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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 24679.2-2020

**Equipment for crop protection - Knapsack sprayers - Part 2:
Safety and environmental requirements**

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Foreword

GB/T 24679 "Plant Protection Machinery Backpack Sprayer" is divided into the following two parts.

- Part 1. Test methods;
- Part 2. Safety and environmental requirements.

This part is Part 2 of GB/T 24679.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 24679.2-2009 "Plant protection machinery backpack sprayer Part 2. Technical requirements". versus

Compared with GB/T 24679.2-2009, except for editorial changes, the main technical changes are as follows.

- Added three definitions (see 3.1, 3.2, 3.3).
- Increased protection requirements for sprayer operation (see 4.1.1).
- Increased the corrosion resistance requirements of the parts in contact with the spray liquid (see 4.1.5).
- Increased the amount of residual liquid requirements (see 4.1.9).
- Modified the requirements of the strap (see 4.2.3, 4.2.2 of the 2009 edition).
- Added UV resistance requirements for the material of the liquid tank (see 4.4.3).
- Added additional requirements for rocker operated backpack sprayers (see Chapter 5).
- Added additional requirements for the knapsack sprayer (machine) driven by the engine or motor (see Chapter 6).
- Added additional requirements for compression sprayers (see Chapter 7).
- Increased use information requirements (see Chapter 8).

This section uses the redrafting method to modify the adoption of ISO 19932-1:2013

"Plant Protection Machinery Backpack Sprayer Part 1. Safety

Total and Environmental Requirements. The technical differences between this part and ISO .19932-1..2013 and the reasons are as follows.

--- With regard to normative quotation documents, this part has been adjusted with technical differences to adapt to China's technical conditions and adjustments

The situation is reflected in Chapter 2 "Regulatory Reference Documents", with specific adjustments as follows.

* Replaced ISO 3864-1..2011 with GB/T 2893.1-2013 modified to adopt international standards;

* Replaced ISO 11684..1995 with GB/T 10396-2006, which adopts international standards.

* Replace ISO 8169. 1984 with GB/T 18520-2001 equivalent to international standards;

* Replaced ISO 5681..1992 with GB/T 20085-2006 which adopts international standards.

--- Added models where the total mass of the knapsack sprayer (machine) is not applicable (see 4.1.2).

--- Changed the content of 4.3.5 comments (see 4.3.5).

This part is proposed by China Machinery Industry Federation.

This part is under the jurisdiction of the National Agricultural Machinery Standardization Technical Committee (SAC/TC201).

This section was drafted by. China Academy of Agricultural Mechanization Sciences, Taizhou Xinyi Agricultural Machinery Co., Ltd., and Taizhou Toyota Spray Washing Machine.

Limited company, Zhejiang Ou Sen Machinery Co., Ltd.

1 Scope

This part of GB/T 24679 stipulates the safety and safety of the design and manufacture of the backpack sprayer (machine) carried by the operator on the back or shoulder

Environmental requirements and verification methods. This section also specifies the type of information provided by the manufacturer regarding safe operations (including residual risks).

This part is suitable for agricultural and horticultural use, the rated capacity of the liquid tank is greater than 3L, the rocker-operated backpack sprayer, the backpack compression

Sprayers and hydraulic atomized knapsack sprayers (machines) driven by engines or motors. This section does not apply to the provisions of ISO 28139

Knapsack spray duster.

This section deals with the major hazards, dangerous conditions and normal hazards associated with normal use or the manufacturer's reasonable foreseeable misuse of the knapsack sprayer (machine)

Dangerous events (see Appendix A), but does not include hazards caused by.

Explosion or fire caused by static electricity, spraying chemicals, and insufficient structural integrity.

This section does not apply to backpack sprayers (machines) manufactured before release.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 2893.1-2013 Graphic symbols Safety colors and safety signs Part 1. Design principles of safety signs and safety marks

(ISO 3864-1..2011, MOD)

GB/T 4269.5-2003 Portable forestry machinery operator control symbols and other marks (ISO 3767-5..1992, IDT)

GB/T 5390-2013 Forestry and garden machinery. Internal combustion engine-powered portable handheld operating machinery

Method (level 2 accuracy) (ISO 22868..2011, IDT)

GB 10396-2006 General rules for safety signs and hazard graphics of agricultural and forestry tractors and machinery, lawn and garden power machinery

(ISO 11684..1995, MOD)

GB/T 15706-2012 General Rules for Safety Design of Machinery Risk Assessment and Risk Reduction (ISO 12100..2010, IDT)

GB/T 16251-2008 Ergonomic principles of work system design (ISO 6385..2004, IDT)

GB/T 18519-2001 Plant protection machinery sprayer bayonet fixed nozzle connection dimensions (idtISO 10626..1991)

GB/T 18520-2001 connection size of spray nozzle and pressure gauge of plant protection machinery sprayer (eqvISO 8169. 1984)

GB/T 20085-2006 Plant protection machinery vocabulary (ISO 5681..1992, MOD)

GB/T 20183.1-2006 Plant protection machinery spray equipment Part 1. Test method for

sprayer nozzles (ISO 5682-1.

1996, IDT)

GB/T 21398-2008 Agricultural and forestry machinery electromagnetic compatibility test methods and acceptance rules (ISO 14982..1998, IDT)

GB/T 23821-2009 Safety of machinery to prevent the upper and lower limbs from reaching the safe distance of the hazardous area (ISO 13857..2008, IDT)

GB/T 24679.1-2017 Plant protection machinery backpack sprayer Part 1. Test method (ISO .19932-2..2013,

IDT)

GB/T 32243-2015 Plant protection machinery sprayer (filter) color coding for filter identification (ISO 19732..2007,

IDT)

HG/T 3043-2009 Rubber hose for agricultural spray (ISO 1401..1999, IDT)