## Half Yearly Compliance Report 2025 01 Jun(01 Oct - 31 Mar)

# Acknowledgement

Proposal Name	Expansion project of chloromethanes and PVC plants of M/s. Chemplast Sanmar Limited, Mettur, Salem District, Tamil Nadu.
Name of Entity / Corporate Office	Chemplast Sanmar Limited
Village(s)	GONUR
District	SALEM

**District** SALEN

Proposal No.	A/TN/IND/21639/1910
Plot / Survey / Khasra No.	
State	TAMIL NADU
MoEF File No.	J-11011/18/96-1A.II(I)

Category	Industrial Projects - 2
Sub-District	Mettur
Entity's PAN	****3000F
Entity name as per PAN	CHEMPLAST SANMAR LIMITED

# **Compliance Reporting Details**

**Reporting Year** 2025

Chemplast Sanmar

Limited, Plant-II, Mettur,

**Remarks (if any)** Tamilnadu II Bi-annual EC

Compliance report for the

year 2024-25

**Reporting Period** 01 Jun(01 Oct - 31 Mar)

## **Details of Production and Project Area**

Name of Entity / Corporate Office

Chemplast Sanmar Limited

	Project Area as per EC Granted	Actual Project Area in Possession
Private	26.32	26.32
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	26.32	26.32

# **Production Capacity**

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	PVC resins	Tons per Annum (TPA)	31/03/2027	60000	65921	66000
2	Hydrochloric Acid	Tons per Annum (TPA)	31/03/2027	-	67684	68000
3	Methyl chloride (CH3Cl),Met hylene Chloride (CH2Cl2),Chl oroform(CHC l3),Carbon Tetra Chloride(CCl	Tons per Annum (TPA)	31/03/2027	22000	32572.35	33580

## **Conditions**

## **Specific Conditions**

Sr.No.	<b>Condition Type</b>	Condition Details
1	Statutory compliance	Six-monthly progress reports on the implementation status of environmental conditions mentioned above must be submitted to Ministry/CPCB and the State Pollution Control Board regularly. The project will be monitored inter-alia by Ministry Regional Office at Bangalore.

### **PPs Submission:** Complied

EC Compliance status report for the compliance period April '24 to September '24 submitted to MoEF and CC on 01.06.2024. Copy of the acknowledgement is attached as Annexure. Scientist C, IRO, MoEF and CC, Chennai visited the plant on 29.10.2024 for issuing Certified Compliance Report.

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2 Statutory compliance Any further expansion of the plant can be taken up only with prior approval of this Ministry

## PPs Submission: Being Complied

The PVC paste resin manufacturing unit at Mettur was started in year 1967. The unit has a valid CTO from TNPCB vide Consent Order No. APCI/L82/85 for production capacity of 21,300 TPA of PVC and 13,320 TPA of HCl. An Environmental Clearance was subsequently granted by MoEF CC vide file number J 7701,1/LB /96-IA II(Ind) dated February t2, 1997, for production capacity of 60,000 TPA of PVC resin and 22,000 TPA of chloromethane. The unit has implemented best available technologies (BAT) in the plant maintenance activities and lower break-down hours, resulted with increase in "On-Stream" hours of the manufacturing facility. These improvements have resulted in increased production output without any additional infrastructure. Following the verification and Site inspection by the District Environmental Engineer (DEE), Salem, TNPCB has issued an amendment in the CTO vide Proceeding No. T9lTNPCB/F.864/SLM/R/L/W dated 14.10.2005 (attached as Annexure - 2), approving a 10 Percentage increase in PVC production capacity to 66,000 TPA. The unit has been operating at this capacity since then.

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Corporate Environmental Responsibility

The funds earmarked for the environmental protection measures shall not be diverted for other purposes and year wise expenditure reported to this Ministry for proper monitoring of the project implementation

