DIN EN ISO 3821:2020-04 (E)

Gas welding equipment - Rubber hoses for welding, cutting and allied processes (ISO 3821:2019)

Contents

Page

European foreword **4**

Foreword **5**

1 Scope **6**

2 Normative references **6**

3 Terms and definitions **7**

4 Abbreviated terms **7**

5 Application **7**

6 Hose designation **7**

7 Materials **8**
7.1 Construction 8
7.1.1 Light and normal duty hoses 8
7.1.2 Flux fuel gas hose 8
7.1.3 Twin hose 8
7.2 Manufacture 8

8 Dimensions and tolerances **8**
8.1 Inside diameters 8
8.2 Outside diameters 9
8.3 Wall thickness 9
8.4 Concentricity (total indicator reading) 10
8.5 Cut lengths and tolerances 10
8.6 Disclosure of inside diameter and outside diameter 10

9 Requirements and type tests **10**
9.1 General 10
9.2 Basic requirements 10
9.2.1 Tensile strength and elongation at break 10
9.2.2 Accelerated ageing 10
9.2.3 Adhesion 10
9.2.4 Hydrostatic requirements 11
9.2.5 Flexibility at ambient temperature 11
9.2.6 Low-temperature flexibility 11
9.2.7 Protection against incandescent particles and hot surfaces 11
9.2.8 Ozone resistance 11
9.3 Special requirements 11
9.3.1 Non-ignition requirement for oxygen hoses 11
9.3.2 Resistance to acetone and dimethylformamide for acetylene hoses 12
9.3.3 Resistance to ***n***-pentane for propane hoses 12
9.3.4 Resistance to azeotrope of trimethylborate with methanol for flux fuel gas hoses 12
9.3.5 Flexibility of flux fuel gas hoses 13
9.3.6 Permeability to LPG, MPS, and natural gas of methane hoses, universal fuel gas hoses, and flux fuel gas hoses 13
9.3.7 Requirements for twin hoses 13
9.3.8 Requirements for universal fuel gas hose 13

10 Hose colour and gas identification **13**
10.1 General 13
10.2 Gas identification 13
10.3 Marking 14
Annex A (normative) **Method of test for non-ignition** **15**
Annex B (normative) **Method of test for resistance to n-pentane** **17**
Annex C (normative) **Method of test for resistance to incandescent particles and hot surfaces** **18**
Annex D (normative) **Summary of requirements and type tests** **20**
Annex E (normative) **Alternative oxygen gas colour codes** **21**
Bibliography **22**