

# ENVIRONMENTAL NORMS



**Board of Investment of Sri Lanka**

## CONTENTS

### STANDARDS PERTAINING TO:

	Page No'
<b>(A) ZONE ENTERPRISES</b>	
1. Tolerance Limits for Industrial Waste Water (Effluents) Discharged into the Common Waste Water Treatment Plant.....	01
<b>(B) ZONE ENTERPRISES AND LICENSED ENTERPRISES</b>	
1. Drinking Water Standards.....	03
2. Ambient Air Quality Standards.....	04
3. Permissible Noise Levels in accordance with Noise Control Regulations....	05
<b>(C) LICENSED ENTERPRISES</b>	
1. Tolerance Limits for the Discharge of Industrial Waste Water into Inland Surface Waters.....	07
2. Tolerance Limits for Industrial Waste Water Discharged on Land for Irrigation purpose .....	09
3. Hydraulic Loading Applicable for Different Soils.....	10
4. Tolerance Limits for Industrial and Domestic Waste Water Discharged into Marine Coastal Areas.....	11
5. Tolerance Limits for Waste Water from Rubber factories being Discharged into Inland Surface Waters.....	12
6. Tolerance Limits for Waste Water from Textile Industries being Discharged into Inland Surface Waters.....	13
7. Tolerance Limits for Waste Water from being Discharged from Tanning Industries.....	14
8. Classification of Industries and Recommended Buffer Zones.....	15
9. List of Chemicals requiring registration with the "National Authority for implementation of the chemical weapons Convention (CWC) in Sri Lanka" for import/use/export .....	16
10. List of Precursor Chemicals under "convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act, No.1 of 2008".....	20
11. List prescribed projects specified under EIA Regulations under the "National Environmental Act" .....	21

## **ENFORCEMENT OF PROVISIONS UNDER THE NATIONAL ENVIRONMENTAL ACT**

The operations of all enterprises should be carried out ensuring conformity to the provisions of the National Environmental Act and its regulations. The enforcement of provisions under the National Environmental Act is carried out by the BOI in respect of all projects established within its Export Processing Zones. A list of activities which could be accommodated in respect of each EPZ has been prepared and could be made available on request. In respect of Enterprises outside the Export Processing Zones, the BOI grants Environmental Clearance and issues Environmental Protection Licences after obtaining concurrence from the CEA where necessary.

The Environmental Impact Assessment regulations of Sri Lanka include a list of Prescribed Projects in respect of which a specified procedure has been laid down in the regulations for granting of environmental clearance. The Environment Department of BOI assists the project proponents in obtaining Environmental Clearance by providing the necessary guidance in case of Prescribed Projects. [Relevant schedule is attached.](#)

This document is a Guide in respect of the Environmental Protection requirements and the Standards to be adhered to by the Enterprises both within and outside the Export Processing Zones.

Further information on Environmental Protection requirements and advice could be obtained from the Environment Department of BOI.

Contact : Director (Environment Management)  
Tel : 0112451273  
Email : [sherinep@boi.lk](mailto:sherinep@boi.lk)  
Web : [www.boi.lk](http://www.boi.lk)

**Board of Investment of Sri Lanka**  
[February 2011](#)

## **ENVIRONMENTAL LICENSING PROCEDURE**

In terms of National Environmental (Protection & Quality) Regulations of 2008, made under the National Environmental Act, Enterprises are required to obtain an Environmental Protection Licence (EPL) prior to commencement of commercial operations. This EPL is issued by the Environment Management Department of the Board of Investment of Sri Lanka with the concurrence of the Central Environmental Authority (CEA). The application form for the EPL can be obtained from the Environment Management Department of the Board. The completed application should be submitted to the Environment Management Department, at least one month prior to the expected date of commencement of commercial operations. A fee would be levied for the inspection and for the issue of the Environmental Protection Licence.

Upon submission of the completed application and payment of the appropriate fee, the Environment Department will make arrangements to inspect the factory to check for compliance with the relevant Environmental Norms prior to issue of the Environmental Protection Licence. This Licence is valid for one year/three years, depending on their project. At least one month prior to the date of expiry of the Licence, an application for renewal should be submitted to the Environment Management Department in the prescribed form obtainable from this Department.

In addition to the EPL, the enterprises are also required to obtain a Licence for the management of their waste. At present this Licence is issued by the CEA. The application for this Licence can be obtained from the Environment Management Department. The completed application should be submitted to the CEA with a copy to the Environment Management Department. This application will be processed by the CEA for issuing of this Licence.

## **CHEMICALS**

Chemicals to be used as raw materials or otherwise should be disclosed by their chemical name along with their Chemicals Safety Data Sheets to the Director (Environment Management) of the BOI. In case of chemicals to be imported, approximate quantities should be indicated prior to their import. Any changes, substitutions or additions to the declared list of chemicals should be intimated to the Environment Management Department prior to importation.

If it is envisaged to import/use/export any chemicals scheduled under the Chemical Weapons Convention Act No. 58 of 2007, such chemicals required registration with the "National Authority for Implementation of the Chemical Weapons Convention (CWC) in Sri Lanka". These scheduled chemicals are shown from Page No. [16-19](#) in this booklet. For further details please contact this Authority on Telephone No. 0112327807.

In terms of the "Conventions Against Illicit Traffic In Narcotic Drugs and psychotropic Substances Act, No. 1 of 2008" Regulations have been gazetted on 10.05.2010. In accordance to these Regulations, to import/store/use any of the chemicals listed therein requires to obtain a Licence from the "Precursor Control Authority" at No: 383, Kotte Road, Rajagiriya (Tel. No. 0112868794, Fax No. 2868791, e-mail address: [mail@nddcb.gov.lk](mailto:mail@nddcb.gov.lk)).

The list of these chemicals is shown on page No. 20 in this booklet under Table I and Table II.

