, and side reflectors; entrance angle in degrees			Pedal reflectors; entrance angle in degrees		
	0	10 up/down	20 left/right	0	10 up/down	20 left/right
0.2	27.0	18.0	9.0	7.5	6.0	3.0
0.3				6.0	4.8	2.4
1.5	.28	.20	.12	.28	.20	.12

<sup>1</sup> Amber values shall be 5/8 × clear values. Red values shall be 1/4 clear values.

TABLE 2 TO PART 1512—MINIMUM CANDLEPOWER PER INCIDENT FOOT-CANDLE FOR CLEAR REFLECTOR<sup>1</sup>

Observation angle	Front, rear, and side reflectors; entrance angle in degrees		
	30 left/right	40 left/right	50 left/right
0.2	8.0	7.0	6.0
1.5	.12	.12	.12

<sup>1</sup> Amber values shall be 5/8 × clear values. Red values shall be 1/4 × clear values.

TABLE 3 TO PART 1512—MINIMUM ACCEPTABLE VALUES FOR THE QUANTITY A DEFINED IN THE RETROREFLECTIVE TIRE AND RIM TEST PROCEDURE

Observation angle (degrees)	Entrance angle (degrees)	Minimum acceptable value of A	
		Meters	Feet
0.2	−4	2.2	7.25
.2	20	1.9	6.27
.2	40	1.3	4.29
1.5	−4	.22	.73
1.5	20	.19	.63
1.5	40	.13	.43

[43 FR 60034, Dec. 22, 1978, as amended at 45 FR 82631, Dec. 16, 1980; 46 FR 3204, Jan. 14, 1981]

TABLE 4 TO PART 1512—RELATIVE ENERGY DISTRIBUTION OF SOURCES

Wave length (nanometers)	Relative energy
380	9.79
390	12.09
400	14.71
410	17.68
420	21.00
430	24.67
440	28.70
450	33.09
460	37.82
470	42.87
480	48.25

Wave length (nanometers)	Relative energy
490	53.91
500	59.86
510	66.06
520	72.50
530	79.13
540	85.95
550	92.91
560	100.00
570	107.18
580	114.44
590	121.73
600	129.04
610	136.34
620	143.62
630	150.83
640	157.98
650	165.03
660	171.96
670	178.77
680	185.43
690	191.93
700	198.26
710	204.41
720	210.36
730	216.12
740	221.66
750	227.00
760	232.11

PART 1513—REQUIREMENTS FOR BUNK BEDS

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APPENDIX TO PART 1513—FINDINGS UNDER THE FEDERAL HAZARDOUS SUBSTANCES ACT

AUTHORITY: 15 U.S.C. 1261(f)(1)(D), 1261(s), 1262(e)(1), 1262(f)–(i).

SOURCE: 64 FR 71907, Dec. 22, 1999, unless otherwise noted.

§ 1513.1 Scope, application, and effective date.

(a) *Scope, basis, and purpose.* This part 1513 prescribes requirements for bunk beds to reduce or eliminate the risk that children will die or be injured from being trapped between the upper

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bunk and the wall or in openings below guardrails or in other structures in the bed. Bunk beds meeting these requirements are exempted from 16 CFR 1500.18(a)(18).

(b) *Application and effective date.* This part applies to all bunk beds, except those manufactured only for institutional use, that are manufactured in the United States, or imported, on or after June 19, 2000. (Facilities intended for use by children under age 6 are not considered to be institutions.) Bunk beds, as described in this section, that are not intended for use by children are subject to the requirements in 16 CFR part 1213, and not to 16 CFR 1500.18(a)(18). However, the provisions of 16 CFR 1213 are substantively identical to the requirements in this part 1513.

### § 1513.2 Definitions.

As used in this part 1513:

*Bed.* See *Bunk bed*.

*Bed end structure* means an upright unit at the head and foot of the bed to which the side rails attach.

*Bunk bed* means a bed in which the underside of any foundation is over 30 inches (760 mm) from the floor.

*Foundation* means the base or support on which a mattress rests.

*Guardrail* means a rail or guard on a side of the upper bunk to prevent a sleeping occupant from falling or rolling out.

### § 1513.3 Requirements.

(a) *Guardrails.* (1) Any bunk bed shall provide at least two guardrails, at least one on each side of the bed, for each bed having the underside of its foundation more than 30 inches (760 mm) from the floor.

(2) One guardrail shall be continuous between each of the bed's end structures. "Continuous" means that any gap between the guardrail and end structure shall not exceed 0.22 inches (5.6 mm) (so as to not cause a finger entrapment hazard for a child).

(3) The other guardrail may terminate before reaching the bed's end structures, providing there is no more than 15 inches (380 mm) between either end of the guardrail and the nearest bed end structure.

(4) For bunk beds designed to have a ladder attached to one side of the bed, the continuous guardrail shall be on the other side of the bed.

(5) Guardrails shall be attached so that they cannot be removed without either intentionally releasing a fastening device or applying forces sequentially in different directions.

(6) The upper edge of the guardrails shall be no less than 5 inches (130 mm) above the top surface of the mattress when a mattress of the maximum thickness specified by the manufacturer's instructions is on the bed. This requirement does not prohibit a wall-side guardrail that terminates in a quarter-circle bend and attaches to the side rail of the upper bunk foundation.

(7) With no mattress on the bed, there shall be no openings in the structure between the lower edge of the uppermost member of the guardrail and the underside of the upper bunk's foundation that would permit passage of the wedge block shown in Figure 1 of this part when tested in accordance with the procedure at § 1513.4(a).

(b) *Bed end structures.* (1) The upper edge of the upper bunk end structures shall be at least 5 inches (130 mm) above the top surface of the mattress for at least 50 percent of the distance between the two posts at the head and foot of the upper bunk when a mattress and foundation of the maximum thickness specified by the manufacturer's instructions is on the bed.

(2) With no mattress on the bed, there shall be no openings in the rigid end structures above the foundation of the upper bunk that will permit the free passage of the wedge block shown in Figure 1 when tested in accordance with the procedure at § 1513.4(b).

(3) When tested in accordance with § 1513.4(c), there shall be no openings in the end structures between the underside of the foundation of the upper bunk and upper side of the foundation of the lower bunk that will permit the free passage of the wedge block shown in Figure 1, unless the openings are also large enough to permit the free passage of a 9-inch (230-mm) diameter rigid sphere.

(4) All portions of the boundary of any opening required by §§ 1513.4(c)(1) and (2) to be probed by the wedge block