



**RWANDA
STANDARD**

**DRS
565-2**

First edition

2023-mm-dd

Packaging of pesticides — Requirements

Part 2: Liquid pesticides

ICS 65.100.01

Reference number

DRS 565-2: 2023

© RSB 2023

DRS 565-2: 2023

In order to match with technological development and to keep continuous progress in industries, standards are subject to periodic review. Users shall ascertain that they are in possession of the latest edition

© RSB 2023

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from RSB.

Requests for permission to reproduce this document should be addressed to:

Rwanda Standards Board

P.O Box 7099 Kigali-Rwanda

KK 15 Rd, 49

Tel. +250 788303492

Toll Free: 3250

E-mail: info@rsb.gov.rw

Website: www.rsb.gov.rw

ePortal: www.portal.rsb.gov.rw

Formatted: German (Switzerland)

Formatted: German (Switzerland)

Formatted: German (Switzerland)

Field Code Changed

Contents

Page

Forewordiv

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 General requirements 1

5 Specific requirements 2

5.1 Technical Grade pesticides 2

5.2 Emulsifiable concentrates 2

5.3 Other Liquid Formulations 4

Copy for public comments

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 565-2 was prepared by Technical Committee RSB/TC 064, *Pesticides*.

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

- 1) IS 8190-2: Requirements for packing of pesticides — Part 2: Liquid pesticides

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

DRS 565 consists of the following parts, under the general title *Packaging of pesticides — Requirements*:

- *Part 1: Solid pesticides*
- *Part 2: Liquid pesticides*
- *Part 3: Household pesticides*
- *Part 4: Fumigants*

Committee membership

The following organizations were represented on the Technical Committee on *Pesticides* (RSB/TC 064) in the preparation of this standard.

Rwanda Forensic Laboratory

Rwanda Agriculture and Animal Resources Development Board

Rwanda Inspectorate, Competition and Consumer Protection Authority

University of Rwanda/College of Sciences and Technology

Rwanda Housing Authority

Rwanda Food and Drugs Authority

Copy for public comments

Copy for public comments

Packaging of pesticides — Requirements — Part 2: Liquid pesticides

1 Scope

This Draft Rwanda Standard gives the requirements for packaging of liquid pesticides.

It does not cover the packaging requirements for liquid pesticides meant for household use (DRS 565-3) and fumigants (DRS 565-4).

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 406, *Pesticides — Terminology*

RS ISO 6361-5, *Wrought aluminium and aluminium alloys — Sheets, strips and plates — Part 5: Chemical composition*

3 Terms and definitions

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

4 General requirements

4.1 The liquid pesticides, technical and their formulations, except otherwise specified in tables 1 to 3, shall be packaged in containers in the quantities of 50 ml, 100 ml, 250 ml, 1 l, 5 l, 10 l, 20 l, 25 l and 50 l. Technical grade and emulsifiable concentrates meant for bulk consumption may also be packaged in quantities of 200 litres in a container.

4.2 Retail packages up to 1 litre shall be further packaged in corrugated fibreboard boxes or wooden cases when they require transportation.

4.3 The high density polyethylene (HDPE) used in the fabrication of HDPE container or fluorinated HDPE bottles and containers shall be of appropriate grade with or without pigments.

4.4 Aluminium used in the fabrication of containers shall conform to Grade 1050A of RS ISO 6361-5.

4.5 Containers of mild steel and tinplate shall also be painted/lacquered externally to prevent rusting from outside, if not lithographed. If lithographed, top and bottom components shall be lacquered externally.

4.6 Closures provided shall be such as not to allow any material to leak through them. These shall be temperproof.

4.7 Containers holding 5 litres or more of liquid pesticides shall be provided with pouring device with each container.

4.8 The packaging shall also conform to the tariff rules in force from time to time for packaging of goods falling in the category of materials of low flash point, dangerous and toxic, wherever applicable.