**TOLERANCE LIMITS FOR INDUSTRIAL WASTE WATER  
(EFFLUENTS) DISCHARGED INTO THE  
COMMON WASTE WATER TREATMENT PLANT**

<b>PARAMETERS</b>	<b>MAXIMUM TOLERANCE LIMIT</b>
BOD (5 days at 20°C) (mg/l)	200
COD (mg/l)	600
pH	6.0-8.5
Total Suspended solids (mg/l)	500
Total dissolved solids (inorganic) (mg/l)	2100
Temperature (°C)	40
Phenolic compounds (as phenolic OH) (mg/l)	5
Oil and grease (mg/l)	30
Total Chromium (mg/l)	2 (Chromium VI 0.5)
Copper (as Cu) (mg/l)	3
Lead (as Pb) (mg/l)	1
Mercury (as Hg) (mg/l)	0.001
Nickel (as Ni) (mg/l)	3
Zinc (as Zn) (mg/l)	10
Arsenic (as As) (mg/l)	0.2
Boron (as B) (mg/l)	2
Ammonical Nitrogen (as N) (mg/l)	50
Sulphides (as S <sup>2-</sup> ) (mg/l)	2
Sulphates (as SO <sub>4</sub> <sup>2-</sup> ) (mg/l)	1000
Chlorides (as Cl) (mg/l)	900
Cyanides (as CN) (mg/l)	0.2
Free Residual Chlorine (as Chlorine) (mg/l)	Nil

<b>Colour – Wave Length Range</b>	<b>Maximum Spectral Absorption Coefficient</b>
400 – 499 nm (Yellow range)	$7 \text{ m}^{-1}$
500 – 599 nm (Red range)	$5 \text{ m}^{-1}$
600 – 750 nm (Blue range)	$3 \text{ m}^{-1}$

<b>Radioactive Materials</b>	
Alpha emitters ( $\mu\text{c}/\text{ml}$ )	$10^{-7}$
Beta emitters ( $\mu\text{c}/\text{ml}$ )	$10^{-6}$

mg/l = milligrams/litre  
 $\mu\text{c}/\text{ml}$  = microcuries/millilitre  
 BOD = Biochemical Oxygen Demand  
 COD = Chemical Oxygen Demand  
 nm = nanometer

**Note:-**

The quality of waste waters discharged into common sewer or collection system should be such to ensure that the waste water.

1. does not damage the sewer by physical or chemical action;
2. does not endanger the health of the workers cleaning the sewer;
3. does not upset the processes that are normally used in sewage treatment;
4. does not overload the common treatment plant;
5. does not damage the crops or affect the soil in case the effluent after treatment is used for irrigation and,
6. does not create fire and explosion hazards due to certain constituents present in the effluent.

The industrial effluents not conforming to the specified tolerance limits or containing solids such as ash, sands, feathers, large floatable, straw, plastics, wood, lime slurry, residue, beer or distillery slops, chemical or paint residue, gross solids from cannery wastes, cinder, sand, tar, hair, rags, metal shavings, garbage and broken glass shall not be permitted to be discharged directly into the common sewer line leading to the waste water treatment plant. Such effluents have to be subjected to an inhouse treatment to bring them to be within the suggested tolerance limits and or to free them from the undesirable material mentioned above prior to discharge into the sewer line.

## DRINKING WATER STANDARDS

**(Sri Lanka Standards for potable water – SLS 614, 1983)**

PARAMETER	Highest Desirable level	Maximum permissible level
<b>A. Physico-Chemical</b>		
Electrical conductivity at 25°C $\mu\text{s}/\text{cm}$	750	3500
Total solids (mg/l)	500	2000
Colour (Hazen Units)	5	30
Taste	Unobjectionable	-
Odour	Unobjectionable	-
Turbidity (NTU)	2	8
Chloride (Cl <sup>-</sup> ) (mg/l)	200	1200
Fluoride (F <sup>-</sup> ) (mg/l)	-	1.5
Iron (Fe) (mg/l)	0.3	1
Manganese (Mn) (mg/l)	0.05	0.5
Copper (Cu) (mg/l)	0.05	1.5
Zinc (Zn) (mg/l)	5	15
Calcium (Ca) (mg/l)	100	240
Magnesium (Mg) (mg/l)	30	150
Total Phosphates (PO <sub>4</sub> <sup>3-</sup> ) (mg/l)	-	2.0
Sulphate (SO <sub>4</sub> <sup>2-</sup> ) (mg/l)	200	400
Total Alkalinity (as CaCO <sub>3</sub> ) (mg/l)	200	400
Total Hardness (as CaCO <sub>3</sub> ) (mg/l)	250	600
Free Ammonia (as NH <sub>3</sub> ) (mg/l)	-	0.06
Nitrate (NO <sub>3</sub> <sup>-</sup> ) (mg/l)	-	45
Nitrite (NO <sub>2</sub> <sup>-</sup> ) (mg/l)	-	0.01
pH	7.0 – 8.5	6.5 – 9.0
Arsenic (As) (mg/l)	-	0.05
Cadmium (Cd) (mg/l)	-	0.005
Chromium (Cr) (mg/l)	-	0.05
Cyanide (CN <sup>-</sup> ) (mg/l)	-	0.05
Lead (Pb) (mg/l)	-	0.05
Mercury (Hg) (mg/l)	-	0.001
Selenium (Se) (mg/l)	-	0.01
Free Residual Chlorine (as Chlorine) (mg/l)	-	0.2
Polynuclear aromatic hydrocarbons (mg/l)	-	0.0002
Phenolic compounds (as phenolic OH) (mg/l)	0.001	0.002
Grease & Oil (mg/l)	-	1.0
COD (Chemical Oxygen Demand) (mg/l)	-	10
<b>Radioactive materials</b>		
Gross alpha radioactivity (pC/l)	-	3
Gross beta radioactivity (pC/l)	-	30
<b>B. Bacteriological</b>		
Total Coliforms / 100 ml	Absent in (i) 95% of the samples in a year and (ii) in any two consecutive samples	10
E.Coli/100ml		Absent

