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595-4**

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**Deltamethrin Pesticides — Specification —
Part 4: Emulsifiable concentrate (EC)**

ICS 65.100.10

Reference number

DRS 595-4: 2025

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 595-4 was prepared by Technical Committee RSB/TC 64, *Pesticides*.

In the preparation of this standard, reference was made to the following standard:

ES 704-3, *Pesticides — Deltamethrin — Part 3: Emulsifiable concentrates — Specification*

The assistance derived from the above source is hereby acknowledged with thanks.

DRS 595 consists of the following parts, under the general title *Deltamethrin Pesticides — Specification*:

- *Part 1: Technical material*
- *Part 2: Wettable Powder*
- *Part 3: Dustable powder*
- *Part 4: Aqueous suspension concentration*
- *Part 5: Emulsifiable concentrate*
- *Part 6: Ultra low volume liquid*
- *Part 7: Water dispersible granules*
- *Part 8: Emulsion, oil-in-water*
- *Part 9: Emulsifiable granules*
- *Part 10: Long lasting treated storage bag*

Committee membership

The following organizations were represented on the Technical Committee on *Pesticides* (RSB/TC 64) in the preparation of this standard.

Rwanda Food and Drugs Authority

Rwanda Forensic Institute

University of Rwanda/College of Sciences and Technology

Standards of Sustainability

CYIRA Ltd

Rwanda Inspectorate, Competition and Consumer Protection Authority

Rwanda Investigation Bureau

Rwanda Agriculture and Inputs Organization (RAIDO)

Rwanda Standards Board (RSB) – Secretariat

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Deltamethrin Pesticides — Specification — Part 4: Emulsifiable concentrate (EC)

1 Scope

This Draft Rwanda Standard specifies the requirements for emulsifiable concentrate of deltamethrin used for agricultural purpose.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

RS 405, *Pesticides — Sampling*

RS 406, *Pesticides — Terminology*

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in RS 406 apply.

4 Requirements

4.1 Active ingredients

4.1.1 Identity test

Where the identity of the active ingredient is in doubt, determine in accordance with DRS 595-1 then the isolated active ingredient shall comply with at least one additional test.

4.1.2 Deltamethrin content

The deltamethrin content shall be declared (g/kg or g/l at $20 \pm 2^\circ\text{C}$.) and when determined in accordance with DRS 595-1, the average measured content shall not differ from that declared by more than the following tolerances:

Declared content in g/kg or g/l at $20 \pm 2^\circ\text{C}$	Tolerance limit
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<p style="text-align: center;">up to 25 above 25 up to 100 above 100 up to 250</p> <p>Note 1: in each range the upper limit is included.</p>	<p>± 15% of the declared content ± 10% of the declared content ± 6% of the declared content</p>
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4.2 General requirements

4.2.1 The material shall consist of technical deltamethrin, complying with the requirement of DRS 595-1, dissolved in suitable solvents, together with emulsifying agent(s) and with or without stabilizer(s).

4.2.2 The material shall be yellow to brown coloured, homogenous and stable liquid.

4.2.3 It shall be in the form of a stable homogeneous liquid, free from visible suspended matter and sediment.

4.2.4 On dilution with water, it shall be readily forming an emulsion suitable for spray.

4.3 Specific requirements

4.3.1 The product when tested with the requirements given in table 1 when tested in accordance with the methods prescribed therein.

S/N	Characteristics	Requirements	Test method
i.	Impurities, Deltamethrin R isomer, % by mass, max.	1	
ii.	Acidity (as H ₂ SO ₄), g/kg, max.	0.5	
iii.	Alkalinity (as NaOH), g/kg, max.	0.5	
iv.	pH, range	4.5-7.5	
v.	Persistent foam, ml after 1 min	50	
vi.	Flash point, °C, min.	24.5	

4.3.1.1 Storage stability**4.3.1.1.1 Stability at 0°C**

After storage at $0 \pm 2^\circ\text{C}$ for 7 days, the volume of solid and/or liquid which separates shall not be more than 0.3 ml.

4.3.1.1.2 Stability at elevated temperature

After storage at $54 \pm 2^\circ\text{C}$ for 14 days, the determined average active ingredient content shall not be lower than 95% relative to the determined average content found before storage

Note: Analysis of the formulation, before and after the storage stability test, should be carried out concurrently (i.e after storage) to reduce the analytical error.

4.3.1.2 Emulsion stability and re-emulsification

The formulation, when diluted at normal temperature shall comply with the following unless another temperature is specified:

Time after dilution, hour	Limit of stability
0	Initial emulsification complete
0.5	"Cream": none
2	"Cream", maximum: 1 ml "Free oil": none
24	Re-emulsification complete
24.5	"Cream": none unless another temperature is specified "Free oil": none

NOTE 1 Tests after 24 h are required only where results at 2h are in doubt

NOTE 2 If the storage conditions are not favourable, it is recommended that the prepared emulsion to be immediately used.

5 Packaging

The product shall be packaged in accordance with RS 565-1.

6 Labelling and marking

The labelling and marking of the product shall be done in accordance with DRS 578.

7 Retail, distribution, storage and handling

The product shall be handled in accordance with DRS 579.

NOTE Attention is drawn to the appropriate national and/ or international regulations on the handling and transport of flammable materials.

8 Sampling

Sampling shall be done in accordance with RS 405.

9 Disposal

Disposal of bulk quantities of obsolete pesticides shall be in accordance with DRS 589.

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Annex A
(normative)

Annex title

A.1 General

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Annex B
(informative)

Which styles correspond to which element — Quick reference guide

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Bibliography

- [1] FAO Specifications and evaluations for agricultural pesticides for *Deltamethrin*

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