

DIN EN ISO 10821:2013-02 (E)

Industrial sewing machines - Safety requirements for sewing machines, units and systems (ISO 10821:2005 + Amd 1:2009) (includes Amendment :2009)

| Contents | | Page |
|---------------------|--|-------------|
| Introduction | | 5 |
| 1 | Scope | 6 |
| 2 | Normative references | 6 |
| 3 | Terms and definitions | 8 |
| 4 | Significant hazards | 10 |
| 4.1 | General | 10 |
| 4.2 | Mechanics | 10 |
| 4.3 | Electricity/Control | 11 |
| 4.4 | Thermal hazards | 11 |
| 4.5 | Noise | 11 |
| 4.6 | Radiation | 11 |
| 4.7 | Ergonomics | 12 |
| 4.8 | Special hazards | 12 |
| 4.9 | Danger zones | 13 |
| 5 | Safety measures and requirements | 20 |
| 5.1 | General principles | 20 |
| 5.2 | Requirements for all types of industrial sewing machines | 20 |
| 5.2.1 | Mechanical equipment | 20 |
| 5.2.2 | Electrical equipment/control/control gear | 23 |
| 5.2.3 | Thermal requirements | 25 |
| 5.2.4 | Noise | 25 |
| 5.2.5 | Radiation | 26 |
| 5.2.6 | Ergonomics | 27 |
| 5.3 | Specific requirements for particular types of industrial sewing machines | 27 |
| 5.3.1 | Button, buttonhole and programmable pattern sewing machines, bartacking machines ... | 27 |
| 5.3.2 | Quilting machines | 28 |
| 5.3.3 | Bag closing sewing machines in the packaging industry | 28 |
| 5.3.4 | Embroidery machines | 28 |
| 5.3.5 | Glove sewing machines | 29 |
| 5.3.6 | Sewing machines for shoe repair | 29 |
| 5.3.7 | Blindstitch sewing machines | 29 |
| 5.3.8 | Linking machines | 29 |
| 6 | Verification of safety requirements or measures | 29 |
| 7 | Information on use and maintenance | 31 |
| 7.1 | General | 31 |
| 7.2 | Marking | 31 |
| 7.3 | Warning of residual risk | 32 |
| 7.4 | Instructions | 32 |
| 7.4.1 | General information | 32 |
| 7.4.2 | Particular information | 33 |
| Annex A (normative) | Finger deflecting device | 34 |
| Annex B (normative) | Warning of residual risk | 37 |

| | |
|---|-----------|
| Annex C (normative) Noise test code | 40 |
| Annex D (normative) Needle breakage protection shield | 55 |
| Annex E (normative) Belt guard at sewing machine drive (motor) | 56 |
| Annex F (informative) Safe fastening of belt pulley at drive shaft of clutch or positioning drives | 58 |
| Annex G (informative) Safe mounting of adaptable positioner/synchronizer at sewing machine shaft | 65 |
| Annex H (informative) Safe mounting of sewing machine drives | 66 |
| Annex I (informative) Noise declaration examples | 71 |
| Annex J (informative) Examples of noise reduction measures at the design stage | 74 |
| Annex K (normative) Written warning -- Languages | 75 |
| Annex L (informative) Ergonomic principles | 79 |
| Bibliography | 80 |
| !Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC" | 82 |
| !Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC" | 83 |
| !Annex ZC (informative) Corresponding International and European Standards for which equivalents are not given in the text" | 84 |