## AMBIENT AIR QUALITY STANDARD

Pollutant	* Average Time	Maximum Permissible Level		+ Method of measurement
		µg/m <sup>3</sup>	ppm	
1. Particulate Matter- Aerodynamic diameter is less than 10µm in size (PM <sub>10</sub> )	Annual	50	-	Hi-volume sampling and Gravimetric or Beta Attenuation
	24hrs.	100	-	
2. Particulate Matter- Aerodynamic diameter is less than 2.5µm in size (PM <sub>2.5</sub> )	Annual	25	-	Hi-volume sampling and Gravimetric or Beta Attenuation
	24hrs.	50	-	
3. Nitrogen Dioxide (NO <sub>2</sub> )	24hrs.	100	0.05	Colorimetric using saltzman method or equivalent gas phase chemiluminescence
	8hrs.	150	0.08	
	1hr.	250	0.13	
4. Sulphur Dioxide (SO <sub>2</sub> )	24hrs.	80	0.03	Pararosanilene method or equivalent pulse fluorescent
	8hrs.	120	0.05	
	1hr.	200	0.08	
5. Ozone (O <sub>3</sub> )	1hr.	200	0.10	Chemiluminescence method or equivalent ultraviolet photometric
6. Carbon Monoxide (CO)	8hrs.	10,000	9.00	Non-Dispersive Infrared Spectroscopy
	1hr.	30,000	26.00	
	Any time	58,000	50.00	

\* Minimum number of observations required to determine the average over the specified period-

03 hour average – 03 consecutive hourly average.

08 hour average – 08 hourly average.

24 hour average – 18 hourly average.

yearly average – 09 monthly averages with at least 02 monthly average each quarter.

+ By wet chemistry methods or by automated analysers.

## **PERMISSIBLE NOISE LEVELS IN ACCORDANCE WITH NOISE CONTROL REGULATIONS**

Maximum Permissible Noise Levels (as  $L_{Acq}\ T$ ) at Boundaries of the land in which the noise source is located shall not exceed the limits set out below.

Area	L <sub>Acq</sub> T, dB(A)	
	Day Time	Night Time
Low Noise (Pradeshiya Sabha area)	55	45
Medium Noise (Municipal Council/Urban Council area)	63*	50
High Noise (EPZZ of BOI & Industrial Estates approved under part IVC of the NEA)	70	60
Silent Zone (100 m from the boundary of a courthouse, hospital, public library, school, zoo, sacred areas and areas set apart for recreation or environmental purposes)	50	45

\* Provided that the noise level should not exceed 60 dB (A) inside existing houses, during day time.

Maximum permissible Noise levels at Boundaries of the land in which the source of noise is located in  $L_{Aeq}$  T for construction activities.

## Construction Activities

L<sub>Acq</sub> T, dB (A)

### Day Time

Night time

75

50

The following noise levels will be allowed where the background noise level exceed or is marginal to the given levels in the above table.

(a) For low noise areas in which the background noise level exceeds or is marginal to the given level

(b) For medium noise areas in which the background noise level exceeds or is marginal to the given level	Measured Background Noise level + 3dB (A)
(c) For silent zone in which the background noise level exceeds or is marginal to the given level	Measured Background Noise Level + 3dB (A)
(d) For high noise areas in which the background noise level exceeds or is marginal to the given level	
(i) For day time	Measured Background Noise level + 5dB (A)
(ii) For night time	Measured Background Noise level + 3dB (A)

**Note 1:**

"**L<sub>Aeq</sub> T**" means the equivalent continuous, A-weighted sound pressure determined over a time interval T (in dB).

"**day time**" from 06.00 hours to 18.00 hours, except for the purposes of construction activities where it means 06.00 hours to 21.00 hours.

"**night time**" means from 18.00 hours to 06.00 hours except for the purposes of construction activities where it means 21.00 hours to 06.00 hours.

**Note 2:**

Noise generated from machinery and processes should be controlled as far as possible at the source by one or more of the following methods;

- (a) Vibration isolation
- (b) Noise Insulation
- (c) Noise absorption
- (d) Damping

Attempts should be made to maintain noise levels as low as practicable within the working environment. However, in the event noise level exceeds 85 dB (A), suitable ear protection devices should be provided to all workers exposed to such noise levels. Wearing of these devices should be ensured during working times.

**TOLERANCE LIMITS FOR THE DISCHARGE OF INDUSTRIAL WASTE WATER  
IN TO INLAND SURFACE WATERS**

No.	Parameter	Unit type of limit	Tolerance Limit Value
01.	Total suspended solids	mg/l, max.	50
02.	Particle size of the total suspended solids	µm, less than	850
03.	pH at ambient temperature	-	6.0-8.5
04.	Biochemical Oxygen Demand (BOD <sub>5</sub> in five days at 20 <sup>0</sup> C or BOD <sub>3</sub> in three days at 27 <sup>0</sup> C)	mg/l, max.	30
05.	Temperature of discharge	°C, max.	Shall not exceed 40 <sup>0</sup> C in any section of the stream within 15m down stream from the effluent outlet.
06.	Oils and greases	mg/l, max	10
07.	Phenolic compounds (as phenolic OH)	mg/l, max	1
08.	Chemical Oxygen Demand (COD)	mg/l, max	250
09.	Colour	Wave length range  436nm (Yellow range) 525 (Red range) 620 (Blue range)	Maximum spectral absorption coefficient  7m <sup>-1</sup> 5m <sup>-1</sup> 3m <sup>-1</sup>
10.	Dissolved phosphates (as P)	mg/l, max	5
11.	Total Kjedahl nitrogen (as N)	mg/l, max	150
12.	Ammonical nitrogen (as N)	mg/l, max	50
13.	Cyanide (as CN <sup>-</sup> )	mg/l, max	0.2
14.	Total residual chlorine	mg/l, max	1.0
15.	Flourides (as F <sup>-</sup> )	mg/l, max	2.0
16.	Sulphides (as S <sup>2-</sup> )	mg/l, max	2.0
17.	Arsenic (as As)	mg/l, max	0.2
18.	Cadmium (as Cd)	mg/l, max	0.1
19.	Chromium, total (as Cr)	mg/l, max	0.5
20.	Chromium, Hexavalent (as Cr <sup>6+</sup> )	mg/l, max	0.1
21.	Copper (as Cu)	mg/l, max	3.0
22.	Iron (as Fe)	mg/l, max	3.0
23.	Lead (as Pb)	mg/l, max	0.1
24.	Mercury (as Hg)	mg/l, max	0.0005

