

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY:

INGREDIENTS:

OCTAMETHYLCYCLOTETRASILOXANE:

TOXICITY TO FISH:

LC50 (ONCORHYNCHUS MYKISS (RAINBOW TROUT)): >0.022 MG/L

EXPOSURE TIME: 96 H

REMARKS: NO TOXICITY AT THE LIMIT OF SOLUBILITY.

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES:

EC50 (DAPHNIA SP.): >0.015 MG/L

EXPOSURE TIME: 48 H

REMARKS: NO TOXICITY AT THE LIMIT OF SOLUBILITY.

TOXICITY TO ALGAE:

EC50: >0.022 MG/L

EXPOSURE TIME: 96 H

REMARKS: NO TOXICITY AT THE LIMIT OF SOLUBILITY.

NOEC: 0.022 MG/L

EXPOSURE TIME: 96 H

REMARKS: NO TOXICITY AT THE LIMIT OF SOLUBILITY.

TOXICITY TO FISH (CHRONIC TOXICITY):

NOEC (ONCORHYNCHUS MYKISS (RAINBOW TROUT)): \geq 0.0044 MG/L

REMARKS: NO TOXICITY AT THE LIMIT OF SOLUBILITY.

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES (CHRONIC TOXICITY):

NOEC (DAPHNIA MAGNA (WATER FLEA)): >0.0079 MG/L

EXPOSURE TIME: 21 D

REMARKS: NO TOXICITY AT THE LIMIT OF SOLUBILITY.

TOXICITY TO BACTERIA:

IC50: >10,000 MG/L

METHOD: ISO 8192

ECOTOXICOLOGY ASSESSMENT:

CHRONIC AQUATIC TOXICITY:

MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE.

PERSISTENCE AND DEGRADABILITY:

INGREDIENTS:

OCTAMETHYLCYCLOTETRASILOXANE:

BIODEGRADABILITY:

RESULT: NOT READILY BIODEGRADABLE.

BIODEGRADATION: 3.7%

EXPOSURE TIME: 28 D

METHOD: OECD TEST GUIDELINE 310

STABILITY IN WATER:

DEGRADATION HALF LIFE: 69.3 - 144 H (24.6 DEG. C) PH: 7

METHOD: OECD TEST GUIDELINE 111

BIOACCUMULATIVE POTENTIAL:

INGREDIENTS:

OCTAMETHYLCYCLOTETRASILOXANE:

PARTITION COEFFICIENT N-OCTANOL/WATER:

LOG POW: 6.48 (25.1 DEG. C)

MOBILITY IN SOIL: NO DATA AVAILABLE

OTHER ADVERSE EFFECTS:

INGREDIENTS:

OCTAMETHYLCYCLOTETRASILOXANE:

RESULTS OF PBT AND VPVB ASSESSMENT:

REMARKS:

OCTAMETHYLCYCLOTETRASILOXANE (D4) MEETS THE CURRENT REACH ANNEX XIII CRITERIA FOR PBT AND VPVB. IN CANADA, D4 HAS BEEN ASSESSED AND DEEMED TO MEET THE PIT CRITERIA. HOWEVER, D4 DOES NOT BEHAVE SIMILARLY TO KNOWN PBT/VPVB SUBSTANCES. THE WEIGHT OF SCIENTIFIC EVIDENCE FROM FIELD STUDIES SHOWS THAT D4 IS NOT BIOMAGNIFYING IN AQUATIC AND TERRESTRIAL FOOD WEBS. D4 IN AIR WILL DEGRADE BY REACTION WITH NATURALLY OCCURRING HYDROXYL RADICALS IN THE ATMOSPHERE. ANY D4 IN AIR THAT DOES NOT DEGRADE BY REACTION WITH HYDROXYL RADICALS IS NOT EXPECTED TO DEPOSIT FROM THE AIR TO WATER, TO LAND, OR TO LIVING ORGANISMS.