ISO 28139:2019-12 (E)

Equipment for crop protection - Knapsack combustion engine-driven airblast s prayers - Safety and environmental requirements and test methods

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 2

4 Safety requirements and/or protective measures 3
4.1 General 3
4.2 Stability when in operation 3
4.3 Exhaust system 3
4.4 Air tube and chemical hoses 3
4.5 Controls 4
4.5.1 General 4
4.5.2 Handle 4
4.5.3 Throttle trigger 5
4.5.4 Engine stopping device 5
4.5.5 Starting device 5
4.5.6 Liquid line shut-off valve 5
4.6 Machine support 5
4.6.1 Harness 6
4.7 Power-driven components 6
4.8 Fuel tank 6
4.9 Protection against contact with hot parts 6
4.10 Electrical requirements 8
4.10.1 General 8
4.10.2 Ignition circuit 8
4.11 Vibration 8
4.11.1 Reduction by design at source and by protective measures 8
4.11.2 Vibration measurement 8
4.12 Noise 8
4.12.1 Reduction by design at source and by protective measures 8
4.12.2 Noise measurement 9
4.13 Electromagnetic immunity 9
4.13.1 Requirements 9
4.13.2 Verification 9

5 Environmental requirements 9
5.1 General 9
5.2 Absorbency of carrying straps 9
5.3 Spray tank 9
5.4 Strainers and filters 10
5.5 Droplet size 11
5.6 Air hoses and chemical hoses 11
5.7 Fan 11
5.8 Mass of total residual liquid 11
5.9 Stability 11
5.10 Spray liquid flow rate 11

5.11 Test report 12

6 Tests 12
6.1 Test liquids and equipment 12
6.2 Test conditions 13
6.2.1 General 13
6.2.2 Engine speed 13
6.3 Spray liquid output 13

6.4 Mass of total residual liquid 13
6.5 Stability 14
6.6 gauge scale and total tank volume 14
6.7 Filling rate 14
6.8 Air velocity 15

7 Information for use 16
7.1 Instruction handbook 16
7.1.1 General 16
7.1.2 Technical data 18
7.2 Marking 19
7.3 Warnings 19

Annex A (informative)Listofsignificanthazards 20

Annex B (normative) Sampling grid position for air velocity determination 25

Annex C (normative) Stability test 26

Annex D (informative) Example of a knapsack combustion engine-driven airblast sprayer 27

Annex E (informative) Safety signs 28

Annex F (informative) Position of sprayer and Petri dishes for potential ground deposit determination 29

Annex G (informative) Sprayer locking device 30

Annex H (informative) Device for detecting potential vertical deposits 31

Annex I (informative)Potentialgrounddeposit,potentialverticaldepositanddropletsizetest 32

Annex J (informative) Minimum content of test report 35

Bibliography 39