

# Crash Tests

## New Car Safety

### MERCEDES E-CLASS (LHD)

Mid 2004 on (AU) Front+side+head airbags

#### Overall Evaluation



**Overall score** 32.95 out of 37

Variant: 220CDi SEDAN Eng: 2.2 litre.

Kerb weight: 1650 kg Category: LUXURY

Vehicles built: 2002 Test by Euro NCAP

**Important note:** The *left-hand-drive* European model was tested by EuroNCAP. Australasian specifications may vary and therefore models sold in Australasia might provide different levels of protection to those described on this page.

#### Model History and Safety Features

The tested model of Mercedes Benz E-Class was introduced in 2002. In mid-2004 advanced seat belt reminders became standard on the Australian model.

Dual front airbags, side airbags and head-protecting side curtains are standard equipment. ABS brakes and electronic stability control are also standard.

The front seat belt buckles are mounted on the seats and the upper anchorages are adjustable. These features improve the fit of the seat belt. Pre-tensioners are fitted to the front and rear outboard seat belts to reduce slack in the event of a crash. A three point seat belt is fitted to the centre rear seat. This provides better protection than a two point seat belt.

#### OVERALL EVALUATION : 5 Stars

The Mercedes E-Class scored 13.26 out of 16 in the offset crash test. The passenger compartment held its shape well. There was a slight risk of serious chest and leg injury for both the driver and passenger.

The vehicle scored 15.69 out of 16 in the side impact crash test. There was a slight risk of serious chest injury for the driver. A further 2 points were scored in the optional pole test.

The advanced seat belt reminder earned the vehicle a further 2 points and this gave a 5 star rating (minimum 32.5 pts).

#### FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 4pts, chest 3.06pts, upper legs 3pts, lower legs 3.2pts.

The passenger compartment held its shape well in the offset crash test. The brake pedal moved rearwards by 49mm and downwards 7mm. The steering wheel hub moved rearwards 11mm, downwards 8mm and sideways 3mm. The front ("A") pillar moved 17mm rearwards. The driver's doorway did not shorten in width. All doors remained closed during the crash. After the crash all doors could be opened with normal effort.

The airbag cushioned the head of the driver and contact was stable. Dash/fascia components were a potential source of injury for the driver's right knee and both passenger knees. The passenger's head was cushioned by the airbag.

#### SIDE IMPACT CRASH TEST

Body region scores out of 4 points each: Head 4pts, chest 3.69pts, abdomen 4pts, pelvis 4pts.

The vehicle was eligible for an optional pole impact test, since it had head-protecting side airbags and scored four points for the head in the side impact test. The manufacturer



Offset crash test at 64km/h

decided to go ahead with the pole test and the vehicle earned a further two points.

#### INJURY MEASUREMENTS

Refer to the information sheet "How the test are done"	Offset Crash Test at 64km/h (v4)		Side Impact Crash Test at 50km/h (v4)
	Driver	Passn	Driver
Head HIC	210.41	113.17	10.72
Acceleration (g for 3ms)	37.99	31.1	13.26
Neck - Shear (kN)	0.44	0.23	-
Tension (kN)	0.17	0.09	-
Extension (Nm)	10.27	6.49	-
Chest Accln (g for 3ms)	-	-	-
Compression (mm)	27.97	28.56	23.54
Viscous criterion (m/s)	0.11	0.11	0.16
Abdomen - Force (kN)	-	-	0.58
Pelvis - Force (kN)	-	-	1.37
Upper legs Force			
Left (kN)	1.68	3.1	
Right (kN)	2.7	0.79	
Knee displ (mm)			
Left	0.94	0.55	
Right	0.82	1.12	
Lower legs Force			
Left (kN)	1.76	1.6	
Right (kN)	2.26	1.89	
Index (Upper/Low)			
Left	0.58/0.21	0.41/0.2	
Right	0.44/0.51	0.44/0.15	

#### Bonus points (maximum 5)

Pole Test: 2 pts Seat belt reminders: 2 pts

#### Modifiers for offset test scores

Head	No deduction
Chest	No deduction
Upper leg	Variable loading Drv 1 pt deduction R
Lower leg	Passn 1pt deduction L&R
Foot score	No deduction
	Score 4 points

#### Pedestrian rating (v4)

4.39 points out of 36



Child head impacts 3.05pts; adult head impacts 1.34pts; upper leg zero pts and lower leg impacts zero pts.



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