

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: Product Chemistry Review of Chlorothalonil Technical
(EPA ID No. 060063-R)

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NOV 26 1991

Applicant: Sostram Corporation

EPA ID No: 060063-R

MRID Nos: 418157-01, 418556-01, 418556-02

CAS No: 1897-45-6

Pesticide Chemical Code (PCC): 081901

Chemical Name: 2,4,5,6-Tetrachloroisophthalonitrile

Common Name: Chlorothalonil

Product Name: Chlorothalonil Technical

Use: Fungicide

INTRODUCTION

Sostram Corp. is requesting a "me-too" registration of the technical grade of the active ingredient (TGAI), Chlorothalonil Technical. (letter of 2/27/91, Linda C. Watson). The product chlorothalonil technical is stated to be substantially similar to SDS BIOTECH Corps' chlorothalonil fungicide product (EPA Reg. No. 50534-7). Product chemistry requirements for the TGAI as described in 40 CFR 158.150 must be fulfilled for full registration.

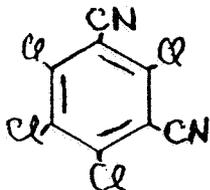
PRODUCT IDENTITY AND COMPOSITION (MRID 418157-01)

61-1: Product Identity and Disclosure of Ingredients

Chlorothalonil is the active ingredient (ai) in the TGAI produced by Sostram Corp. Chlorothalonil is:

2,4,5,6-tetrachloroisophthalonitrile (IUPAC)

1,3-benzodicarbonitrile, 2,4,5,6-tetrachloro- (CAS name)



Molecular Formula: $C_8 Cl_4 N_2$

Molecular Weight: 265.93

CAS Number: 1897-45-6

Pesticide Chemical Code (PCC): 081901

The composition of the TGAI is contained in the Confidential Statement of Formula (CSF, EPA Form 8570-4) and is discussed in Confidential Appendix B.

The data satisfy the requirements of 40 CFR 158.155. No additional data are needed.

61-2: Beginning Materials and Manufacturing Process

See Confidential Appendix A for a discussion of the beginning materials and the manufacturing process.

The data satisfy the requirements of 40 CFR 158.160 - 158.162 for the TGAI chlorothalonil technical. No additional data are needed.

61-3: Discussion of the Formation of Impurities

See Confidential Appendix A for a discussion of the formation of impurities.

The data satisfy the requirements of 40 CFR 158.167 for the TGAI chlorothalonil technical. No additional data are needed.

ANALYSIS AND CERTIFICATION OF PRODUCT INGREDIENTS (MRID 418556-01)

62-1: Preliminary Analysis

Five samples of the TGAI were examined for the product's components. For a discussion of the results and the analytical methods used, see Confidential Appendix B.

The data satisfy the requirements of 40 CFR 158.170 for the TGAI, chlorothalonil technical. No additional data are needed.

62-2: Certified Limits

The certified limits are contained in the CSF and are discussed in Confidential Appendix B.

The data satisfy the requirements of 40 CFR 158.175 for the

TGAI, chlorothalonil technical. No additional data are needed.

62-3: Enforcement Analytical Methods

An adequate enforcement method is available for determination of the active ingredient of the TGAI chlorothalonil. The method and its validation data are discussed in Confidential Appendix B. No additional data are needed.

PHYSICAL AND CHEMICAL CHARACTERISTICS

The physicochemical properties of Chlorothalonil Technical are summarized below (MRID 418556-02).

Guidelines Reference Number (GRN)	Property	Description
63-2	Color	White
63-3	Physical State	Finely divided powder
63-5	Melting Point	252.1 - 253.6 °C
63-7	Density	0.654 +/- 0.009 g/ml (40.77 lbs/cu. ft.)
63-8	Solubility	Water, 0.96 +/- 0.01 ppm Methanol, 0.192 +/- 0.011 g/100ml Octanol, 0.070 +/- 0.001 g/100 ml
63-9	Vapor Pressure	<1.0 x 10 ⁽⁻⁷⁾ torr (25 °C)
63-11	Octanol/Water Partition Coefficient	3.79 +/- 0.07 (25 °C)
63-12	pH	5.90 +/- 0.01 (25 °C)
63-13	Stability	Stable when stored at 54 °C for 14 days
63-14	Oxidizing or Reducing Action	No oxidizing or reducing action noted
63-17	Storage Stability	Study underway
63-20	Corrosion Characteristics	No apparent corrosion

Information on the stability (GRN 63-13) of the TGAI is required. The information should include, in addition to temperature stability noted above, discussion of the sensitivity of the active ingredient to metal and metal ions and the sensitivity of the active ingredient to sunlight.

SUMMARY

The following information is needed to support the registration of the technical grade of the active ingredient (TGAI) Chlorothalonil Technical.

63-13: Stability

Information which is needed includes a discussion of the sensitivity of the active ingredient to metal and metal ions and the sensitivity of the active ingredient to sunlight.

CONCLUSION

PCRS/RSB concludes that the unregistered TGAI produced by Sostram Corporation is substantially similar to the registered TGAI produced by FERMENTA ASC CORPORATION.

NOTE TO PM:

There is some question concerning the registrant of the registered product Technical Chlorothalonil Fungicide (EPA Reg. No. 50534-7). The Confidential Statement of Formula, dated 4/18/89, lists [REDACTED] of the registered product. However, the letter of 2/27/91 (Linda C. Watson, Consultant/Regulatory Affairs, Sostram corp.) indicates that the registered product belongs to SDS BIOTECH CORPORATION.

ATTACHMENTS:

Confidential Appendices A and B.

Source information is not included.

CHLOROTHALONIL PRODUCT CHEMISTRY REVIEW

Pages 5 thru 11 are not included with the enclosed copy. The pages contain product manufacturing and quality control process information.