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WCO Programme Global Shield (PGS) – E-book No. 12

[Training Material for Departmental Use]

E-BOOK



*Matrix of Legal Provisions
applicable to
Precursor Chemicals for IEDs &
other Hazardous / Dangerous Goods*

Note:

1. In this E-book, attempts have been made to explain about *Matrix of Legal Provisions applicable to Precursor Chemicals for IEDs & other Hazardous / Dangerous Goods*. It is expected that it will help departmental officers in their day-to-day work.
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INDEX

Part-I: Matrix of Legal Provisions for import/export of precursor chemicals for IEDs	1
Part –II: Other Miscellaneous Legal Provisions dealing with Dangerous Goods/Hazardous substances	8
Part –III: Multilateral Environmental Agreements (MEAs) for Chemical Safety and Management	10
Part IV: Restriction or Regulation on Import/Export, Manufacture, Use, Storage, Transportation of Precursor Chemicals for IEDs	12

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Part-I: Matrix of Legal Provisions for import/export of precursor chemicals for IEDs

The **Table-I** tabulate and briefly describe the important legal provisions in India relating to Hazardous Chemicals/Dangerous Goods in General and Precursor Chemicals/Detonator used for IEDs in particular.

Table-I

Area	Legal Provisions	Important Details
Import and Export Controls over 14 Precursor Chemicals and the Detonator	ITC (HS) i.e. Indian Trade Classification based on Harmonized System provides for details of prohibition, restriction or regulation on import and export of all tradable goods. It has been issued under <i>Foreign Trade (Development & Regulation) Act, 1992 and is administered by the Ministry of Commerce & Industry.</i>	<p style="background-color: yellow;">Import of Precursor Chemicals for IEDs and Detonators</p> <p>In respect of 15 items subjected to monitoring under PGS, four items, namely, Detonator, Acetic Anhydride, Urea and Ammonium nitrate are restricted for import into India.</p> <ul style="list-style-type: none"> • Import of detonators require import license from the office of Director General of Foreign Trade. • Import of Ammonium Nitrate having more than 45% nitrogen by weight require license for import from the Chief Controller of Explosives. • Import of Acetic anhydride require import license from the office of DGFT. • Import of Urea other than Industrial Grade/Technical Grade can only be imported by State Trading Enterprises (i.e. Canalizing Agency). Import of Industrial grade/Technical Grade urea is free subject of fulfillment of Actual user condition. • Import of other precursor chemicals, namely, Acetic-Anhydride, Acetone, Aluminum Powder Ammonium Nitrate, Hydrogen Peroxide, Nitric Acid, Potassium Chlorate, Sodium Chlorate, Potassium Perchlorate free but subject to procedurals requirement under Rule 18 of the Manufacture, Storage and Import of Hazardous Chemical [MSIHC] Rules, 1989. • Import of Sodium Nitrate, Potassium Nitrate and Calcium Ammonium Nitrate is free. <p style="background-color: yellow;">Export of Precursor Chemicals for IEDs and</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

		<p>detonators</p> <p>Export of all items, which are subjected to controls under PGS, are freely exportable except the following restriction/regulation.</p> <ul style="list-style-type: none"> • Export of Acetic-Anhydride require “No Objection Certificate” from Narcotics Commissioner • Export of detonators is restricted and require export license from the officer of DGFT. • Export of Urea is restricted and require export license from the office of DGFT.
	<p>The Customs Act, 1962</p>	<p>Under Section 111 of the Customs Act, 1962, inter alia, any goods imported or attempted to imported in contravention of any of the provisions of any other act or are brought within the Indian customs waters for the purpose of being imported, contrary to any prohibition imposed by or under this Act or any other law for the time being in force, are liable for confiscation and the importer is liable for imposition of penalty under Section 112 of the Customs Act, 1962.</p> <p>Similar provisions exist under Section 113 and 114 of the Customs Act, 1962 in case of export or attempted export of goods in contravention of statutory provisions.</p>
	<p>The Explosive Act, 1884</p> <p>The Ammonium Nitrate Rules, 2012</p> <p>The Explosive Rules, 2008</p>	<p>Ammonium Nitrate is deemed to be explosive under the Explosive Act, 1884. It is subjected to controls under Ammonium Nitrate Rules, 2012.</p> <p>Detonator is also covered under the definition of explosives under the Explosive Act, 1884 and subjected to controls prescribed under the Explosive Rules, 2008. In addition to import/export license/permission, the manufacture, storage, packaging, labeling, transport of Detonator/Ammonium Nitrate is subjected to controls under the provisions of the Explosive Act, 1884 and the Ammonium Nitrate Rules, 2012/ Explosive Rules, 2008.</p>
	<p>Narcotics Drugs and Psychotropic Substances</p>	<p>Acetic Anhydride has also been declared precursor Chemical for use in the manufacture of illicit narcotic drugs and psychotropic substances under NDPS Act, 1985 and the Narcotic Drugs and Psychotropic</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

