



MANIPUR POLLUTION CONTROL BOARD

IMPHAL WEST DC OFFICE COMPLEX

LAMPHELPAT-795004

LIST OF ORANGE CATEGORY OF INDUSTRIES

Sl. No.	Industry Sector	Remarks
1	Dismantling of rolling stocks (wagons/coaches)	Emissions of dust and generation of waste oils take place during dismantling.
2	Bakery and confectionery units with production capacity > 1 TPD. (With ovens/furnaces)	
3	Chanachur and laddoo from puffed and beaten rice(muri and shira) using husk fired oven	Normal water and air polluting
4	Coated electrode manufacturing	Preparation of core wire/rod, preparation of dry mix, preparation of wet mix, application of coating by extrusion, baking of coated electrodes
5	Compact disc computer floppy and cassette manufacturing/Reel manufacturing	Generates waste-water and process emissions.
6	Flakes from rejected PET bottle	Normal water & air polluting industry.
7	Food and food processing including fruits and vegetable processing	Normal water and air polluting.
8	Jute processing without dyeing	CPCB has notified standards
9	Manufacturing of silica gel	Waste-waters containing TDS and emissions of H ₂ SO ₄ are generated.
10	Manufacturing of tooth powder, toothpaste, talcum powder and other cosmetic items	Both air and water pollution are generated.
11	Printing or etching of glass sheet using hydrofluoric acid	Both air and water pollution are generated.
12	Silk screen printing, sari printing by wooden blocks	Wash-water and PM emissions from boilers.
13	Synthetic detergents and soaps (excluding formulation)	<p>i. This is the score for units having generation of wastewaters less than 100 KLD.</p> <p>ii. The units having wastewater generation more than 100 KLD will become mainly water polluting and accordingly categorized as Red.</p>
14	Thermometer manufacturing	Involves making of glass bulb, forming reservoir in the glass tube for fluid, inserting fluid, scale marking, use of fuel to heat the glass tubes and hydrofluoric acid to seal the scaling. Small quantities of spent acids are generated.

15	Cotton spinning and weaving (medium and large scale)	Mainly air polluting industry. Sources of air pollution are the fine particles (PM) of cotton from spinning process.
16	Almirah, Grill Manufacturing (Dry Mechanical Process)	Air pollution due to spray painting (emissions of VOCs). Noise pollution due to hammering operations. Units without painting operations shall be categorized as green category.
17	Aluminium and copper extraction from scrap using oil fired furnace (dry process only)	Significant air pollution due to melting (emissions of SO ₂ , PM).
18	Automobile servicing, repairing and painting	Normal water and air polluting and recyclable waste oil generating. If the waste water generation is more than 100 KLD, it will be Red category unit.
19	Ayurvedic and homeopathic medicine	
20	Brickfields (excluding fly ash brick manufacturing using lime process)	Significantly air polluting.
21	Building and construction project more than 20,000 sq. m built up area	i. In the pre-construction stage, it is mainly air polluting due to generation of dust (PM) emissions. ii. After construction, it is mainly water polluting. If the discharge is more than 100 KLD, it will be categorized as Red.
22	Ceramics and Refractories (units with coal consumption < 12 MT/day)	i. Mainly air polluting industry. ii. Units with coal consumption > 12 MT/day shall be categorized as Red
23	Coal washeries	i. Wet washeries are mainly water polluting industry generating effluents which are having inorganic SS & TDS. ii. Additionally, air pollution due to PM emissions is also generated.
24	Dairy and dairy products (small scale)	
25	DG set of capacity >1MVA but < 5MVA	
26	Dry coal processing, mineral processing, industries involving ore sintering, pelletising, grinding & pulverization	

