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

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

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MEMORANDUM

SUBJECT: Methanesulfonamide - New Chemical Screen
(also known as F6285)

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DEC 20 1994

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12/21/94

The current data submission for methanesulfonamide (a herbicide for soybeans) has passed the new chemical screen in EFGWB.

Previously (review dated 10/31/94; DP Barcode D207675), methanesulfonamide failed the new chemical screen due to an unacceptable photodegradation in water study (161-2). In the study the registrant (FMC Corp.) did not monitor the formation and declin of major photodegradates (such as 3-desmethyl-4-desdifluoromethyl F6285, desdichloromonohydroxy F6285). Other studies passed the preliminary screening against the acceptance criteria.

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In response to EFGWB's comments, the registrant conducted a supplemental aqueous photolysis study in which the sampling times were extended to 10 days (the first study was terminated within 8 hours). The registrant has submitted the preliminary results from the supplemental study which show that the major photodegradates (i.e., 3-desmethyl-4-desdifluoromethyl F6285 and desdichloromonohydroxy F6285) detected in the first study are not persistent. Each of these two photodegradation products reached a maximum of approximately 15% of the applied after 4 hours of exposure. Then both chemicals degraded very rapidly; less than 2% of the applied were detected at 22-hour sampling. A triazolinone product was gradually formed through the cleavage of phenyl and triazolinone rings in methanesulfonamide at all three pH's. This photoproduct reached a level of approximately 20% of the applied after 168 hours of exposure.

Since the supplemental study has provided additional information to upgrade the first aqueous photolysis study (161-2), EFGWB concludes that the study passes the preliminary screening.

Listed below are the Environmental Fate data requirements for methanesulfonamide:

Status of the Environmental Data Requirements for Methanesulfonamide

Data Were Submitted to Support the Following Requirements:

161-1 Hydrolysis

the study (MRID 41928202) was determined acceptable (see EFGWB's reviews dated 10/28/91 and 12/21/92).

161-2 Photolysis in Water

the study (MRID 43345424) is currently in review. The registrant has submitted additional information from a supplemental aqueous photolysis study in which the formation and decline of the photodegradates were investigated up to 10 days of exposure.

161-3 Photolysis on Soil

the study (MRID 43345425) is currently in review.

162-1 Aerobic Soil Metabolism

the studies (MRID 42932117 and 41928203) were determined acceptable (see EFGWB's reviews dated 10/28/91; 12/21/92; and 3/14/94).

162-3 Anaerobic Aquatic Metabolism

the study (MRID 43345426) is currently in review.

163-1 Leaching-Adsorption/Desorption

the ads./des. study (MRID 41911604) was determined acceptable (see EFGWB's reviews dated 10/28/91 and 12/21/92).

the aged leaching study (MRID 43355903) is currently in review.

164-1 Terrestrial Field Dissipation

the studies (MRID 43345427 and 43345434) are currently in review.

Data Are Not Needed to Support the Following Requirements:

161-4 Photolysis in Air

waived due to the low vapor pressure ($<10^{-9}$ mmHg at 25C).

163-2 Volatility-Laboratory

waived due to the low vapor pressure ($<10^{-9}$ mmHg at 25C).

163-3 Volatility-Field

waived due to the low vapor pressure ($<10^{-9}$ mmHg at 25C).

165-4 Fish Bioaccumulation

waived in the EFGWB's review dated 12/21/92 due to the low octanol water partition coefficient (K_{ow}=0.006). However, the submitted fish bioaccumulation study (MRID 43345433) will be reviewed by EFGWB.