	<p>Act, 1985</p>	<p>Substances (Regulation of Controlled Substances Order) 2013, which came into force with effect from 26.03.2013.</p> <p>This order issued under Section 9A of the NDPS Act, 1985 mandatorily requires manufacturers, distributors, sellers, importers, exporters and consumers of specified controlled substances (Acetic Anhydride and others) to maintain records and file quarterly returns with the Narcotics Control Bureau.</p>
	<p>Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 [also referred to as MSIHC Rules]</p> <p><i>[Issued under Environment Protection Act, 1986]</i></p>	<p>Explosive Precursor Chemicals, namely, Acetic Anhydride (Sr. No.3), Acetone (Sr. No. 4), Aluminium Powder (19); Ammonium Nitrate (Sr.No.33), Hydrogen Peroxide (Sr.No.318), Nitric Acid (Sr.No.423); Perchloric Acid (Sr. No. 478); Sodium Chlorate (Sr.No. 568) and Potassium Chlorate (Sr. No. 520) are considered hazardous material and are listed in Part II of the Schedule I of the MSIHC Rules, 1989 as amended.</p> <p><i>Note: The words and figures in bracket above indicate Sr. No. at which the given chemical figures in the list in Part II of the Schedule 1 of the MSIHC Rules, 1989 as amended.</i></p> <p>According to Section 18 (2) of the said rules, any person responsible for importing hazardous chemicals in India shall provide (before thirty days or as reasonably possible but not later than) the date of import, to the concerned authorities the following information pertaining to,</p> <ul style="list-style-type: none"> • Name and Address of the person receiving the consignment in India; • The port of entry in India; • Mode of transport from the exporting country to India; • The quantity of chemical(s) being imported; and • Complete product safety information. <p>The above rule is applicable to a chemical which satisfies any of criteria laid down in part I of Schedule I or listed in Part II of this Schedule.</p> <p>These Rules also prescribes controls on,-</p> <ul style="list-style-type: none"> • Production, storage, use and import of the specified hazardous chemicals

Matrix of Legal Provisions applicable to Precursor Chemicals

		<ul style="list-style-type: none"> • Chemical and petro-chemical substances having hazardous (i.e. flammable, explosive, corrosive, toxic) properties • Storage of hazardous chemicals not associated with processes. • Chemical Storage in plant Premises <ul style="list-style-type: none"> • Low level: Specifies 684 chemicals • Medium level: specifies 179 chemicals and threshold Quantity of Chemicals • High level: specifies 17 chemicals and Threshold quantity of Chemicals <p>Storage of Chemicals away from the main process:</p> <ul style="list-style-type: none"> • specifies 30 chemicals and Threshold quantity
<p>Transportation of Dangerous goods</p>	<p>Central Motor Vehicle Rules, 1989</p>	<p>Rules 129 to 137 of the Central Motor Vehicle Rules, 1989 contain provisions for ensuring safe inland transportation of Dangerous Goods (Hazardous Chemicals). It also lay down requirements for class labels to be displayed on the goods carriage/vehicles as well as requirement for safety of Vehicles/carriage. In brief, the relevant rules are as under:-</p> <p>Rule 129: Transportation of goods of dangerous or hazardous nature to human life: Provides for display of distinct class labels on vehicle carrying dangerous goods, packages containing dangerous good, vehicles to have safety equipments for preventing fire, explosion or leakage of dangerous Chemicals.</p> <p>Rule 129 A: Spark Arrester: Vehicle carrying dangerous or hazardous goods to be fitted with spark arrester.</p> <p>Rule 130: Manner of Display of Class label: provides as to how the class label should be displayed on the goods carriage.</p> <p>Rule 131: Responsibility of the consignor for safe transport of dangerous or hazardous goods.</p> <p>Rule 132: Responsibility of the transporter or owner of goods carriage: Lays down responsibilities of the transporter or owner of goods carriage.</p> <p>Rule 133: Responsibility of the Driver: prescribe certain responsibility on the driver of the goods carriage carrying dangerous goods.</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