25.	Nickel (as Ni)	mg/l, max	3.0
26.	Selenium (as Se)	mg/l, max	0.05
27.	Zinc (as Zn)	mg/l, max	2.0
28.	Pesticides	mg/l, max	0.005
29.	Detergents/surfactants	mg/l, max	5
30.	Faecal Coliform	MPN/100 ml, max	40
31.	Radio Active Material: (a) Alpha emitters (b) Beta emitters	micro curie/ml, max micro curie/ml, max	$10^{-8}$ $10^{-7}$

Note 1 : All efforts should be made to remove unpleasant odour as far as possible.

Note 2 : These values are based on dilution of effluents by at least 8 volumes of clean receiving water. If the dilution is below 8 times, the tolerance limits are multiplied by the 1/8 of the actual dilution.

Note 3 : The above mentioned general standards shall cease to apply with regard to a particular industry when industry specific standards are notified for that industry.

Note 4 : Pesticides as per World Health Organization (WHO) and Food and Agriculture Organization (FAO) requirements.

**TOLERANCE LIMITS FOR INDUSTRIAL WASTE WATER  
DISCHARGED ON LAND FOR IRRIGATION PURPOSE**

No:	Parameter	Unit Type of limit	Tolerance Limit Value
1.	Total dissolved solids	mg/l, max.	2100
2.	pH at ambient temperature	-	5.5-9.0
3.	Biochemical Oxygen Demand (BOD <sub>5</sub> in five days at 20 <sup>0</sup> C or BOD <sub>3</sub> in three days at 27 <sup>0</sup> C)	mg/l, max.	250
4.	Oils and greases	mg/l, max.	10
5.	Chemical Oxygen Demand (COD)	mg/l, max.	400
6.	Chlorides (as Cl <sup>-</sup> )	mg/l, max.	600
7.	Sulphates (as SO <sub>4</sub> <sup>2-</sup> )	mg/l, max.	1000
8.	Boron (as B)	mg/l, max.	2.0
9.	Arsenic (as As)	mg/l, max.	0.2
10.	Cadmium (as Cd)	mg/l, max.	2.0
11.	Chromium, total (as Cr)	mg/l, max.	1.0
12.	Lead (as Pb)	mg/l, max.	1.0
13.	Mercury (as Hg)	mg/l, max.	0.01
14.	Sodium Adsorption Ration (SAR)	-	10-15
15.	Residual Sodium Carbonate (RSC)	mol/l, max.	2.5
16.	Electrical conductivity	µs/cm, max.	2250
17.	Faecal Coliform	MPN/100ml, max.	40
18.	Copper (as Cu)	mg/l, max.	1.0
19	Cyanide (as CN <sup>-</sup> )	mg/l, max.	0.2
20.	Radio Active Material: (c) Alpha emitters (d) Beta emitters	micro curie/ml, max micro curie/ml, max	10 <sup>-9</sup> 10 <sup>-8</sup>

## **HYDRAULIC LOADING APPICABLE FOR DIFFERENT SOILS**

<b>Soil Texture Class</b>	<b>Recommended Dosage of settled Industrial Effluents (cubic Meters / hectare, day)</b>
1. Sandy	225 to 280
2. Sandy Loam	170 to 225
3. Loam	110 to 170
4. Clay loam	55 to 110
5. Clayey	35 to 55

**TOLERANCE LIMITS FOR INDUSTRIAL AND DOMESTIC WASTE WATER DISCHARGED  
INTO MARINE COASTAL AREAS**

No:	Parameter	Unit Type of limit	Tolerance Limit Value
1.	Total suspended solids	mg/l, max.	150
2.	Particle size of- (a) Floatable solids (b) Setttable solids	mm, max. µm, max.	3 850
3.	pH at ambient temperature	-	5.5-9.0
4.	Biochemical Oxygen Demand (BOD <sub>5</sub> in five days at 20°C or BOD <sub>3</sub> in three days at 27°C)	mg/l, max.	100
5.	Temperature	°C, max.	45°C at the point of discharge
6.	Oils and greases	mg/l, max	20
7.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, max	5
8.	Chemical Oxygen Demand (COD)	mg/l, max	250
9.	Total residual chlorine	mg/l, max	1.0
10.	Ammonical Nitrogen	mg/l, max	50
11.	Cyanide (as CN <sup>-</sup> )	mg/l, max	0.2
12.	Sulphides (as S <sup>2-</sup> )	mg/l, max	5.0
13.	Fluorides (as F <sup>-</sup> )	mg/l, max	15
14.	Arsenic (as As)	mg/l, max	0.2
15.	Cadmium (as Cd)	Mg/l, max	2.0
16.	Chromium, total (as Cr)	Mg/l, max	2.0
17.	Chromium, Hexavalent (as Cr <sup>6+</sup> )	Mg/l, max	1.0
18.	Copper (as Cu)	Mg/l, max	3.0
19.	Lead (as Pb)	Mg/l, max	1
20.	Mercury (as Hg)	Mg/l, max	0.01
21.	Nickel (as Ni)	Mg/l, max	5.0
22.	Selenium (as Se)	Mg/l, max	0.1
23.	Zinc (as Zn)	Mg/l, max	5.0
24.	Pesticides	Mg/l, max	0.005
25.	Organic-Phosphorus compounds	Mg/l, max	1.0
26.	Chlorinated hydrocarbons (as Cl)	Mg/l, max	0.02
27.	Faecal Coliform	MPN/100ml, max.	60
28.	Radio Active Material: (e) Alpha emitters (f) Beta emitters	micro curie/ml, max micro curie/ml, max	10 <sup>-8</sup> 10 <sup>-7</sup>

Note 1 : All efforts should be made to remove unpleasant odour and colour as far as practicable.

