



[Prescribed under rule 7(2) of the Registration and Licensing of Industrial Undertakings Rules, 1952]

APPLICATION FOR LICENCE OR PERMISSION

(To be submitted with 10 spare copies)

This form is to be used for application for a licence or permission for the establishment of a new industrial undertaking [under section II of the Industries (Development and Regulation) Act, 1951] where foreign collaboration, import of capital equipment or issue of capital involved.

1. Name of the Schedule industry or industries to which the articles proposed to be manufactured relate.
2. Name and address of the applicant. MONSANTO COMPANY, ST. LOUIS, MO.(U.S.A.)
3. Name and address of the industrial undertaking. New Company - India
4. If possible at this stage, indicate—
 - (a) Where is it proposed to be undertaken by proprietors, partners, private limited or public limited company. Public Limited Company
 - (b) Names of proprietors, partners, or Board of Directors and their addresses. To be appointed
 - (c) Name and address of the Managing Agents, if any. None
 - (d) Obligations, rights and privileges of Managing Agents in the constitution and working of the Company. Not applicable
 - (e) How is it proposed to finance the scheme? Monsanto Equity - 50%
Indian Public Equity - 50%
Foreign Exchange and Rupee Loans
 - (f) Is any foreign collaboration (whether in the form of royalty or consultancy agreement) or investment envisaged? If so, the extent and nature of such collaboration. Is it proposed to find foreign exchange for import of capital equipment in any other way? Technical services, export services
Royalty and investment are envisaged.
Monsanto Co., U.S.A. will provide technology and capital. As far as can be ascertained today, Monsanto capital input will cover the foreign exchange required for import of capital equipment.
5. Proposed location of the factory. Maharashtra is the state which offers the greatest advantages from techno-economic aspects.

Tehsil.....District.....State.....

Amended under Notification dated December 11, 1964

JBA/NP 16-9-69

0054698

TOWOLDMON0055476

6. Lines of Manufacture proposed: -

Name of product or bye-product	*Proposed (annual) installed capacity
1. Biphenyl (C ₆ H ₅ C ₆ H ₅)	1,400 Metric Tons
2. Chlorinated Biphenyl (Monsanto Trademark "Aroclor")	2,270 Metric Tons
*Biphenyl continuous manuf. of crude and then batch refined Aroclor via batch type manuf. All Calculations on 3 shift/300 day year	

*Basis of estimating installed capacity should be clearly stated viz., whether the operation will be continuous or by shifts and the number of shift days assessed for estimating the annual capacity.

7. Manufacturing Programme:

(a) Existing activities, if any:

Sl. No.	Items of production	Existing capacity		Current Annual Production	
		Quantity/Tonnage	Value	Quantity/Tonnage	Value
1					
2					
3					
etc.					

(b) Final manufacturing programme for items in respect of which this application is made.

Sl. No.	Item of manufacture	Annual capacity		Estimated Annual Production		CIF Value of unit/product Rs/Kg.
		Quantity/Tonnage	Rs - Lakhs	Quantity	Value	
1	Aroclors	2,270	157.5			3.60
2	Biphenyl	1,400	73.0*			3.30
3	*Biphenyl is not sold, all used to manufacture Aroclors (chlorinated Biphenyls), indicated value is that of imported material.					
etc.						

0034699

13. Power supply—

(a) Total requirements proposed to be drawn from —

(1) own generating station.

(2) public supply. - - - - - 2.500 KWH/Day (Average)

(b) In case of own station give brief particulars of plant in operation

14. If possible indicate additional requirements of coal/ coke in the proforma attached. No coal/coke - steam via fuel oil, oil consumption 1,800 gal. (U.S.)/day

15. If possible indicate the estimated value of fixed assets i.e., investment in land, buildings and machinery. (Installed value Rs-Lakhs)

	1972	1974	Total
Land	3.00	-	3.00
Building	12.75	9.75	22.50
Machinery	61.43	48.00	109.43

Note:—Where the land and/or building is rented, the capitalised value of the same may be given

16. Give a brief description of the processes involved in the manufacture and factors favourable for their adoption. (See attachment)

17. Staff and Labour— 1972-73 1974-78 Proposed to be employed on implementation of the project.

(a) Managerial. 2 3

(b) S: rvisory—

Technical 2 4

Non-Technical 2 4

(c) Clerical 4 6

(d) Labour—

Skilled 7 15

Semi-skilled 5 10

Unskilled 5 8

Total 27 40

(e) Other categories, if any.

Note Market personnel not included; foreign national manager and training personnel also excluded.

Place.....

Date.....

Signature of applicant.

(To be filled in by the Govt. of India)

Date of receipt of the application

Signature of the Receiving Officer.