		<p>Rule 134: Emergency information panel: provides for marking of Emergency information panel on the three sides of the carriage and information it should display.</p> <p>Rule 135. Driver to be instructed: about the nature of goods being transported, nature of risk involved, precaution to be taken during motion or stationery and action to be taken in case of emergency.</p> <p>Rule 136: Driver to report to the police station about accident : in case of accident, driver is required to inform police, owner of the goods and the transporter</p> <p>Rule 137: Class Labels: This rule provides various types of class labels to be used in case of carriage of hazardous goods or dangerous goods. It also lists all hazardous goods/dangerous goods along with type of hazards posed.</p>
<p>Transportation of Hazardous Goods</p>	<p>Hazardous Substances (Classification, Packaging, and Labeling) Rules 2011 – Draft Rules 2011 [Not yet notified]</p>	<p>These draft rules are based on the Recommendations of Sub-committee on Globally Harmonized System of classification and labeling of Chemicals (GHS).</p>
<p>Workers Safety at work place</p>	<p>The Factories Act, 1948</p>	<p>Sections 41 A to 41H of the Factories Act, 1948 contains provisions relating to Hazardous Processes. These provisions, inter-alia, provides for Constitution of Site Appraisal Committee (41 A); Compulsory disclosure of information by occupier (41B); Specific Responsibility of the occupier in relation to hazardous process (41C); power of central govt. to appoint Inquiry Committee (41D); emergency Standards (41E); Permissible limits of exposure of chemical and toxic substances (41F); Worker's participation in Safety management (41G); and right of workers to warn about imminent danger (41H).</p> <p>The term Hazardous Process has been defined in section 2 (cb) of the Factories Act, 1948 as amended. As per definition, "hazardous process" means any process or activity in relation to an industry</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

		<p>specified in the 'First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, bye-products, wastes or effluents thereof would,--</p> <p>(i) cause material impairment to the health of the persons engaged in or connected therewith, or</p> <p>(ii) result in the pollution of the general environment:</p> <p>Provided that the State Government may, by notification in the Official Gazette, amend the First Schedule by way of addition, omission or variation of any industry specified in the said Schedule;</p> <p>Occupational Exposure of Chemicals (limit of over 100 items specified]: This is meant for the safety of workers. Three explosive precursor chemicals, namely, Acetone, Hydrogen Peroxide and Nitric Acid figure in the said list.</p>
<p>Accident during handling of hazardous substance:</p> <p><i>[Mandatory Insurance requirement to meet any liability arising on account of loss of life or loss of property.]</i></p>	<p>Public liability Insurance Act, 1991 and the Public Liability Insurance Rules, 1991</p>	<p>This Act provide for public liability- insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto.</p> <p>Under this Act, the Owner {who is handling hazardous substance} is required to,-</p> <ul style="list-style-type: none"> - Provide any information required for ascertaining compliance with the provisions of the Act - Allow entry and inspection to ascertain compliance with the provisions of the Act; - Required to have insurance policy equal to paid up capital, but not exceeding Rs. 50 crores, providing for contracts of insurance thereby he is insured against liability to give relief; - Pay the amount of an award as specified by the District Magistrate. <p>The term “handling”, in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance;</p> <p>The term "hazardous substance" means any substance</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