27	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol)	<ul style="list-style-type: none"> i. Mainly water polluting industry. ii. Units having discharge > 100 KLD shall be categorized as Red
28	Ferrous and Non-ferrous metal extraction involving different furnaces through melting, refining, re-processing, casting and alloy making	<ul style="list-style-type: none"> i. Mainly air polluting. ii. This is applicable to secondary production of ferrous & nonferrous metals (excluding lead) up-to 1 MT/hour production. iii. For lead process, it is categorized as Red. iv. For Induction Furnace clubbed with AOD furnace, the molten metal from induction furnace is transferred to AOD furnace where other metals like manganese and nickel are added to get the metal of desired constituents. The lime and silicon are also added for reduction of the metal oxides to the base metal. It is categorized as Red.
29	Fertilizer (granulation / formulation /blending only)	
30	Fish feed, poultry feed and cattle feed	Obnoxious odour, H ₂ S, etc.
31	Fish processing and packing (excluding chilling of fishes)	Heating furnace. Mainly air polluting.
32	Forging of ferrous and non-ferrous metals (using oil and gas fired furnaces)	Heating furnace. Mainly air polluting.
33	Formulation/pelletization of camphor tablets, naphthalene balls from camphor/ naphthalene powders.	Mainly air polluting. Emissions of Benzene, HC are expected.
34	Glass ceramics, earthen potteries and tile manufacturing using oil and gas fired kilns, coating on glasses using cerium fluorides and magnesium fluoride, etc.	Mainly air polluting. Emissions of SO ₂ are expected.
35	Gravure printing, digital printing on flex, vinyl	Waste waters , emissions of VOCs
36	Heat treatment using oil fired furnace (without cyaniding)	Mainly air polluting and noise generating.
37	Hot mix plants	
38	Hotels (< 3 star) or hotels having > 20 rooms and less than 100 rooms.	Mainly water polluting.
39	Ice cream making unit	Wash-water and boilers/ oven for pasteurization.
40	Industries engaged in recycling /reprocessing/ recovery/reuse under Schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, Items namely - Paint and ink Sludge/residues	Mainly air polluting
41	Industries engaged in recycling /reprocessing/ recovery/ reuse of Hazardous Waste under schedule IV of	

	Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, Items namely - Brass Dross, Copper Dross, Copper Oxide Mill Scale, Copper Reverts, Cake & Residues, Waste Copper and copper alloys in dispersible form, Slags from copper processing for further processing or refining, Insulated Copper Wire, Scrap/copper with PVC sheathing including ISRI-code material namely "Druid", Jelly filled Copper cables, Zinc Dross-Hot dip Galvanizers SLAB, Zinc Dross-Bottom Dross, Zinc ash/Skimming arising from galvanizing and die casting operations, Zinc ash/Skimming/other zinc bearing wastes arising from smelting and refining, Zinc ash and residues including zinc alloy residues in dispersible form	
42	Industry or processes involving foundry operations	<p>i. This score is valid for the foundries having capacity < 5 MT/hr as such units require the coal/coke @ < 500 kg/hr.</p> <p>ii. The units having capacity of 5 MT/hr and more, the coal/coke consumption will be more than 500 kg/hr and will be classified as Red.</p>
43	Lime manufacturing (using lime kiln)	Mainly air polluting
44	Liquid floor cleaner, black phenyl, liquid soap, glycerol mono stearate manufacturing	Both air and water polluting
45	Manufacturing of glass	<p>i. Mainly air polluting (melting at 1500°C) and refining.</p> <p>ii. In case of lead glass, the category will be Red</p>
46	Manufacturing of iodized salt from crude/ raw salt	Boiling in Evaporators (multiple effect evaporators), centrifuging, iodization with KIO ₃ mixing. Mainly air polluting.
47	Manufacturing of mirror from sheet glass	Evaporator & furnace for heating the metal to be applied as reflector on mirror. Mainly air polluting.
48	Manufacturing of mosquito repellent coil	Mainly air polluting. Toxic fumes are expected.
49	Manufacturing of Starch/Sago	Water and air polluting industry. Boiler is used for steam generation.
50	Mechanized laundry using oil fired boiler	Both air and water pollution are generated.
51	Modular wooden furniture from particle board, MDF< swan timber etc., Ceiling tiles/ partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (With boiler)	<p>1. Mainly air pollution from Boiler as well as VOCs from use of adhesives.</p> <p>2. Without boiler, it will be a Green category industry.</p>