4.9 The containers shall be of sturdy design and shall conform to the relevant specific standard.

4.10 Wherever any conditions are attached in the registration certificate given by competent authority, the same shall also be considered applicable in that and shall be verified accordingly.

5 Specific requirements

5.1 Technical Grade pesticides

The technical grade pesticides shall be packaged in dry and clean containers as described in Table 1.

Table 1 – Requirements for packaging of liquid pesticide, Technical Grade

S/N	Pesticides	Requirements
i.	Cypermethrin; Cypermethrin concentrate; diazinon; Disulfoton; Fenitrothion; HFenthion; Fenitrothion; Fenthion; Fenvalerate; Formorhion; malathion; Methyl parathion; Methyl parathion concentrate; Oxydemeton-methyl concentrate; Phenthoate; Phorate; Temephos; Thiometon concentrated.	Mild steel drums suitably and properly lacquered from inside. Cypermethrin may also be packaged in aluminium containers
ii.	Parathion ethyl	Mild steel drums
iii.	Irobornyl thiocynoacetate (thanite)	Aluminium clad iron containers or high backed phenolic enamel lined metal containers.
iv.	Dichlorvos	HDPE drums of 1.75 to 2.25 mm thickness. The HDPE drums shall be repackaged in mild steel drums with removable lid and having bolt-type closing ring. For packages of 5 litres HDPE containers shall be used.
v.	Phosphamidon	HDPE drums of 1.75 to 2.25 mm thickness. The HDPE drums shall be repackaged in mild steel drums with a removable lid and having bolt-type closing ring.
vi.	Dicofol	Mild steel containers suitably lacquered or anodized aluminium drums
vii.	Monocrotophos; Thiobencarb	Mild steel containers, suitably and properly lacquered or HDPE containers fitted in mild steel containers.
viii.	Butachlor; Edifenphor; Fiuchloralin concentrate; Quinalphoa; Tridemorph.	Mild steel drums, suitably and properly lacquered from inside. Aluminium containers nay also be used.

5.2 Emulsifiable concentrates

The emulsifiable concentrates shall be packaged in dry and clean containers as described in table 2.

Table 2 – Requirements for packaging of emulsifiable concentrates

S/N	Pesticides	Requirements
i.	Alachlor; BHC; Butachlor; diazinon; Endosulfan; Malathion; Triallate; Ethion EC	Mild steel or tinfoil containers suitably and properly lacquered from inside. Endosulfan may also be packaged in aluminium containers. Alachlor 50% EC, butachlor 50% EC, endosulfan 35% EC, malathion 50% EC, triallate 50% EC, and ethion 50% EC, may also be packed in Fluorinated HDPE bottles and containers.
ii.	Cypermethrin; Deltamethrin; Emvalerate; Parathion, methyl	Aluminium containers. The containers shall be wrapped individually in transparent low density polyethylene bags of minimum 0.075 mm thickness. These bags shall be closed by heat sealing and contain adequate space to collect the leaking material if any. Cypermethrin 10 % EC may also be packed in PET bottles of 100, 250, 500 and 1 000 ml capacity with leakproof and pilferproof closure system. Cypermethrin 10% EC, cypermethrin 25% EC, deltamethrin 2.8% EC, and fenvalerate 20% EC may also be packaged in Fluorinated HDPE bottles and containers
iii.	Chlorpyrifos; Dimethoate; Fenthion; Formothion; Fenitrothion; Fruchloralia; Oxydemeto-methyl; Phosnlone; Quinalphos; Temrphos; Thiometon; Tridemorph.	Mild steel or tinfoil containers, suitably and properly lacquered from inside. Aluminium bottles or round OT aluminium containers may also be used. Quinalphos may also be packaged in a 4 litre container made of tinfoil suitably and properly lacquered from inside. Chlorpynphos 20% EC, dimethoate 30 % EC and quinalphos may also be packaged in Fluorinated HDPE bottles and containers
iv.	Binapacryl	Aluminium or tinfoil containers. Tinfoil containers shall be lacquered twice, internally.
v.	Chlormequat chloride aqueous solution; Dichlorvos; Monocrotophos water soluble concentrates; phosphamidon water soluble concentrates.	Mild steel or tinfoil containers suitably and properly lacquered from inside or HDPE containers of 1.75 to 2.25 mm thickness, HDPE containers shall be heat-sealed with HDPE plugs finally closed with HDPE screw caps. These containers shall be heat-sealed with HDPE plugs finally closed with HDPE screw caps. These containers shall be repackaged in mild steel drums with a removable lid having bolt-type closing ring. For packs of 5 l, HDPE containers shall be used. For smaller packages up to 1 000 ml, HDPE containers or galvanized tin containers suitably and properly lacquered from inside shall be used. Monocrotophos 36% SL may also be packaged in Fluorinated HDPE bottles and containers.
vi.	Dicofol; Propanil	Mild steel or tinfoil containers suitably and properly lacquered from inside. Alternatively, anodized aluminium drums may be used.
vii.	Pondimethalin; Pyrethrum; Thiobencarb	Aluminium or mild steel or tinfoil containers. Dicofol 18.5% EC may also be packaged in Fluorinated HDPE bottles and containers.