		<p>or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986 (29 of 1986), and exceeding such quantity as may be specified, by notification, by the Central Government.</p> <p>As per section 2 (e) of the Environmental Protection Act, the term "hazardous substance" means any substance or preparation which, by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings other living creatures, plants, micro-organism, property or the environment.</p>
<p>Provisions relating to Emergency arising due to industrial accidents involving Hazardous Chemicals.</p>	<p>Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996</p> <p>Note: These rules have been notified vide notification No. G.S.R 347 (E), dated 1.8.1996 under section 6, 8, and 25 of the Environment (Protection) Act, 1986.</p>	<p>It is an offshoot of Bhopal Gas Disaster in 1984. This resulted due to leakage of Chemical Methyl Isocyanate gas (a chemical use to manufacture pesticides). It led to death of thousands of peoples and injuries to lakhs of people at Bhopal in the State of Madhya Pradesh in India.</p> <p>These rules provides for formation of Crisis Groups at</p> <ul style="list-style-type: none"> ● Central Level ● State Level ● District Level ● Local level <p>Central Crisis Group</p> <ul style="list-style-type: none"> ● Apex body to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents ● Continuously monitor the post-accident situation from major accidents, suggest measures for prevention <p>State crisis group</p> <ul style="list-style-type: none"> ● Apex body in the State to deal with major chemical accidents and provide expert guidance ● Review all district off-site emergency plans in the State and report to Central crisis Group <p>District Crisis Group</p> <ul style="list-style-type: none"> ● Assist in the preparation of the district off-site emergency plan ● Assist the district administration in the management of chemical accidents

Matrix of Legal Provisions applicable to Precursor Chemicals

		<p>Local Crisis Group</p> <ul style="list-style-type: none"> • Prepare local emergency plan for the industrial pocket • Ensure dovetailing of local emergency plan with district off-site emergency plan <ul style="list-style-type: none"> -Train personnel involved in chemical accident management.
Illegal Possession, or use of Explosive material including IEDs	The Explosive Substance Act, 1908	<p>Under this Act, varying degree of imprisonment including life imprisonment or 20 years imprisonment have been prescribed for various criminal offences such as,-</p> <p>(i) causing explosion which is likely to endanger life or property.</p> <p>(ii) attempt to cause explosion, or for making or keeping explosives with intend to endanger life or property</p> <p>(iii) for making or possessing explosives under suspicious circumstances</p> <p>(iv) abetting any of the above offence.</p>

Part –II: Other Miscellaneous Legal Provisions dealing with Dangerous Goods/Hazardous substances

The following **Table-II** tabulates and briefly describes the other important legal provisions in India relating to Hazardous Chemicals /Dangerous Goods.

Table II

Sr. No.	Legal Provisions	Important Details
1.	Indian Standard IS 1446: 2002: Indian Standard dealing with transportation of Dangerous Goods	<p>This standard classifies chemicals and dangerous goods by the type of risk involved and lists the various hazardous Chemicals/Dangerous Good along with corresponding UN number to facilitate safe national and international transport.</p> <p>This standard is based on the recommendations of the United Nations Committee of Experts on the Transport of Dangerous Goods published in Orange Book.</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