Note 2 : These values are based on dilution of effluents by at least 8 volumes of clean receiving water. If the dilution is below 8 times, the permissible limits are multiplied by the 1/8 of the actual dilution.

**TOLERANCE LIMITS FOR WASTE WATER FROM RUBBER FACTORIES  
BEING DISCHARGED INTO INLAND SURFACE WATERS**

No:	Parameters	Units	Tolerance Limit Value	
			Type I* Factories	Type II** Factories
1.	pH value at ambient temperature	-	6.5 to 8.5	6.5 to 8.5
2.	Total suspended solids	mg/l, max.	100	100
3.	Total solids	mg/l, max.	1500	1000
4.	Biochemical Oxygen Demand (BOD <sub>5</sub> in five days at 20°C or BOD <sub>3</sub> in three days at 27°C)	mg/l, max.	60	50
5.	Chemical Oxygen Demand (COD)	mg/l, max.	400	400
6.	Total Nitrogen	mg/l, max.	300	60
7.	Ammonical Nitrogen (as N)	mg/l, max.	300	40
8.	Sulphides (as S <sup>2-</sup> )	mg/l, max.	2.0	2.0

\* Type I Factories – Latex Concentrate

\*\* Type II Factories – Standard Lanka Rubber; Crepe Rubber and Ribbed Smoked Sheet

Note 1 : All efforts should be made to remove odour and colour as far as possible.

Note 2 : These values are based on dilution of effluents by at least 8 volumes of clean receiving water. If the dilution is below 8 times, the permissible limits are multiplied by the 1/8 of the actual dilution.

**TOLERANCE LIMITS FOR WASTE WATER FROM TEXTILE INDUSTRY BEING  
DISCHARGED INTO INLAND SURFACE WATERS**

No.	Parameters	Unit type of limit	Tolerance Limit Values
01.	pH at ambient temperature		6.5 to 8
02.	Temperature	°C, max	40 measured at site of sampling
03.	Total suspended solids	mg/l, max.	50
04.	Biochemical Oxygen Demand (BOD <sub>5</sub> in five days at 20°C or BOD <sub>3</sub> in three days at 27°C)	mg/l, max.	60
05.	Colour	Wave length range  436nm (Yellow range) 525 (Red range) 620 (Blue range)	Maximum spectral absorption coefficient  7m <sup>-1</sup> 5m <sup>-1</sup> 3m <sup>-1</sup>
06.	Oils and grease	mg/l, max	10
07.	Phenolic compounds (as Phenolic OH)	mg/l, max	1.0
08.	Chemical Oxygen Demand (COD)	mg/l, max	250
09.	Sulphides (as S <sup>2-</sup> )	mg/l, max	2.0
10.	Chromium (as Cr)	mg/l, max	2.0
11.	Hexavalent Chromium ( as Cr <sup>+6</sup> )	mg/l, max	0.5
12.	Copper, total (as Cu)	mg/l, max	3.0
13.	Zinc, total (as Zn)	mg/l, max	5.0
14.	Ammonical nitrogen (as N)	mg/l, max	60
15.	Chloride (as Cl <sup>-</sup> )	mg/l, max	70

Note 1 : All effort should be made to remove unpleasant odour as far as practicable.

Note 2 : These values are based on dilution of effluents by at least 8 volumes of clean receiving water. If the dilution is below 8 times, the permissible limits are multiplied by the 1/8 of the actual dilution.

**TOLERANCE LIMITS FOR WASTE WATER FROM BEING DISCHARGED  
FROM TANNING INDUSTRIES**

No:	Parameter	Unit Type of Limit	Tolerance Limit Values for Effluents Discharged into Inland Surface Waters	Tolerance Limit Values for Effluents Discharged into Marine Coastal Areas
01.	pH value at ambient temperature	-	5.5-9.0	5.5-9.0
02.	Total suspended solids	mg/l, max.	100	150
03.	Biochemical Oxygen Demand (BOD <sub>5</sub> in five days at 20 <sup>0</sup> C or BOD <sub>3</sub> in three days at 27 <sup>0</sup> C)	mg/l, max.	60	100
04.	Chemical Oxygen Demand (COD)	mg/l, max.	250	300
05.	Colour	Wave length range  436nm (Yellow range) 525 (Red range) 620 (Blue range)	<b>Maximum spectral absorption coefficient</b>  7m <sup>-1</sup> 5m <sup>-1</sup> 3m <sup>-1</sup>	- - -
06.	Alkalinity (as CaCO <sub>3</sub> )	mg/l, max.	750	-
07.	Chloride (as Cl <sup>-</sup> )	mg/l, max.	1000	-
08.	Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/l, max.	0.5	0.5
09.	Chromium, total (as Cr)	mg/l, max.	2.0	2.0
10.	Oils and greases	mg/l, max.	10	20
11.	Phenolic compounds (as phenolic OH)	mg/l, max.	1.0	5.0
12.	Sulphides (as S <sup>2-</sup> )	mg/l, max.	2.0	5.0

Note 1 : All efforts should be made to remove unpleasant odour as far as practicable.

