DIN EN 13938-1:2026-03 (E)

Explosives for civil uses - Propellants and rocket propellants - Part 1: Requirements

Contents

Page

European foreword 4

1 Scope 6

2 Normative references 6

3 Terms and definitions 6

4 Requirements for solid gun propellants 7
4.1 Information to be provided for solid gun propellants 7
4.1.1 Temperature of use 7
4.1.2 Storage conditions 7
4.1.3 Density 7
4.2 Requirements on properties of solid gun propellants 7
4.2.1 Resistance to electrostatic discharge 7
4.2.2 Deflagration to detonation transition (DDT) 7
4.2.3 Burning rate 7
4.2.4 Thermal stability 7
4.2.5 Insensitiveness to friction 7
4.2.6 Insensitiveness to impact 7
4.2.7 Density 8

5 Requirements for solid rocket propellants 8
5.1 Information to be provided for solid rocket propellants 8
5.1.1 Temperature of use 8
5.1.2 Storage conditions 8
5.1.3 Density 8
5.1.4 Means of ignition 8
5.2 Requirements on properties of solid rocket propellants 8
5.2.1 Voids and fissures of small rocket motors containing solid rocket propellants 8
5.2.2 Thermal stability 8
5.2.3 Insensitiveness to friction 8
5.2.4 Insensitiveness to impact 8

6 Requirements for black powder used as propellant, for pyrotechnic articles or for safety fuses 9
6.1 Information to be provided for black powder used as propellant 9
6.1.1 Temperature of use 9
6.1.2 Storage conditions 9
6.1.3 Burning rate 9
6.1.4 Density 9
6.2 Requirements on properties of black powder used as propellant 9
6.2.1 Burning rate 9
6.2.2 Thermal stability 9
6.2.3 Insensitiveness to friction 9
6.2.4 Insensitiveness to impact 9
6.2.5 Density 9

7 Requirements for powder cakes 10
7.1 Information to be provided for powder cakes 10
7.1.1 Temperature of use 10
7.1.2 Storage conditions 10

7.2 Requirements on properties of powder cakes 10
7.2.1 Thermal stability 10
7.2.2 Insensitiveness to friction 10
7.2.3 Insensitiveness to impact 10

Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2014/28/EU relating to the making available on the market and supervision of explosives for civil uses aimed to be covered 11

Bibliography 15