SRI LANKA STANDARD 466 : PART 13:1983
UDC 632.95

SPECIFICATION FOR
PLANT PROTECTION PRODUCTS
PART 13—DIURON

BUREAU OF CEYLON STANDARDS

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PART 13 : DIURON

SLS 466:Part 13:1983

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This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD

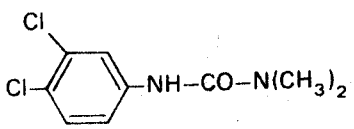
SPECIFICATION FOR PLANT PROTECTION PRODUCTS

PART 13 : DIURON

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Bureau of Ceylon Standards on 1983-09-29, after the draft, finalized by the Drafting Committee on Pesticides, had been approved by the Agricultural and Food Products Divisional Committee.

Diuron is the common name accepted by the International Organization for Standardization (ISO) for 3-(3,4-dichlorophenyl)-1,1-dimethyl urea. The structural formula is



$C_9H_{10}Cl_2N_2O$

This standard is based on the FAO Specification on Diuron.

The methods of analysis and miscellaneous techniques referred to in this part have been developed and adopted by Collaborative International Pesticides Analytical Council Limited (CIPAC) and are found in CIPAC Handbook Vol. 1 (1970) and Vol. 1A (1980).

Information on standard waters for laboratory evaluation of pesticidal formulations will be found in *CIPAC Monograph 1, Standard Waters and an FAO Survey of naturally occurring waters (1972)*, W. Heffer and Sons Limited Cambridge, United Kingdom.

Wherever possible, standards for apparatus and common names for pesticides are those approved by the ISO.

All standard values given in this part are in SI units.

This specification is subject to the provisions of the *Control of Pesticides Act No. 33 of 1980* and regulations framed thereunder.

Other essential background information could be obtained from *Manual on the use of FAO Specification for Plant Protection Products.*

1 SCOPE

This part prescribes requirements and methods of sampling and test for diuron technical and diuron dispersible powders.

2 REFERENCES

SLS 592 Sampling of pesticidal products

SLS ... Code of practice for packaging of pesticides.

SECTION 1 - DIURON TECHNICAL

3 DESCRIPTION

The material shall consist essentially of diuron and may contain related manufacturing impurities. It shall be a powder, white to cream in colour, free from extraneous impurities or added modifying agents.

4 ACTIVE INGREDIENT

4.1 Identity tests

Where the identity of the material is in doubt, the identity shall be established by the following tests:

4.1.1 *Melting point (CIPAC 1A, page 1251, method 100/1/M/5.2.1)*

Range, 154 °C to 159 °C.

The melting point of the material shall not be depressed by admixture with an equal quantity of pure diuron.

4.1.2 *TLC (CIPAC 1A, page 1252, method 100/1/M/5.2.2)*

The spot from the major component in the chromatogram prepared from the material shall have the same R_f as that from a standard diuron.

4.2 Diuron *(CIPAC 1A, page 1252, method 100/1/M/5.3)*

4.2.1 *Minimum content*

Minimum : 95.0 per cent.

4.2.2 *Declared content*

The diuron content shall be declared and when determined, the content shall not differ from that declared by more than ± 2 percentage units.

5 IMPURITIES

5.1 Free amine salts *(CIPAC 1A, page 1252, method 100/1/M/5.5)*

Maximum : 0.4 per cent, calculated as dimethylamine hydrochloride.

5.2 Water *(CIPAC 1A, page 1252, method 100/1/M/5.6)*

Maximum : 1.0 per cent.

6 PACKAGING

The containers shall comply with the requirements stipulated in SLS ... Code of practice for packaging of pesticides (under preparation).

7 MARKING

The marking on the containers shall comply with the *Control of Pesticides Act No. 33 of 1980* and regulations framed thereunder.

SECTION 2 - DIURON DISPERSIBLE POWDERS

8 DESCRIPTION

The product shall consist of a homogenious mixture containing diuron (complying with Section 1, page 2) as the active ingredient together with carriers and any necessary formulants. It shall be a fine powder, free from visible extraneous matter and hard lumps.

9 ACTIVE INGREDIENT

9.1 Identity test

Where the identity of the active ingredient is in doubt, the identity shall be established by the following test:

9.1.1 *TLC (CIPAC 1A, page 1252, method 100/3/M/5.3)*

The major spot in the chromatogram prepared from the extracted active ingredient shall have the same R_f as that from a standard diuron.

9.2 Diuron *(CIPAC 1A, page 1252, method 100/3/M/5.3)*

The diuron content shall be declared and when determined, the content shall not differ from that declared by more than the following amounts:

Declared content	Permitted tolerance
Up to 60 per cent	± 5 per cent of the declared content
Above 60 per cent	± 3 percentage units

10 IMPURITIES

10.1 Free amine salts *(CIPAC 1A, page 1252,method 100/3/M/5.5)*

Maximum : 0.4 per cent, of the diuron content found under **9.2**.

10.2 Water *(CIPAC 1A, page 1252,method 100/3/M/5.8)*

Maximum : 2.5 per cent.

11 PHYSICAL PROPERTIES

11.1 Wet sieve test *(CIPAC 1 ; MT 59.3)*

Maximum : 2 per cent retained on a 75-μm test sieve.

11.2 Suspensibility *(CIPAC 1A, page 1252,method 100/3/M/5.8)*

A minimum of 40 per cent of the diuron content declared under **9.2** shall be in suspension after 30 minutes in CIPAC Standard Water A when the product is tested as received and in Standard Water C when the product is tested after the stability test **(12)**.

Alternatively, if the buyer requires the CIPAC Standard Waters to be used, then this should be specified when ordering.

11.3 Wettability of the product *(CIPAC 1A, page 1253, method 100/3/M/5.9)*

It shall be completely wetted in not more than 1.5 min, without swirling.

11.4 Persistent foam *(CIPAC 1A, page 1253, method 100/3/M/5.10)*

Maximum : 20 ml after 1 min.

12 STORAGE STABILITY

Stability at 54 °C *(CIPAC 1A,page 1253, method 100/3/M/5.11)*

After storage at 54 ± 2 °C for 14 days the product shall continue to comply with **9.2**, **10.1**, **11.1** and **11.2**.

13 PACKAGING

The containers shall comply with the requirements stipulated in **SLS** ... Code of practice for packaging pesticides (under preparation).

14 MARKING

The marking on the containers shall comply with the *Control of Pesticides Act No. 33 of 1980* and regulations framed thereunder.

SECTION 3 - SAMPLING AND CONFORMITY TO STANDARD

15 SAMPLING

15.1 Representative samples of the material, for ascertaining conformity to the requirements of this specification, shall be drawn as prescribed in **SLS 592**.

15.2 Minimum sizes of composite samples to be drawn shall be as follows:

a) Diuron technical - at least 300 g; and

b) Diuron dispersible powder - at least 750 g.

16 CONFORMITY TO STANDARD

A lot shall be declared as conforming to the requirements of this specification, if the following conditions are satisfied.

16.1 All containers selected as in 15.1 conform to the packaging and marking requirements.

16.2 The composite sample drawn as in 15.1, when tested, satisfies requirements given in the relevant section.

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

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SRI LANKA STANDARDS INSTITUTION

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The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

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