Note 2 : These values are based on dilution of effluents by at least 8 volumes of clean receiving water. If the dilution is below 8 times, the permissible limits are multiplied by the 1/8 of the actual dilution.

**CLASSIFICATION OF INDUSTRIES AND RECOMMENDED  
BUFFER ZONES**

Type	Categories and examples	Area each works (hectares)	Buffer Zone width Feet
1. Heavy Industry with much air pollution	Oil Refineries, Iron and steel industry, Nuclear reactor	50 -200	500 -2000
	Machine manufacture power station, ship building/breaking		
	Strawboard, artificial fibres, ceramic & glass products, cement etc.		
2. Medium heavy industry with moderate air pollution	Electrical appliances textile weaving etc	50 -75	150 -500
3. Light Industry with some air pollution	Confectionery and food industry, glass manufacture etc.	1 -50	30 -150
4. Light Industry with little air pollution	Electronics garments etc.	1 -10	20 -50
5. Workshops handicrafts etc.	shoes, handbags etc.	< 1	> 10

**CHEMICALS SCHEDULED UNDER THE CHEMICAL WEAPONS CONVENTION  
ACT NO. 58 OF 2007**

**SCHEDULE 1**

<b>A. Toxic chemicals :</b>	<b>(CAS registry number)</b>
(1) O-Alkyl (≤C10, incl. cycloalkyl) Alkyl (Me,Et, n-Pr or i-Pr)-phosphonofluoridates	
e.g. Sarin: O-Isopropyl methylphosphonofluoridate Somon: O-Pinacolyl methylphosphonofluoridate	(107-44-8) (96-64-0)
(2) O-Alkyl (≤C10,incl, cycloalkyl) N, N-dialkyl (Me, Et, n-Pr or 1-Pr) phosphoramidocyanides	
e.g. Tabun: O-Ethyl N,N-dimethyl phosphoramidocyanide	(77-81-6)
(3) O-Alkyl (H or ≤C10, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr)-phosphonothiolates and corresponding alkylated or protonated salts	
e.g. VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate	(50782-69-9)
(4) Sulfur mustards:	
Mustard gas: 2-Chloroethylchloromethylsulfide	(2625-76-5)
Mustard gas: Bis(2-chloroethyl) sulfide	(505-60-2)
Mustard gas: Bis(2-chloroethylthio) methane	(63869-13-6)
Sesquimustard: 1, 2-Bis(2-chloroethylthio) ethane	(3563-36-8)
Sesquimustard: 1, 3-Bis (2-chloroethylthio)-n-propane	(63905-10-2)
Sesquimustard: 1, 4-Bis (2-chloroethylthio)-n-butane	(142868-93-7)
Sesquimustard: 1, 5-Bis (2-chloroethylthio)-n-pentane	(142868-94-8)
O-Mustard: Bis (2-chloroethylthiomethyl) ether	(63918-90-1)
O-Mustard: Bis (2-chloroethylthioethyl) ether	(63918-89-8)
(5) Lewisties:	
Lewisties 1: 2-Chlorovinyldichloroarsine	(541-25-3)
Lewisties 2: Bis (2-chlorovinyl)chloroarsine	(40334-69-8)
Lewisties 3: Tris (2-chloroethyl) arsine	(40334-70-1)

(6) Nitrogen mustards:

HN1: Bis (2-chloroethyl) ethylamine (538-07-8)  
HN2: Bis (2-chloroethyl) methylamine (51-75-2)  
HN3: Tris (2-chloroethyl) amine (555-77-1)

(7) Saxitoxin (35523-89-8)

(8) Ricin (9009-86-3)

**B. Precursors :**

(1) Alkyl (Me,Et, n-Pr or i-Pr) phosphonyldifluorides

e.g. DF: Methylphosphonyldifluoride (676-99-3)

(2) O-Alkyl (H or  $\leq$ C10, incl. cycloalkyl) O-2-dialkyl  
(Me, Et, n-Pr or i-Pr)-aminoethyl alkyl  
(Me, Et, n-Pr or i-Pr)-phosphonites and  
Corresponding alkylated or protonated salts

e.g. QL: O-Ethyl O-2-diisopropylaminoethyl  
methylphosphonite (57856-11-8)

(3) Chlorosarin:

O-Isopropyl methylphosphonochloridate (1445-76-7)

(4) Chlorosoman:

O-Pinacolyl methylphosphonochloridate (7040-57-5)

## SCHEDULE II

### A. Toxic chemicals :

(1) Amtion:  
O, O-Diethyl S-[2-diethylamino) ethyl]  
Phosphorothiolate (78-53-5)  
and corresponding alkylated or protonated salts

(2) PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)- 1-propene (382-21-8)

(3) BZ: 3-Quinuclidinyl benzilate (\*) (6581-06-2)

### B. Precursors :

(1) Chemicals, except for those listed in schedule 1,  
containing a phosphorus atom to which is bonded  
one methyl, ethyl or propyl (normal or iso) group  
but not further carbon atoms,  
e.g. Methylphosphonyl dichloride (676-97-1)  
Dimethyl methylphosphonate (756-79-6)

Exemption: Fonofos: O-Ethyl S-phenyl  
ethylphosphonothiolothionate (944-22-9)

(2) N, N-Dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidic dihalides

(3) Dialkyl (Me, Et, n-Pr or i-Pr) N, N-dialkyl  
(Me, Et, n-Pr or i-Pr)-phosphoramides

(4) Arsenic trichloride (7784-34-1)

(5) 2,2-Diphenyl-2-hydroxyacetic acid (76-93-7)

(6) Quinuclidin-3-ol (1619-34-7)

(7) N, N-Dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl-  
2-chlorides and corresponding protonated salts

(8) N, N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and  
corresponding protonated salts  
Exemption: N, N-Dialkylaminoethanol (108-01-0)  
and corresponding protonated salts  
N,N-Diethylaminoethanol (100-37-8)