viii.	Phenthoate	Mild steel or tinplate containers suitably and properly lacquered from inside. Aluminium containers may also be used. Aluminium containers shall be wrapped individually in transparent polyethylene bags of minimum thickness 0.125 mm which shall be closed by heat-sealing to collect the and shall contain adequate space the leaking material, if any.
ix.	Paraquat dichloride water soluble concentrates	Mild steel containers suitably and properly lacquered from inside or HDPE containers of wall thickness not less than 1 mm.
x.	Nitrofen	Mild steel or aluminium or HDPE containers. Mild steel containers shall be suitably and properly lacquered from inside.
xi.	Edifenphos	Mild steel containers suitably and properly lacquered from inside. Aluminium containers may also be used.
<p>NOTE – Monocrotophos water soluble concentrates, when packed in HDPE containers of 100 ml to 5 litres capacity, may be sealed by mechanical seal proofing arrangement as a tight HDPE bung insertion and a ring operated pilferproof ratchet type HDPE screw cap as an alternate to heat-sealing provisions. If solvents of aromatic hydrocarbon origin are used in making the formulation, HDPE containers shall not be used for packaging that formulation.</p>		

5.3 Other Liquid Formulations

The following liquid formulations shall be packaged in clean and dry containers as described in table 3.

Table 3 – Requirements for packaging of liquid formulations other than technical and emulsifiable concentrates

S/N	Pesticides	Requirements
i.	Lime sulphur solution; mosquito larvicidal oil	Mild steel containers
ii.	Emulsifiable larvicidal oil; pyrethrum based; Pyrethrum extracts	Aluminium containers. The containers shall be wrapped individually in transparent LDPE bags of not less than 0.075 mm thickness. These bags shall be closed by heat sealing and contain adequate space to collect the leaking material, if any. Cypermethrin 10 % EC and deltamethrin EC may also be packaged in PET containers of 100, 250, 500 and 1000 ml capacity with lokproof and pilferproof closure system
iii.	Nicotine sulphate solution	Mild steel or tinplate containers suitably and properly lacquered from inside
iv.	Liquid amine salts solution	Mild steel containers suitably and properly lacquered from inside. Tinplate containers suitably and properly lacquered from inside may be used for packing up to 10 litres of material
v.	Liquid amine salts of 2,4-D	Mild steel or tinplate or HDPE containers.

Bibliography

[1] ES 695:2002, *Pesticides — Packaging*

Copy for public comments

DRS 565-2: 2023

Copy for public comments

Price based on nnn pages

©RSB 2023 - All rights reserved