



## Standard Specification for Paintball Cylinder Burst Disk Assemblies<sup>1</sup>

This standard is issued under the fixed designation F 2030; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This specification covers burst disk assemblies for paintball marker propellant sources their application and installation requirements.

1.2 The values stated in SI units are to be regarded as standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

### 2. Referenced Documents

2.1 *Code of Federal Regulations:*<sup>2</sup>

~~DOT 49 CFR 1734d~~ DOT 49 CFR

2.2 *CGA Standard:*<sup>3</sup>

~~CGAS-1-1~~ CGA S-1.1 Pressure Relief Device Standards-Part 1-Cylinders for Compressed Gases

CGA TB-13 Correct Assemblies and Installation of Rupture Disk and Fusible Plug Type Pressure Relief Devices

### 3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 Burst Disk Assembly is sometimes known as a Rupture Disk Assembly.

3.1.2 burst disk port, n—port into which a burst disk assembly is installed.

3.1.3 service pressure, n—operating pressure as indicated by markings placed on cylinder at time of manufacture.

3.1.4 test pressure, n— $\frac{5}{3}$  of cylinder's service pressure.

3.2 *Abbreviations:*

3.2.1 psi—pounds per square inch

### 4. Materials and Manufacture

4.1 ~~The~~ The materials and processes used to manufacture the burst disk assembly shall result in items with mechanical strength sufficient to pass the applicable burst pressure tests. Materials used shall be corrosion resistant, chemically compatible with the propellant used, and shall not promote galvanic action. ~~Rupture~~ Burst disks shall be manufactured and tested in accordance with ~~DOT 49 CFR 1734d~~ and CGA S-1-1S-1.1.

4.2 ~~The~~ The burst disk assembly and related port features shall be free of burrs and sharp edges.

### 4.5. Performance

4.1 ~~Burst~~ Burst disk assemblies intended for use with a service pressure of 12 410 kPa (1800 psi) shall rupture at not less than 18 615 kPa (2700 psi) and no more than 20 684 kPa (3000 psi) at a temperature of 71.1°C (160°F). At a temperature of 15.6°C (60°F) the same burst disk shall rupture at not less than 19 822 kPa (2875 psi) and no more than 21 890 kPa (3175 psi).

4.2 ~~The~~ The relief hole in the burst disk assembly shall provide for flow to adequately vent the cylinder as specified in CGA S-1-1

5.1 Burst disk must rupture between 90 and 100 % of test pressure as noted in Table 1.

4.3 ~~The~~ The rupture disk and seal shall be permanently retained on the plug to provide proper alignment and assembly.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F08 on Sports Equipment and Facilities and is the direct responsibility of Subcommittee F08.24 on Paintball and Equipment.

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<sup>2</sup> *Code of Federal Regulations*, available from U.S. Government Printing Office, Washington, DC 20402.

<sup>3</sup> Available from Compressed Gas Assoc., Inc., 1725 Jefferson Davis Highway, Suite 1004, Arlington, VA 22202-4102.