(9) N, N-Dialkyl (Me, Et, n-Pr or i-Pr)-aminoethane-thiols and corresponding protonated salts

(10) Thiodiglycol: Bis (2-hydroxyethyl) sulfide (111-48-8)

(11) Pionacolyl alcohol: 3,3-Dimethylbutane-2-ol (464-07-3)

### **SCHEDULE III**

#### **A. Toxic chemicals :**

(1) Phosgene: Carbonyl dichloride (75-44-5)  
 (2) Cyanogen chloride (506-77-4)  
 (3) Hydrogen cyanide (74-90-8)  
 (4) Chloropicrin: Trichloronitromethane (76-06-2)

#### **B. Precursors :**

(1) Phosphorus oxychloride (10025-87-3)  
 (2) Phosphorus trichloride (7719-12-2)  
 (3) Phosphorus penta chloride (10026-13-8)  
 (4) Trimethyl phosphite (121-45-9)  
 (5) Triethyl phosphite (122-52-1)  
 (6) Dimethyl phosphite (868-85-9)  
 (7) Diethyl phosphite (762-04-9)  
 (8) Sulfur monochloride (10025-67-9)  
 (9) Sulfur dichloride (10545-99-0)  
 (10) Thionyl chloride (7719-09-7)  
 (11) Ethyldiethanolamine (139-87-7)  
 (12) Methyldiethanolamine (105-59-9)  
 (13) Triethanolamine (102-71-6)

**Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances  
Act, No.1 of 2008**

<b>FIRST SCHEDULE</b>	
<b>Table I</b>	<b>Table II</b>
1. Acetic Anhydride HS Code : 2915.24 CAS No. 108-24-7	1. Acetone HS Code : 2914.11 CAS No. 67-64-1
2. N-Acetylanthranilic acid HS Code : 2924.23 CAS No. 89-52-1	2. Anthranillic acid HS Code : 2922.43 CAS No. 118-92-3
3. Ephedrine HS Code : 2939.41 CAS No. 299-42-3	3. Ethyl ether HS Code : 2909.11 CAS No. 60-29-7
4. Ergometrine HS Code : 2939.61 CAS No. 60-79-7	4. Hydrochloric acid HS Code : 2806.10 CAS No. 7647-01-0
5. Ergotamine HS Code : 2939.62 CAS No. 113-15-5	5. Methyl ethyl ketone HS Code : 2914.12 CAS No. 78-93-3
6. Isosafrole HS Code : 2932.91 CAS No. 120-58-1	6. Phenylacetic acid HS Code : 2916.34 CAS No. 103-82-2
7. Lysergic acid HS Code : 2939.63 CAS No. 82-58-6	7. Piperidine HS Code : 2933.32 CAS No. 110-89-4
8. 3,4-Methylenedioxyphenyl 1-2 propanone HS Code : 2932.92 CAS No. 4676-39-5	8. Sulfuric acid HS Code : 2807.00 CAS No. 7664-93-9
9. Norephedrine HS Code : 2939.49 CAS No. 154-41-6	9. Toluene HS Code : 2902.30 CAS No. 108-88-3
10. 1-Phenyl -2-propanone HS Code : 2914.31 CAS No. 103-79-7	
11. Piperanol HS Code : 2932.93 CAS No. 120-57-0	
12. Potassium permanganate HS Code : 2941.61 CAS No. 7722-64-7	
13. Pseudoephedrine HS Code : 2939.42 CAS No. 90-82-4	
14. Safrole HS Code : 2932.94 CAS No. 94-59-7	

PART 1 : SECTION (1) — GENERAL

BOARD OF INVESTMENT OF SRI LANKA

Government Notification  
The National Environmental Act, No. 47 OF 1980  
Order under Section 23 Y  
SCHEDULE  
PART I

**PROJECTS AND UNDERTAKINGS IF LOCATED WHOLLY OR PARTLY OUTSIDE THE COASTAL ZONE AS DEFINED BY COAST CONSERVATION ACT. NO 57 OF 1981**

1. All river basin development and irrigation projects excluding minor irrigation works (as defined by Irrigation Ordinance chapter 453).
2. Reclamation of Land, wetland area exceeding 4 hectares.
3. Extraction of timber covering land area exceeding 5 hectares
4. Conversion of forests covering an area exceeding 1 hectare into non-forest uses.
5. Clearing of land areas exceeding 50 hectares.
6. Mining and Mineral Extraction

Inland deep mining and mineral extraction involving a depth exceeding 25meters  
Inland surface mining of cumulative areas exceeding 10 hectares  
All off shore mining and mineral extractions  
Mechanized mining and quarrying operations of aggregate, marble, limestone, silica, quartz, and decorative stone within 1 kilometer of any residential or commercial areas.

7. Transportation Systems

Construction of national and provincial highways involving a length exceeding 10 kilometers  
Construction of railway lines  
Construction of airports  
Construction of airstrips  
Expansion of airports or airstrips that increase capacity by 50 percent or more.

8. Port and Harbour Development

Construction of ports  
Construction of harbours  
Port expansion involving an annual increase of 50% or more in handling capacity per annum.

9. Power Generation and Transmission

Construction of hydroelectric power stations exceeding 50 Megawatts.  
Construction of thermal power plants having generation capacity exceeding 25 Megawatts at a single location or capacity addition exceeding 25 Megawatts to existing plants.  
Construction of nuclear power plants.  
All renewable energ based electricity generating stations exceeding 50 Megawatts.

10. Transmission Lines

Installation of overhead transmission lines of length exceeding 10 kilometers and voltage above 50 Kilovolts.

11. Housing and Building

Integrated multi—development activities consisting of housing, industry, commercial infrastructure covering a land area exceeding 100 hectares.

12. Resettlement

Involuntary resettlement exceeding 100 families other than resettlement effected under emergency situations.

