

## TABLE OF CONTENTS

FOREWORD.....	1
1. EXECUTIVE SUMMARY .....	4
2. IDENTITY AND PHYSICAL/CHEMICAL PROPERTIES .....	5
3. ANALYTICAL METHODS .....	5
4. SOURCES OF HUMAN AND ENVIRONMENTAL EXPOSURE.....	6
4.1    Natural sources .....	6
4.2    Anthropogenic sources.....	6
4.3    Production and uses .....	6
5. ENVIRONMENTAL TRANSPORT, DISTRIBUTION, AND TRANSFORMATION.....	7
5.1    Air .....	7
5.2    Water.....	7
5.3    Sediment and soil.....	7
5.4    Biota.....	7
5.5    Environmental modelling.....	8
6. ENVIRONMENTAL LEVELS AND HUMAN EXPOSURE.....	8
6.1    Environmental levels .....	8
6.1.1    Ambient air .....	8
6.1.2    Indoor air.....	8
6.1.3    Surface water and groundwater.....	9
6.1.4    Drinking-water .....	9
6.1.5    Soil and sediment .....	9
6.1.6    Food .....	9
6.1.7    Consumer products.....	9
6.1.8    Human tissues and fluids .....	9
6.2    Human exposure: Environmental.....	10
6.3    Human exposure: Occupational.....	11
7. COMPARATIVE KINETICS AND METABOLISM IN LABORATORY ANIMALS AND HUMANS .....	11
8. EFFECTS ON LABORATORY MAMMALS AND <i>IN VITRO</i> TEST SYSTEMS.....	12
8.1    Single exposure.....	12
8.2    Short-, medium-, and long-term exposure .....	12
8.2.1    Inhalation .....	12
8.2.2    Oral .....	13
8.3    Carcinogenicity.....	13
8.4    Genotoxicity and related end-points .....	13
8.5    Reproductive toxicity.....	14
8.6    Mode of action of critical effect.....	15

9. EFFECTS ON HUMANS.....	15
9.1 Acute effects .....	15
9.2 Effects of long-term exposure.....	15
9.2.1 Effects on the nervous system .....	16
9.2.2 Cardiovascular disease .....	17
9.2.3 Risk factors for cardiovascular disease .....	18
9.2.4 Effects on the eye .....	19
9.2.5 Carcinogenicity .....	19
9.2.6 Effects on reproduction and development.....	19
9.2.7 Other effects .....	20
10. EFFECTS ON ORGANISMS IN THE LABORATORY AND FIELD.....	20
10.1 Terrestrial organisms .....	20
10.2 Aquatic organisms .....	20
11. EFFECTS EVALUATION.....	21
11.1 Evaluation of health effects .....	21
11.1.1 Hazard identification .....	21
11.1.2 Exposure-response analyses and criteria for setting tolerable intakes/concentrations or guidance values .....	22
11.1.3 Sample risk characterization for the general population .....	23
11.1.4 Uncertainties and degree of confidence.....	23
11.2 Evaluation of environmental effects .....	24
11.2.1 Terrestrial organisms.....	24
11.2.2 Aquatic organisms.....	24
11.2.3 Discussion of uncertainty .....	25
12. PREVIOUS EVALUATIONS BY INTERNATIONAL BODIES.....	25
REFERENCES .....	26
APPENDIX 1 — SOURCE DOCUMENT .....	32
APPENDIX 2 — CICAD PEER REVIEW .....	32
APPENDIX 3 — CICAD FINAL REVIEW BOARD .....	33
APPENDIX 4 — CALCULATION OF THE BMC.....	34
INTERNATIONAL CHEMICAL SAFETY CARD .....	37
RÉSUMÉ D'ORIENTATION .....	39
RESUMEN DE ORIENTACIÓN .....	41