#### PPs Submission: Complied

Separate budget for the environmental protection measures (Capital and Recurring cost) is earmarked and are not diverted for any other purpose. All the expenses are recorded in advanced accounting system (SAP) of the company. Capital Cost utilized for Environment safeguard and protection measures during the compliance period (October 2024 to March 2025) is detailed below S.no Description Cost (Rs. Lakhs) 1 Operational cost of ZLD ETP and Incinerator 412.29 2 Water Samples analysis charges 2.09 3 Ambient Air quality and stack monitoring 1.63 4 Greenbelt development and maintenance charges 15.17 5 VOC analysis in Piezometric well water and Ground water 1.744 6 Calibration of VCM/VOC/CL2 sensor 0.4895 7 ETP Sludge handling and disposal to Common TSDF Poochempalli 7.76 8 ZLD Sludge handling and coprocessing in M/s India Cements Ltd. 0.94 9 AAQ/Stack survey by TNPCB 1.47 10 Consent fee 6.34 11 Plastic waste Management 20.52 12 AMC for Care Air Centre 0.3 Total 470.767

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#### WASTE MANAGEMENT

Handling, manufacturing, storage and transportation of hazardous chemicals must be in accordance with the Manufacture, storage and import of Hazardous Chemicals Rules, 1989 as amended in October 1994. Necessary approvals from Chief Inspectorate of Factories/ Chief Controller of Explosives must be obtained as per regulations.

## PPs Submission: Complied

Hazardous chemicals are handled as per the guidelines of Manufacture, storage and import of Hazardous Chemicals Rules 1989 as amended. Necessary approvals from Factory Inspectorate / Chief Controller of Explosives are in place and periodically renewed as per the requirement. PVC Plant: 1. VCM storage licenses: (License No.S/HO/TN/03/196S (S2669) and (License No.S/HO/TN/03/224 (S2720) valid up to 30.09.2028. 2. Chlorine storage for 68 tonners license No: G/SC/TN/06/1412 (G 18458) valid up to 30.09.2025

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## AIR QUALITY MONITORING AND PRESERVATION

The gaseous and SPM emission(s) from various units should confirm to the standards prescribed by the State Pollution Control Board from time to time. At no time, the emissions should go beyond the prescribed limits. In the event of failure of any pollution control system adopted by the units, the respective unit(s) must be put out of operation immediately and shall not be restarted until the control systems are rectified to achieve the desired efficiency.

#### **PPs Submission:** Complied

All the Air pollution control equipment's are in operation in an efficient manner. Monthly monitoring of stack emissions is carried out through NABL and MoEF and CC accredited Laboratory and report is being submitted to TNPCB on monthly basis. The list of Stacks and Stack Emission monitoring data during Compliance period (October 2024 to March 2025) is attached as Annexure. There is no failure / down-time of any pollution control system during the compliance period.

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## AIR QUALITY MONITORING AND PRESERVATION

Monitoring of ambient air quality and stack emissions shall be periodically carried out in consultations with SPCB and report submitted to the Board quarterly and to the Ministry (Regional Office at Bangalore) half-yearly

## PPs Submission: Complied

Ambient Air quality is monitored in 12 Locations through NABL and MoEF and CC accredited laboratory on monthly basis and monitored results are submitted to TNPCB on monthly basis. Chlorine monitors (4 numbers) are installed in the Chlorine handling area and monitored on real time basis at PVC plant. Similarly, 12 Nos of Chlorine monitors installed at Caustic Soda plant and 1no. of HCL monitor installed in the HCL plant. Ambient Air Quality monitoring data during Compliance period (October 2024 to March 2025) is attached as Annexure. Monthly monitoring of stack emissions is carried out through NABL and MoEF and CC accredited Laboratory and report is being submitted to TNPCB on monthly basis. Stack Emission monitoring data during Compliance period (October 2024 to March 2025) is attached as Annexure. A consolidated report of AAQ Stack monitoring is submitted to RO, MoEF and CC bi-annually. Continuous Ambient Air quality Monitoring Stations are installed at upwind and downwind directions to monitor SO:, NOx, pM16,

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VOC and Chlorine. The real time data are connected with Care Air Centre of TNPCB. The real time monitored values are also displayed at plant entrance for public view. Photo of online display board attached Annexure.

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Noise Monitoring & Prevention

Adequate Noise control measures shall be taken up so as to keep noise levels below 85 dB (A) in the work environment. The ambient noise level must not exceed the standards stipulated under EPA/State authorities.

