

### **Radian Convertible Car Seats**

Sunshine Kids' Radian child restraints were conceptualized and designed around a set of strict safety and performance parameters. Below is a brief summary explaining how those features are embodied and the resultant crash test performance.

### **FMVSS 213 Compliance and Beyond**

Extensive crash testing was conducted for a matrix of both rear-facing and forward-facing child occupants. In every test, fully instrumented test dummies were used to accurately measure and record all biomechanical data throughout the entire crash test sequence.

Radian seats meet all the biomechanical values established by NHTSA, achieving a level of performance significantly superior to that required by US safety standard FMVSS 213.

### **Rear-Facing**

In all crash tests, even at the maximum rated capacities of 40 lbs and 45 lbs, Radian seats meet all the biomechanical values established by NHTSA in FMVSS213.

Note: FMVSS213 only requires these standards for rear-facing children below 22 lbs. Above 22 lbs, rear-facing seats do not have to meet any such performance.

### **Forward-Facing**

In all crash tests, even at the maximum rated capacities of 65 lbs and 80 lbs, Radian seats meet all the biomechanical values established by NHTSA in FMVSS213.

Note: FMVSS213 only requires these standards for forward-facing children below 50 lbs. Above 50 lbs, forward-facing seats do not have to meet any such performance.

### **NCAP Crash Testing**

For severe-accident testing, NHTSA has utilized an NCAP crash test of 35mph and 47g impact force - almost the twice the crash impact force of the FMVSS213 crash test at 30 mph and 25g. NCAP crash testing with a "worst-case" installation assures a child's safety in a severe accident is not compromised by a potential failure of the child seat.

Radian seats are successfully NCAP crash tested at their maximum capacities: rear-facing (40 lbs and 45 lbs) and forward-facing (65 lbs and 80 lbs), without using top tether. In every test, the dummy remained securely retained and Radian was structurally intact.

### **Crash Energy Systems**

Radian features two safety systems that significantly reduce crash forces on a child's head, neck and chest: SafeStop®, the only energy absorbing harness system that provides safer/softer deceleration for a child, and a thick layer of EPS crush-foam underneath the child absorbs downward, vertical forces impacting a child's spine in an accident.