

# DIN EN 12697-24:2012-08 (E)

## Bituminous mixtures - Test methods for hot mix asphalt - Part 24: Resistance to fatigue

---

<b>Contents</b>		<b>Page</b>
Foreword .....		4
1	Scope .....	8
2	Normative references .....	8
3	Terms, definitions, symbols and abbreviations .....	8
3.1	General .....	9
3.2	Two-point bending test on trapezoidal specimens .....	9
3.3	Two-point bending test on prismatic shaped specimens .....	10
3.4	Three-point bending test on prismatic shaped specimens .....	12
3.5	Four-point bending test on prismatic shaped specimens .....	13
3.6	Symbols for indirect tensile test on cylindrical shaped specimens .....	18
4	Sample preparation .....	19
4.1	Age of the specimens .....	19
4.2	Drying of the specimen .....	19
4.3	Dimensions and bulk density of the specimens .....	19
5	Failure .....	19
6	Calculations .....	19
7	Summary of the procedures .....	19
7.1	Two-point bending test on trapezoidal specimens .....	19
7.2	Two-point bending test on prismatic shaped specimens .....	19
7.3	Three-point bending test on prismatic shaped specimens .....	20
7.4	Four-point bending test on prismatic shaped specimens .....	20
7.5	Indirect tensile test on cylindrical shaped specimens .....	20
8	Checking of the testing equipment .....	20
9	Test report .....	21
Annex A (normative)	Two-point bending test on trapezoidal shaped specimens .....	22
A.1	Principle .....	22
A.2	Equipment .....	23
A.3	Specimen preparation .....	23
A.4	Procedure .....	26
A.5	Calculation and expression of results .....	27
A.6	Test report .....	28
A.7	Precision .....	28
Annex B (normative)	Two-point bending test on prismatic shaped specimens .....	30
B.1	Principle .....	30
B.2	Equipment .....	30
B.3	Specimen preparation .....	31
B.4	Procedure .....	31
B.5	Calculation and expression of results .....	32

<b>B.6</b>	<b>Test report .....</b>	<b>34</b>
<b>B.7</b>	<b>Precision .....</b>	<b>34</b>
<b>Annex C (normative) Three-point bending test on prismatic shaped specimens .....</b>		<b>35</b>
<b>C.1</b>	<b>Principle .....</b>	<b>35</b>
<b>C.2</b>	<b>Equipment .....</b>	<b>35</b>
<b>C.3</b>	<b>Specimen preparation .....</b>	<b>36</b>
<b>C.4</b>	<b>Procedure .....</b>	<b>36</b>
<b>C.5</b>	<b>Calculation and expression of results .....</b>	<b>37</b>
<b>C.6</b>	<b>Test report .....</b>	<b>40</b>
<b>C.7</b>	<b>Precision .....</b>	<b>41</b>
<b>Annex D (normative) Four-point bending test on prismatic shaped specimens .....</b>		<b>42</b>
<b>D.1</b>	<b>Principle .....</b>	<b>42</b>
<b>D.2</b>	<b>Equipment .....</b>	<b>44</b>
<b>D.3</b>	<b>Specimen preparation .....</b>	<b>45</b>
<b>D.4</b>	<b>Procedure .....</b>	<b>46</b>
<b>D.5</b>	<b>Calculation and expression of results .....</b>	<b>48</b>
<b>D.6</b>	<b>Test report .....</b>	<b>48</b>
<b>D.7</b>	<b>Precision .....</b>	<b>48</b>
<b>Annex E (normative) Indirect tensile test on cylindrical shaped specimens .....</b>		<b>49</b>
<b>E.1</b>	<b>Principle .....</b>	<b>49</b>
<b>E.2</b>	<b>Equipment .....</b>	<b>49</b>
<b>E.3</b>	<b>Specimen preparation .....</b>	<b>52</b>
<b>E.4</b>	<b>Procedure .....</b>	<b>53</b>
<b>E.5</b>	<b>Calculation and reporting of results .....</b>	<b>53</b>
<b>E.6</b>	<b>Test report .....</b>	<b>56</b>
<b>E.7</b>	<b>Precision .....</b>	<b>56</b>
<b>Bibliography .....</b>		<b>57</b>