

TABLE OF CONTENTS

FOREWORD.....	1
1. EXECUTIVE SUMMARY	4
2. IDENTITY AND PHYSICAL/CHEMICAL PROPERTIES	6
3. ANALYTICAL METHODS	6
4. SOURCES OF HUMAN AND ENVIRONMENTAL EXPOSURE	7
5. ENVIRONMENTAL TRANSPORT, DISTRIBUTION, AND TRANSFORMATION	9
6. ENVIRONMENTAL LEVELS AND HUMAN EXPOSURE.....	11
6.1 Environmental levels	11
6.2 Human exposure	12
7. COMPARATIVE KINETICS AND METABOLISM IN LABORATORY ANIMALS AND HUMANS.....	13
7.1 Absorption	13
7.2 Distribution	14
7.3 Elimination	14
7.4 Pharmacokinetic models	15
7.5 Biological monitoring.....	16
8. EFFECTS ON LABORATORY MAMMALS AND IN VITRO TEST SYSTEMS	16
8.1 Single exposure.....	16
8.2 Short-term exposure.....	17
8.3 Medium-term exposure.....	17
8.4 Long-term exposure and carcinogenicity.....	17
8.5 Genotoxicity and related end-points	19
8.6 Reproductive toxicity.....	20
8.6.1 Effects on fertility.....	20
8.6.2 Developmental toxicity	20
8.7 Other toxicity.....	20
8.8 Mode of action.....	20
9. EFFECTS ON HUMANS	21
10. EFFECTS ON OTHER ORGANISMS IN THE LABORATORY AND FIELD	24
10.1 Essentiality.....	24
10.2 Aquatic environment	24
10.3 Terrestrial environment.....	28
11. EFFECTS EVALUATION	29
11.1 Evaluation of health effects	29
11.1.1 Hazard identification and dose-response assessment.....	29
11.1.2 Criteria for setting tolerable intakes and concentrations.....	30
11.1.3 Sample risk characterization.....	30

11.1.4	Uncertainties in the evaluation of health risks.....	30
11.2	Evaluation of environmental effects	31
11.2.1	Uncertainties in the evaluation of environmental effects	32
12.	PREVIOUS EVALUATIONS BY IOMC BODIES	32
	REFERENCES	33
	APPENDIX 1 — ACRONYMS AND ABBREVIATIONS	48
	APPENDIX 2 — SOURCE DOCUMENTS	48
	APPENDIX 3 — CICAD PEER REVIEW	49
	APPENDIX 4 — CICAD FINAL REVIEW BOARD	50
	APPENDIX 5 — OUTLINE OF THE SPECIES SENSITIVITY DISTRIBUTION METHOD (DUTCH STATISTICAL EXTRAPOLATION METHOD) USED TO DERIVE GUIDANCE VALUES FOR COBALT FOR THE PROTECTION OF AQUATIC SPECIES.....	51
	INTERNATIONAL CHEMICAL SAFETY CARDS.....	55
	RÉSUMÉ D'ORIENTATION.....	79
	RESUMEN DE ORIENTACIÓN.....	82