

# DIN EN 16261-3:2013-03 (E)

## Pyrotechnic articles - Fireworks, Category 4 - Part 3: Test methods

---

<b>Contents</b>		<b>Page</b>
Foreword .....		4
1	Scope .....	5
2	Normative references .....	5
3	Terms and definitions .....	5
4	Test environment for functioning test .....	5
4.1	General .....	5
4.2	Wind measurement .....	5
5	Apparatus .....	5
6	Test methods .....	9
6.1	Construction and stability .....	9
6.1.1	Outer dimension of item .....	9
6.1.2	Determination of calibre .....	10
6.1.3	Determination of gross mass .....	10
6.2	Design - Verification .....	10
6.3	Determination of tube angle .....	10
6.3.1	Apparatus .....	10
6.3.2	Procedure .....	10
6.4	Angle of ascent and burst height .....	11
6.4.1	General .....	11
6.4.2	Dimensions of mortar .....	11
6.4.3	Support of mortar .....	11
6.5	Measurement of sound pressure level .....	11
6.5.1	Apparatus .....	11
6.5.2	Procedure .....	11
6.6	Extinguishing of flames .....	11
6.6.1	Apparatus .....	11
6.6.2	Procedure .....	11
6.7	Visual and audible inspections .....	12
6.8	Mechanical conditioning .....	12
6.8.1	Apparatus .....	12
6.8.2	Procedure .....	12
6.9	Thermal conditioning .....	12
6.9.1	Apparatus .....	12
6.9.2	Procedure .....	12
6.10	Function test .....	12
6.10.1	Apparatus .....	12
6.10.2	Procedure .....	13
6.10.3	Monitoring of effect, rising/bursting and drop height .....	13
6.10.4	Monitoring of effect range and effect dimensions of aquatic fireworks .....	13
6.11	Measuring of CE-marking .....	14
6.11.1	Apparatus .....	14
6.11.2	Procedure .....	14
Annex A (informative)	Mechanical Conditioning (Shock Apparatus) .....	15
Annex B (informative)	Procedures for calculation of heights .....	18

<b>Annex C (informative) Calculation method for safety-/protection distance .....</b>	<b>22</b>
<b>Annex D (informative) Overview of essential safety requirements and corresponding clauses of all parts of EN 16261 .....</b>	<b>23</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2007/23/EC on the placing on the market of pyrotechnic articles .....</b>	<b>24</b>
<b>Bibliography .....</b>	<b>25</b>