2.	The Aircraft (Carriage of Dangerous Goods) Rules, 2003	<p>These rules govern carriage of dangerous goods by Air.</p> <p>These Rules extend to whole of India and apply also –</p> <p>(a) to aircraft registered in India or aircraft operated by an operator who has his principal place of business or permanent place of residence in India, wherever they may be;</p> <p>(b) to all aircraft for the time being in or over India; and</p> <p>(c) to persons operating air transport services to, from, within and over India, shippers of dangerous goods or their agents.</p>
3.	Gas Cylinder Rules, 2004 [Issued by the Department of Industrial Policy and Promotion under the Ministry of Commerce and Industry]	<p>The objective of these rules is to ensure safety of the public engaged in the activity of filling, possession, transport and import of such gases. The Compressed gases viz., permanent gas, liquefiable gas or gas dissolved in liquid when filled in a metallic container pose potential hazard when explode.</p> <p>The Govt. of India has declared compressed gas filled in metallic container as an ‘explosives’ under Section 17 of the Explosives Act, 1884 within its meaning. Further, in exercise of power under Section 5 & 7 of the Explosive Act, 1884, the Central government has promulgated the Gas Cylinder Rules, 2004 to regulate filling, possession, transport and import of such gases.</p>
4.	Petroleum Act, 1934	<p>This Act contains provisions governing the import, transport, storage, production, refining and blending of petroleum.</p>
5.	Petroleum Rules, 2002	<p>The term “Petroleum” has been defined under the Act and Rules as liquid hydrocarbon or a mixture of liquid hydrocarbons and any inflammable mixture containing liquid hydrocarbons.</p> <p>These rules provides for approval of Refineries, Petrochemicals/Oil/Gas Processing Plants, transport of petroleum by water, land and pipeline, Flameproof and other</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

		safety equipment's for use in areas laden with flammable gases and licensing of storage installations, Tank trucks for transportation by road, aircraft refueller.
6.	Calcium Carbide Rules,1987	<p>These rules provides for approval of receptacles for packing Calcium Carbide, transport, storage of Calcium carbide.</p> <p>The Calcium Carbide in contact with moisture generates acetylene gas which has wider range of explosives limits. Further, the Calcium Carbide has been declared as inflammable substance under the Inflammable Substances Act and the Petroleum Act has been made applicable to it.</p>

Part –III: Multilateral Environmental Agreements (MEAs) for Chemical Safety and Management

Table III

Sr. No.	Name of Multilateral Environmental Agreements	Legal Provisions implementing Convention in India.	Brief Details
1.	Chemical Weapon Convention, 1993	Chemical Weapon Convention Act, 2000	<p>The CWC Act prohibits the manufacture, development, production, acquisition, transfer, use and storage of Chemical Weapons.</p> <p>The Act identifies toxic chemicals into three Schedules. The Chemicals included in the <u>Schedules 1, 2 & 3</u> of the Chemical Weapons Convention are presently notified against Categories <u>1A, 1B and 1C</u> of <u>Appendix 3 to Schedule 2 of ITC (HS)</u>.</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

2.	Stockholm Convention, 2001	<p>The manufacture, storage and import of Hazardous Chemical Rules,1989</p> <p>The Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008</p> <p>The Insecticide Act, 1968</p>	<p>The Stockholm Convention on Persistent Organic Pollutants (POPs) was adopted in 2001. It bans or severely restricts production, trade, and use of twenty two POPs.</p> <p>Most of these chemicals are no longer manufactured or used in industrialized countries; however, the nature of POPs means that people can be seriously impacted by releases of POPs that occur hundreds or even thousands of miles away.</p> <p>The Stockholm Convention contains provisions for the disposal and treatment of POPs wastes and stockpiles. It also establishes procedures for listing additional POPs that may be banned or severely restricted.</p>
3.	Rotterdam Convention, 1999	<p>Schedule 1 of the ITC (HS) issued under Foreign Trade & Development Act, 1992 [administered by the Ministry of Commerce & Industry]</p> <p>Import of following items is restricted in terms of Interim PIC procedure of Rotterdam convention:-</p> <ul style="list-style-type: none"> • Amosite (in Rock form) [HS Code: 25249014]; • Amosite (Fibre raw, beaten or washed or graded to length) [HS code: 25249024] • Amosite (Flakes or powder) [HS code: 25249034] • Containing polychlorinated 	<p>The full name of Rotterdam Convention is the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. It entered into force on 24 February 2004.</p> <p>It is a legally binding international treaty that empowers countries to make informed choices about whether to allow imports of chemicals and pesticides that pose threats to the environment or human health. This convention enables importing countries to either give their prior informed consent (PIC) to accept hazardous chemicals, or to refuse imports of such</p>

