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No. S 696

PREVENTION OF POLLUTION OF THE SEA ACT 1990

PREVENTION OF POLLUTION OF THE SEA (NOXIOUS LIQUID SUBSTANCES IN BULK) (AMENDMENT) REGULATIONS 2023

In exercise of the powers conferred by section 34(1) of the Prevention of Pollution of the Sea Act 1990, the Maritime and Port Authority of Singapore, with the approval of the Minister for Transport, makes the following Regulations:

Citation and commencement

1. These Regulations are the Prevention of Pollution of the Sea (Noxious Liquid Substances in Bulk) (Amendment) Regulations 2023 and come into operation on 1 November 2023.

Amendment of Appendix 1 of First Schedule

2. In the Prevention of Pollution of the Sea (Noxious Liquid Substances in Bulk) Regulations 2006 (G.N. No. S 686/2006), in the First Schedule, in Appendix 1, after “**The Revised GESAMP hazard evaluation procedure**”, replace the tables with —

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Numerical rating	A Bioaccumulation and Biodegradation			B Aquatic Toxicity	
	A1 Bioaccumulation		A2 Biodegradation	B1 Acute toxicity LC/EC/IC ₅₀ (mg/L)	B2 Chronic toxicity EC ₁₀ or NOEC (mg/L)
	A1a: log P _{ow}	A1b: BCF			
0	log < 1, log > ca.7 MW > 1000	no measurable BCF	R: readily biodegradable	AT > 1000	CT > 1
1	1 ≤ log < 2	1 ≤ BCF < 10	NR: not readily biodegradable	100 < AT ≤ 1000	0.1 < CT ≤ 1
2	2 ≤ log < 3	10 ≤ BCF < 100		10 < AT ≤ 100	0.01 < CT ≤ 0.1
3	3 ≤ log < 4	100 ≤ BCF < 500		1 < AT ≤ 10	0.001 < CT ≤ 0.01
4	4 ≤ log < 5	500 ≤ BCF < 4000		0.1 < AT ≤ 1	CT ≤ 0.001
5	5 ≤ log < ca.7	BCF ≥ 4000		0.01 < AT ≤ 0.1	
6				AT ≤ 0.01	

Numerical rating	C Acute Mammalian Toxicity				
	C1 Oral toxicity	C2 Dermal toxicity	C3 Inhalation toxicity		
			C3a		C3b
	LD ₅₀ /ATE (mg/kg)	LD ₅₀ /ATE (mg/kg)	vapour/mist LC ₅₀ /ATE (mg/L)	mist only LC ₅₀ /ATE (mg/L)	vapour only LC ₅₀ /ATE (mg/L)
0	ATE > 2000	ATE > 2000	ATE > 20	ATE > 5	ATE > 20
1	300 < ATE ≤ 2000	1000 < ATE ≤ 2000	10 < ATE ≤ 20	1 < ATE ≤ 5	10 < ATE ≤ 20
2	50 < ATE ≤ 300	200 < ATE ≤ 1000	2 < ATE ≤ 10	0.5 < ATE ≤ 1	2 < ATE ≤ 10
3	5 < ATE ≤ 50	50 < ATE ≤ 200	0.5 < ATE ≤ 2	0.05 < ATE ≤ 0.5	0.5 < ATE ≤ 2
4	ATE ≤ 5	ATE ≤ 50	ATE ≤ 0.5	ATE ≤ 0.05	ATE ≤ 0.5

D Irritation, Corrosion and Long-term Health Effects			
Numerical rating	D1 Skin irritation and corrosion	D2 Eye irritation and corrosion	D3 Long-term health effects
0	not irritating	not irritating	C – Carcinogenic M – Mutagenic R – Reprotoxic Ss – Sensitizing to skin Sr – Sensitizing to respiratory system A – Aspiration hazard T – Target Organ Toxicity N – Neurotoxic I – Immunotoxic
1	mildly irritating	mildly irritating	
2	irritating	irritating	
3	severely irritating or corrosive 3A Corr. (≤ 4 h) 3B Corr. (≤ 1 h) 3C Corr. (≤ 3 min)	severely irritating	

E Interference with Other Uses of the Sea			
Numerical rating	E1 Flammability flashpoint (°C)	E2 Physical effects on wildlife and benthic habitats	E3 Interference with coastal amenities
0	- (not flammable, does not burn)	Fp – Persistent floater F – Floater S – Sinker G – Gas E – Evaporator D – Dissolver and combinations thereof	no interference no warning
1	Fp > 93		slightly objectionable warning, no closure of amenity
2	60 < Fp ≤ 93		moderately objectionable possible closure of amenity
3	23 ≤ Fp ≤ 60		highly objectionable
4	Fp < 23		closure of amenity

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[G.N. Nos. S 470/2013; S 868/2014; S 798/2015;
S 667/2016; S 494/2017; S 806/2020; S 1021/2020;
S 114/2022; S 1018/2022]

Made on 30 October 2023.

YEE PING YI
*Acting Chairperson,
Maritime and Port Authority of
Singapore.*

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