



**PART 201 GENERIC DRAFT CLEANUP CRITERIA AND SCREENING LEVELS;
PART 213 DRAFT TIER 1 RISK-BASED SCREENING LEVELS (RBSLs)
FOR PHENYTOIN**

GROUNDWATER: RESIDENTIAL AND INDUSTRIAL-COMMERCIAL

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to one microgram per liter (ug/L).

Guidesheet Number →		#1	#2	#3	#4	#5	#6	#7	#8	#9
	Chemical Abstract Service Number	Residential & Commercial I Drinking Water Criteria & RBSLs	Industrial & Commercial II, III & IV Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level
Phenytoin	57410	17	68	89 (X)	NLV	NLV	14,000	32,000	ID	ID

SOIL: RESIDENTIAL AND COMMERCIAL I

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to one microgram per kilogram (ug/kg).

Guidesheet Number →		#10	Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
	Chemical Abstract Service Number	Statewide Default Background Levels	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
	Hazardous Substance		Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Phenytoin	57410	NA	340	1,800 (X)	2.8E+5	NLV	NLV	NLV	NLV	2.2E+8	1.0E+5	NA



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FOR PHENYTOIN**

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to one microgram per kilogram (ug/kg).

Guidesheet Number →			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21	#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#30	
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Industrial and Commercial Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
Phenytoin	57410	NA	340	1,400	1,800 (X)	2.8E+5	NLV	NLV	NLV	NLV	2.8E+8	4.8E+5	6.7E+5	5.6E+5	NA

TOXICOLOGICAL AND CHEMICAL-PHYSICAL DATA

Scientific notation is represented by E+ or E- a value, for example 2×10^6 is reported as 2.0E+6.
Units are as indicated in each column heading.

Hazardous Substance	Chemical Abstract Service Number (CAS#)	Oral Reference Dose (RfD)	Oral Slope Factor (SF)	Chronic Inhalation Reference Concentration (RfC)	Inhalation Unit Risk Factor (IURF)	Occupational Short Term Exposure Level (STEL)	Relative Source Contribution for Drinking Water (RSC)	Ingestion Absorption Efficiency (AEi)	Dermal Absorption Efficiency (AEd)	Relative Source Contribution for Soil (RSC)	Log Octanol-Water Partition Coefficient (Log Kow)	Soil Organic Carbon-Water Partition Coefficients for Organic Compounds (Koc)
		mg/Kg-day	(mg/Kg-day) ⁻¹	ug/m ³	(ug/m ³) ⁻¹	ug/m ³	unitless	unitless	unitless	unitless	unitless	L/Kg
Phenytoin	57410	3.0E-2	5.1E-2	NA	1.4E-5	NA	0.2	1.0	0.1	1.0	2.47	1,473

Hazardous Substance	Soil K _{oc} for Ionizing Organic Compounds at pH=6.8	Soil-Water Distribution Coefficients for Inorganic Compounds at pH=6.8 (Kd)	Henry's Law Constant at 25°C (HLC)	Air Diffusivity (D _i or D _a or D ^{air})	Water Diffusivity (D _w)	Lower Explosive Limit in Air (LEL)	Flash Point (FP)	Water Solubility (S)	Physical State at Standard Temperature & Pressure	Molecular Weight (MW)
	L/Kg	L/Kg	atm-m ³ /mol	cm ² /s	cm ² /s	unitless	°F	ug/L		g/mol
Phenytoin	NA	NR	1.02E-11	0.08	8.0E-6	NA	NA	3.2E+4	solid	252.27

Footnote X:

See [FOOTNOTE X](#) of the Michigan Department of Environmental Quality's Remediation and Redevelopment Division's (RRD), [RRD Operational Memorandum No. 1](#) regarding the GSI criterion. The draft Surface Water Human Drinking Water Value (HDV) and Soil GSI Protection Criteria for HDV for phenytoin (CAS # 57-41-0) are 15 µg/L and 300 µg/kg, respectively.

Acronyms:

"ID" means insufficient data to develop a criterion

"NA" means a criterion or value is not available or, in the case of background, not applicable.

"NLV" means that the hazardous substance is not likely to volatilize under most conditions.

"NR" means not relevant.