Matrix of Legal Provisions applicable to Precursor Chemicals

		<p>biphenyls (PCBs) polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs) [HS Code: 27109100]</p> <ul style="list-style-type: none"> • Poly Brominated Biphenyls [HS Code: 34049031] • Poly Chlorinated Biphenyls [HS Code: 34049032] • Poly Chlorinated Terphenyls [HS Code: 34049033] • Poly Brominated Biphenyls, Poly Chlorinated Biphenyls, Poly Chlorinated Terphenyls, Crocidolite [HS Code: 38349035] 	<p>chemicals. The convention covers pesticides and industrial chemicals that parties to the convention have been banned or severely restricted for health or environmental reasons. At present, 40 chemicals, including 25 pesticides are listed under this convention.</p>
4.	Basel Convention, 1989	<ul style="list-style-type: none"> • Hazardous wastes (Management, Handling and Transboundary Movement) Rules, 2008 • The Batteries (Management & Handling) Rules, 2001 	<p>This convention is on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. It was adopted on 22 March 1989. The overarching objective of the Basel Convention is to protect human health and the environment against the adverse effects of hazardous wastes.</p> <p>Its scope of application covers a wide range of wastes defined as “hazardous wastes” based on their origin and/or composition and their characteristics, as well as two types of wastes defined as “other wastes” - household waste and incinerator ash.</p>

Part IV: Restriction or Regulation on Import/Export, Manufacture, Use, Storage, Transportation of Precursor Chemicals for IEDs

Table IV

Area of Controls	Laws/Rules enacted by the Government	Ammonium Nitrate	Nitromethane	Acetic anhydride	Sodium nitrate	Potassium Nitrate	Sodium chlorate	Potassium Chlorate	Potassium perchlorate	Hydrogen Peroxide	Nitric Acid	Acetone	Aluminum Powder /Flakes	Calcium Ammonium Nitrate	Urea	Detonators
Controls Over Import under ITC (HS)	ITC (HS) issued under Foreign Trade (Development & Regulation) Act, 1992 Directorate General of Foreign Trade	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes	Yes
Controls Over Export under ITC (HS)	-do-	No.	No.	Yes	No.	No.	No	No	No	No	No	No	No	No	Yes	Yes
Controls under Explosive Act and rules framed thereunder	Ammonium Nitrate Rules, 2012; Explosive Rules, 2008; Explosive Act, 1884	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes

Matrix of Legal Provisions applicable to Precursor Chemicals

Area of Controls	Laws/Rules enacted by the Government	Ammonium Nitrate	Nitromethane	Acetic anhydride	Sodium nitrate	Potassium Nitrate	Sodium chlorate	Potassium Chlorate	Potassium perchlorate	Hydrogen Peroxide	Nitric Acid	Acetone	Aluminum Powder /Flakes	Calcium Ammonium Nitrate	Urea	Detonators
Controls over Manufacture, Storage etc.	Manufacture, Storage and Import of Hazardous Material Rules, 1989 [issued under the Environment Protection Act, 1986]*	Yes (33)*	No	Yes	No	No	Yes (568)	Yes (520)	Yes (478)	Yes (318)	Yes (423)	Yes (4)	Yes (19)	No	No	Yes
Controls for ensuring Worker's Safety at work place	The Factories Act, 1948 as amended **									TLV	TLV	TLV				
Controls over Transportation	Central Motor Vehicles Rules, 1989***	Yes (122)	Yes (1615)	Yes (7)	Yes (2029)	Yes (1836)	Yes (1999)	Yes (1819)	Yes (1840)	Yes (1183-1185)	Yes (1573-1574)	Yes (9)	Yes (91)	No	No	Yes(307-308)

Note:

*means that Threshold Limit Value (TLV) have been prescribed under Factories Act, 1948 to ensure safety of workers.

* means that number given in the bracket indicates the Serial Number at which the given chemical figures in the list in Part II of the Schedule 1 of the MSIHC Rules, 1989 as amended.

*** means that number given in the bracket indicates the Serial Number at which the given chemical figures in the list of chemicals specified in Rule 137 of Central Motor Vehicles Rules, 1989, and considered to be dangerous from transportation point of view.