

Application (and Removal) Torque

Application torque is the rotational force with which a closure is applied to a bottle or jar. Measured in pounds per inch, the rule of thumb for application torque measurement is approximately 50%(+/-) of the closure's diameter. For example, a 63mm closure should have an application torque of between 31 to 38 lb/in.

Cap Size (MM)	Plastic Container Application Torque	Glass Container Application Torque
15	7-9	6-9
18	8-10	7-10
20	10-12	8-12
22	11-14	9-14
24	12-15	10-15
28	13-17	11-17
33	16-20	13-20
38	19-23	15-23
43	21-26	17-26
45	23-28	18-28
48	24-29	19-29
53	27-32	21-32
58	29-35	23-35
63	31-38	25-38
70	35-42	28-42
83	41-49	34-49
89	44-53	36-53
100	48-60	40-60
110	55-65	45-65
120	60-72	48-72

Removal torque is the maximum force required to remove or unscrew a closure. Generally, removal torque should be 40 to 60% of the application torque 24 hours after the closure has been applied. From the example above, the 63mm closure (application torque between 31 to 38 lb/in) would have a removal torque of 13 to 23 lb/in.