13. Water Supply

All ground water extraction projects of capacity exceeding % million cubic meters per day  
Construction of water treatment plants of capacity exceeding % million cubic meters

14. Pipelines

Laying of gas and liquid (excluding water) transfer pipelines of length exceeding 1 kilometer

15. Hotels

Construction of Hotels or holiday resorts or projects which provide recreational facilities exceeding 99 rooms or 40 Hectares, as the case may be.

16. Fisheries

Aquaculture development projects of extent exceeding 4 hectares  
Construction of fisheries harbours  
Fisheries harbour expansion projects involving an increase of 50% or more in fish handling capacity per annum.

17. All Tunnelling Projects

18. Disposal of Waste

Construction of any solid waste disposal facility having a capacity exceeding 100 tons per day.  
Construction of waste treatment plants treating toxic or hazardous waste.

19. Development of all Industrial Estates and Parks exceeding an area of 10 hectares.

20. Iron and Steel Industries

Manufacture of iron and steel products of production capacity exceeding 100 tons per day using iron ore as raw material

21. Manufacture of iron and steel products of production capacity exceeding 100 tons per day using scrap iron as raw material

Non-Ferrous Basic Metal Industries  
Smelting of aluminium or copper or lead of production capacity exceeding 25 tons per day.

22. Basic Industrial Chemicals

Formulation of toxic chemicals of production capacity exceeding 50 tons per day.  
Manufacture of toxic chemicals of production capacity exceeding 25 tons per day.

23. Pesticides and Fertilizers

Formulation of pesticides of combined production capacity exceeding 50 tons per day.  
Manufacture of pesticides of combined production capacity exceeding 25 tons per day.

24. Petroleum and Petrochemicals

Petroleum refineries producing gasoline, fuel oils, illuminating oils, lubricating oils and grease, aviation and marine fuel and liquefied petroleum gas from crude petroleum.

Manufacture of petro—chemicals of combined production capacity exceeding 100 tons per day from raw materials obtained from production processes of oil refinery or natural gas separation.

25. Tyre and Tube Industries

Manufacture of tyre and tubes of combined production capacity exceeding 100 tons per day from natural or synthetic rubber.

26. Sugar Factories

Manufacture of refined sugar of combined production capacity exceeding 50 tons per day.

27. Cement and Lime

Manufactures of Cement.

Manufacture of lime employing kiln capacity exceeding 50 tons per day.

28. Paper & Pulp

Manufacture of paper or pulp of combined production capacity exceeding 50 tons per day

29. Spinning, Weaving and Finishing of Textiles

Integrated cotton or synthetic textile mills employing spinning, weaving, dyeing and printing operations together, of combined production capacity exceeding 50 tones per day.

30. Tanneries and Leather Finishing

Chrome tanneries of combined production capacity exceeding 25 tons per day.

Vegetable (bark) of combined production capacity exceeding 50 tons per day.

Provided however, where the projects and undertaking set out in items 20 to 30 are located within Industrial Estates and parks as described at (19) above, the approval shall not be necessary under the provisions of Part IV C of the Act.

31. Industries which involve the manufacture, storage or use of Radio Active Materials as defined in the Atomic Energy Authority Act No. 19 of 1969 or Explosives as defined in the Explosives Act, No. 21 of 1956, excluding for national security reasons.

## **PART II**

32. All projects and undertaking listed in Part I irrespective of their magnitudes and irrespective of whether they are located in the coastal zone or not, if located wholly or partly within the areas specified in Part III of the Schedule.

The following industries if located wholly or partly within the areas specified in part III of the Schedule:

33. Iron and Steel.

34. Non-Ferrous Basic Metal.

35. Basic Industrial Chemicals.

36. Pesticides and Fertilizer.

37. Synthetic Resins, Plastic materials and Man-made Fibres

- 38. Other Chemical Products.
- 39. Petroleum and Petro-chemical products.
- 40. Tyres and Tubes.
- 41. Manufacturing and Refining of Sugar.
- 42. Alcoholic Spirits.
- 43. Malt Liquors and Malt.
- 44. Cement and lime.
- 45. Non-metallic Mineral Products.
- 46. Paper, Pulp and Paperboard.
- 47. Spinning, Weaving and Finishing of Textiles.
- 48. Tanneries and Leather Finishing.
- 49. Shipbuilding and Repairs.
- 50. Railroad Equipment.
- 51. Motor Vehicles.
- 52. Air Craft.

### **PART III**

- 1. Within 100 m from the boundaries of or within any area declared under —  
 the National Heritage Wilderness Act No. 3 of 1988,  
 the Forest Ordinance (Chapter 451].  
 whether or not such areas are wholly or partly within the Coastal Zone as defined in the Coast  
 Conservation Act, No. 57 of 1981.
- 2. Within the following areas whether or not the areas are wholly or partly within the  
 Coastal Zone:  
 any erodable area declared under the Soil Conservation Act (Chapter 450).  
 any Flood Area declared under the Flood Protection Ordinance (Chapter 449)  
 and any flood protection area declared under the Sri Lanka Land Reclamation and Development  
 Corporation Act, No.15 of 1968 as amended by Act, No. 52 of 1982.  
 60 meters from the bank of a public stream as defined in the Crown Lands Ordinance (Chapter 454)  
 and having a width of more than 25 meters at any point of its course.

any reservation beyond the full supply level of a reservoir.  
 any archaeological reserve, ancient or protected monument as defined or declared under the Antiquities  
 Ordinance (Chapter 188).  
 any area declared under the Botanic Gardens Ordinance (Chapter 446).

In these regulations unless the context otherwise requires-

"hazardous waste" means any waste which has toxic, corrosive,  
 flammable, reactive, radio active or infectious characteristics.  
 "reservoir" means an expanse of water resulting from man made  
 constructions across a river or a stream to store or regulate water. Its  
 "environs" will include that area extending up to a distance of 100 meters from  
 full supply of the reservoir inclusive of all islands falling within the reservoir.