

MARPOL, Annex II, Categorization of Noxious Liquid Substances

Appendices to annex II APPENDIX 1												
Guidelines for the categorization of noxious liquid substances												
Products are assigned to Pollution Categories based on an evaluation of their properties as reflected in the resultant GESAMP Hazard Profile as shown in the table below:												
Rule	A1 Bioaccumulation	A2 Biodegradation	B1 Acute toxicity	B2 Chronic toxicity	D3 Long-term health effects	E2 Effects on marine wildlife and on benthic habitats	Cat					
1			≥ 5				X					
2	≥ 4		4									
3		NR	4									
4	≥ 4	NR			CMRTNI							
5			4									
6			3									
7			2				Y					
8	≥ 4	NR		Not 0								
9				≥ 1								
10						Fp,F or S if not inorganic						
11					CMRTNI		OS					
12	Any product not meeting the criteria of rules 1 to 11 and 13						Z					
13	All products identified as: ≥2 in column A1; R in column A2; blank in column D3; not Fp, F or S (if not organic) in column E2; and 0 (zero) in all other columns of the GESAMP Hazard Profile						OS					
Abbreviated legend to the revised GESAMP Hazard Evaluation Procedure												
Columns A and B - Aquatic Environment												
A		B										
Bioaccumulation and Biodegradation		Aquatic Toxicity										
Rating	A 1 Bioaccumulation		A 2 Biodegradation	B 1 Acute Toxicity		B 2 Chronic Toxicity						
	log Pow	BCF		LC/EC/IC ₅₀ (mg/l)	NOEC (mg/l)							
0	<1 or > ca. 7	not measurable	R: readily biodegradable NR: not readily biodegradable	>1000	>1							
1	≥1 - <2	≥1 - <10		>100 - ≤1000	>0.1 - ≤1							
2	≥2 - <3	≥10 - <100		>10 - ≤100	>0.01 - ≤0.1							
3	≥3 - >4	≥100 - <500		>1 - ≤10	>0.001 - ≤0.01							
4	≥4 - >5	≥500 - <4000		>0.1 - ≤1	≤0.001							
5	≥5 - > ca. 7	≥4000		>0.01 - ≤0.1								
6				≤0.01								
Columns C and D - Human Health (Toxic effects to mammals)												
Ratings	C Acute mammalian toxicity			D Irritation, Corrosion & Long term health effects								
	C 1 Oral Toxicity LD ₅₀ /ATE (mg/kg)	C 2 Dermal Toxicity LD ₅₀ /ATE (mg/kg)	C 3 Inhalation Toxicity LC ₅₀ /ATE (mg/l)	D 1 Skin Irritation & corrosion	D 2 Eye Irritation & corrosion	D 3 Long term health effects						
0	>2000	>2000	>20	not irritating	not irritating	C - Carcinogen M - Mutagenic R - Reprotoxic Se- Sensitizing to skin Sr - Sensitizing to respiratory system A - Aspiration hazard T - Target organ toxicity N - Neurotoxic I - Immunotoxic						
1	>300 - ≤2000	>1000 - ≤2000	>10 - ≤20	mildly irritating	mildly irritating							
2	>50 - ≤300	>200 - ≤1000	>2 - ≤10	Irritating	Irritating							
3	>5 - ≤50	>50 - ≤200	>0.5 - ≤2	Severely irritating or corrosive 3A Corr. (≤4hr) 3B Corr. (≤1hr) 3C Corr. (≤3m)	severely irritating							
4	≤5	≤50	≤0.5									
Column E Interferences with other uses of the sea												
E 1 Tainting		E 2 Physical effects on wildlife & benthic habitats		E 3 Numerical Rating Interference with Coastal Amenities								
NT: not tainting (tested) T: tainting test positive		FP: Persistent Floater F: Floater S: Sinking Substances		0	no interference no warning							
				1	slightly objectionable warning, no closure of amenity							
				2	moderately objectionable possible closure of amenity							
				3	highly objectionable closure of amenity							