52	New highway construction project	
53	Non-alcoholic beverages(soft drink) & bottling of alcohol/non-alcoholic products (waste-water generation < 100 KLD)	Units having waste-water generation > 100 KLD will be categorized as Red.
54	Paint blending and mixing (Ball mill)	Both air and water pollution are generated.
55	Paints and varnishes (mixing and blending)	Waste-waters as well as fumes of VOCs due to solvents, pigments, varnishes.
56	Ply-board manufacturing(including Veneer and laminate) with oil fired boiler/ thermic fluid heater(without resin plant)	Mainly air polluting because of use of boiler.
57	Potable alcohol (IMFL) by blending, bottling of alcohol products	Mainly water polluting.
58	Printing ink manufacturing	i. Pigments, binders and solvents are used. ii. Boiler is also used. iii. Emissions of VOCs take place.
59	Printing press	Colored waste-waters containing dyes and VOC emissions are generated.
60	Reprocessing of waste plastic including PVC	Large quantities of wash-water and fugitive emissions are generated.
61	Rolling mill (oil or coal fired) and cold rolling mill	Mainly air polluting. Cooling water, recyclable waste oils, etc. are also generated.
62	Spray painting, paint baking, paint shipping	Mainly air polluting. Emissions of VOCs and HC are generated.
63	Steel and steel products using various furnaces like blast furnace/open hearth furnace/induction furnace/arc furnace/submerged arc furnace /basic oxygen furnace/hot rolling reheated furnace	Mainly air polluting. In the emissions, oxides of manganese, nickel etc. are also present.
64	Stone crushers	Mainly air and noise polluting
65	Surgical and medical products including prophylactics and latex	Both air and water polluting
66	Tephlon based products	Due to spraying applications, emissions (HC) are generated
67	Thermocol manufacturing (with boiler)	Polystyrene is heated. Mainly air polluting with boiler.
68	Tobacco products including cigarettes and tobacco/opium processes	Such industries generate both air as well as water pollution.
69	Transformer repairing/ manufacturing (dry process only)	Mainly air polluting because of ovens, shot-blasting, etc.
70	Tyres and tubes vulcanization/ hot retreating	Mainly air polluting. Emissions

		of PM, VOCs and obnoxious odour are generated.
71	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils	<ul style="list-style-type: none"> i. All sorts of pollution are generated. ii. This score is valid for plants having wastewater generation < 100 KLD. iii. If the waste-water generation is more than 100 KLD, the unit shall be classified as Red.
72	Wire drawing and wire netting	Mainly water polluting.
73	Dry cell battery (excluding manufacturing of electrodes) and assembling & charging of acid lead battery on micro scale	Both water and air polluting
74	Pharmaceutical formulation and for R & D purpose (For sustained release/extended release of drugs only and not for commercial purpose)	<ul style="list-style-type: none"> i. All sorts of pollution are generated. ii. R&D activities are to be shifted to Red category.
75	Synthetic resins	All sorts of pollution are generated.
76	Synthetic rubber excluding molding	<ul style="list-style-type: none"> i. Most synthetic rubber is created from two materials, styrene and butadiene. Both are currently obtained from petroleum. ii. Process is similar to a part of Petrochemical plants.
77	Cashew nut processing	
78	Coffee seed processing	
79	Parboiled Rice Mills	<ul style="list-style-type: none"> i. Rice Mills are generating both air and water pollution. ii. Wastewaters are having high strength in respect of BOD. iii. This is valid for units having waste-water generation < 100 KLD and fuel consumption less than 12 MTD. iv. For units having wastewater generation > 100 KLD or fuel consumption > 12 MTD or both, the unit shall be classified as Red.
80	Foam manufacturing	<ul style="list-style-type: none"> i. Raw material is polyurethane, latex etc. ii. Emissions of VOCs and HAPs. CH₃Cl₂ and

		<p>similar compounds as blowing agents.</p> <p>iii. Outdated raw materials and spoiled slots are discarded as HW.</p>
81	Industries engaged in recycling /reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, Items namely - Used Oil – As per specifications prescribed from time to time.	Mainly air polluting and hazardous waste generating industry.
82	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, Items namely - Waste Oil -- As per specifications prescribed from time to time.	Mainly air polluting and hazardous waste generating industry.
83	Producer gas plant using conventional up drift coal gasification (linked to rolling mills glass and ceramic industry refractories for dedicated fuel supply)	Mainly air polluting & tar (HW) generating. SO ₂ , CO, NO _x are generated. Tar is the byproduct and utilized by other industries in co-processing.

Specific remarks in respect of some of the industrial sectors

Sl. No.	Industry Sector	Remarks
1	<i>Excavation of sand from the river bed (excluding manual excavation)</i>	<i>Since such types of activities cause ecological disturbances, the instructions issued by the government from time to time be followed. To be categorized by MoEF&CC.</i>
2	<i>Infrastructure Development Project</i>	<i>Vast variety of such projects come under such category. This is to be decided by the concerned SPCB in line of EIA Notification, 2006.</i>