0054700

(c) Forecast of time required for implementation of the project, ---18 months after receipt of import licenses

8. Phased manufacturing programme for 7(b) above, if any:

Year	Items of production	Annual turnover		Percentage by value of imported content (i.e. total of all imported raw materials and component)
		Quantity/Tonnage	Value	
1st year				
(i)				
(ii)				
(iii)				
(iv)				
2nd year	(See Attachments)			
(i)				
(ii)				
(iii)				
(iv)				
3rd year				
etc.	(Attach a sheet, if necessary)			

9. Estimated requirements of main raw materials and their value.

Name of raw material	Whether indigenous or imported if the later, the country of origin	Quantity required per year	Estimated value
----------------------	--	----------------------------	-----------------

(See Attachments)

10. Requirements of capital equipment. (Not-installed values)	1972	1974	Total
Total value of equipment required. Rs-Laks.	44.48	32.25	76.73
(i) Imported—	13.34	16.13	29.47
Please give name of the countries in the order of preference.	U.S.A. or U.K.		
(ii) Indigenous—	31.14	16.12	47.26

11. Indicate your requirements of rail transport for movement of raw materials and finished products in the proforma attached.

(See attachment)

12. Water supply—

(a) Will it be ample for requirements of—

(1) factory, and

(2) township or staff quarters?
(State approximate quantity).

(b) Will it be drawn from public supply? Yes, total needs 285,000 gallons (U.S.) per day, water for steam boilers included.

(c) Effluent problems, if any.

0054701

8. PHASED MANUFACTURING PROGRAM FOR 7(b) ABOVE

Year	Items of production	Annual Turnover		Percentage by value of imported content (i.e. total of all imported raw materials and component)	
		Quantity/ Tonnage Metric Tons	Value Rs. Lakhs	Individual	Combined
1972	(i) Aroclor	712	64.8	36%	
1973	(i) Aroclor	862	72.7	39%	
1974	(i) Aroclor	1,043	82.8	41%	
1975	(i) Biphenyl	770	*	-	
	(ii) Aroclor	1,261	95.9	0.4%	
1976	(i) Biphenyl	930	*	-	
	(ii) Aroclor	1,524	110.9	0.4%	
1977	(i) Biphenyl	1,123	*	-	
	(ii) Aroclor	1,841	127.9	0.4%	
1978	(i) Biphenyl	1,384	*	-	
	(ii) Arcolor	2,268	157.5	0.4%	

* No sales of Biphenyl - - All used in manufacturing Aroclor, cost of imported and indigenous raw materials added to those of Aroclor.

0054702

9. ESTIMATE REQUIREMENTS OF MAIN RAW MATERIALS

Name of Raw Material	Indigenous (I) or imported (i) origin	Quantity Required (Metric Tons) & Estimated Value (Rs-Lakhs) -- by year						
		1972	1973	1974	1975	1976	1977	1978
(1) Biphenyl Value (Rs-lakhs)	(i)	434 22.970	526 27.840	636 33.660	-	-	-	-
(2) Chlorine Value (Rs-lakhs)	I	643 2.130	778 2.580	942 3.120	1139 3.770	1376 4.44	1662 5.50	2048 6.780
(3) ATT. Clay Value (Rs-lakhs)	(i)	1.1 0.027	1.3 0.032	1.6 0.040	1.9 0.047	2.3 0.057	2.8 0.069	3.4 0.084
(4) Ferric Chloride Value (Rs-lakhs)	(i)	0.2 0.007	0.3 0.010	0.3 0.010	0.4 0.013	0.5 0.017	0.6 0.020	0.7 0.023
(5) Nitrogen (compressed) Value (Rs-lakhs)	I	1.2 0.069	1.5 0.087	1.8 0.104	2.1 0.121	2.6 0.150	3.1 0.179	3.9 0.225
(6) Lime Value (Rs-lakhs)	I	1.4 0.023	1.7 0.028	2.1 0.035	2.5 0.041	3.1 0.051	3.7 0.061	4.5 0.074
(7) Benzene Value (Rs-lakhs)	I	-	-	-	1078 1.694	1302 2.045	1572 2.470	1938 3.045
(8) Carbon Dioxide-Liquid Value (Rs-lakhs)	I	-	-	-	16.2 0.268	19.5 0.323	23.6 0.390	29.1 0.4
(9) Lead Value (Rs-lakhs)	(i)	-	-	-	15.0 0.298	18.1 0.359	21.9 0.435	27.0 0.536
(10) Isopropanol Value (Rs-lakhs)	I	-	-	-	57.7 1.527	69.7 1.844	84.1 2.225	103.7 2.744
Value (i)		23.004	27.882	33.710	0.358	0.433	0.524	0.643

*do we want to
show this?*

0054703

11. REQUIREMENTS OF RAIL TRANSPORT

	<u>Trucks/Day</u>	<u>Trucks/Year</u>
Raw materials received	2	600
Fuel Oil	1	300
Container	1	300
Waste to dump	1	300
Finished goods shipment	2	600

All receipts in tank trucks or 55-gallon drums.

1. PROCESS DESCRIPTION

- A. BIPHENYL. An intermediate for the production of chlorinated biphenyls such as Monsanto Aroclors (trademark) is produced by the pyrolysis of benzene. Benzene is passed through a vaporizer then bubbled through molten lead in a series of reaction vessels at a controlled rate and temperature. The resultant condensed crude biphenyl is then distilled to separate it from unconverted benzene and residual tars.
- B. AROCLORS. Chlorine gas is used to chlorinate biphenyl to the desired degree in the presence of a catalyst in a batch type chlorinator. The crude product is then distilled and treated to give a finished product of the desired specifications. Hcl gas evolved in the chlorination if a market exists can be recovered as industrial grade muriatic acid.

0054704