#### PPs Submission: Complied

Adequate Noise Control Measures are implemented in the work area so that the Ambient Noise Level never exceeds the standard as prescribed by the Tamil Nadu pollution Control Board. In -built engineering control measures have been provided for the noise prone equipment s. Apart from this, PPEs like earmuff / earplugs are provided to all the employees working in the noise prone areas as a secondary protection from noise. Ambient Noise Level is measured internally on monthly basis and the report on the same is submitted to TNPCB on monthly basis. TNPCB is annually monitoring the Ambient Noise Level annually in 7 boundary Locations and 5 source Locations. Noise level monitored data during the compliance period is found within the standard and the report is attached as Annexure.

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WASTE MANAGEMENT

The hazardous waste including residual solvent, heavy ends, spent catalyst, Mercury bearing sludge, VCM high boils, etc. must be handled as per Hazardous and other Waste (Management and Handling) Rules, 1989 and necessary approval from SPCB must be obtained.

#### PPs Submission: Complied

The hazardous wastes are handled as per the provisions of Hazardous Waste and other (Management and Handling) Rules 2016. The Authorization for handling hazardous waste has been obtained from Tamil Nadu Pollution Control Board vide HWA Order NO. 20HFC31185293 dated 31/08/2020 (Valid till 31/03/2025) including incinerating high boils of VCM. Mercury bearing sludge is totally eliminated by the introduction of Membrane process in Aug-07 at Caustic Soda Plant.

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WATER QUALITY MONITORING AND PRESERVATION The effluent generation from the Chloromethanes and PVC plants must be maintained at the present level even after expansion and steps must be continued to further reduce the same. At any case, the quantity of effluent shall not exceed 30 m3 /hr for PVC plant and 9.30m3/hr chloromethane section. The effluents must be treated to meet the prescribed norms under EPA/State Pollution Control Board before discharging outside the premises. Effluent quality must be monitored to SPCB every quarter and Ministry every six-months

### PPs Submission: Complied

The effluent water generation at PVC plant section (Polymer) during the compliance period is 17.07 KL/Hr and from Chloromethane plant is 6.55 Kl/hour. Effluents streams are collected and treated at Zero liquid discharge plant and the recovered water is recycled back to the process. Company is sustaining zero liquid discharge status since September 2009. Filtered polymer water is recycled back to the process and effluent generated from chloromethane plant is treated at ZLD and recycled back to the process. There is no effluent discharge to outside premises from both the plants. The integrity of ZLD is being checked by SPCB by taking samples on monthly basis. Being achieved ZLD status, the effluent quality has not applicable. However, the quantity of water recycled is being reported.

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WASTE MANAGEMENT

The company must expedite the R and D efforts to extract mercury the brine sludge (Av 1450 mg/kg) to the least possible (preferably 4-100 ppm)

#### **PPs Submission:** Complied

The Caustic Soda manufacturing plant graduated from the legacy mercury cell technology to the cutting-edge membrane cell process, significantly reducing its environmental impact. Chemplast

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Sanmar Ltd, in keeping with its environment-friendly approach to business completed the switch over this August 2007, well ahead of the mandated timeline. The company spent Rs 800 millions in the switch over at its mercury based to membrane-based technology and sludge was generated mercury free from Brine Sludge. The Brine sludge is finally processed through drum filter for maximizing the removal of moisture content. From 1st March 2019 on wards Brine sludge is being transported and disposed to common TSDF of M/s. Re Sustainability IWM Solutions Limited (Formerly Known as Tamilnadu Waste Management Limited), Virudhungar and Pochampalli Taluk, Krishnagiri District 635206.

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Corporate Environmental Responsibility

The project authorities must set up Environmental Cell with adequate facilities for collection and analysis of samples, monitoring of environmental quality parameters, and to carry out time bound action plans related to environmental management and pollution control.

### **PPs Submission:** Complied

Environment Management cell is in place with qualified Engineer to carry out the Environmental Management and Monitoring functions at plant supported by Corporate Environment Team from Head Office. Organogram of Environment Cell is attached as Annexure. CSL established Full-fledged laboratory facilities for Environmental parameter monitoring. Lab photo is attached as Annexure .

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Statutory compliance

The project authority must strictly comply with the stipulations made by the State Government and State Pollution Control Board in the NOC granted to the Chloromethane and PVC project expansion.

#### PPs Submission: Complied

The Compliance status to conditions stipulated in the TNPCB NOC dated 17th June 1996 is attached as Annexure.

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WATER QUALITY MONITORING AND PRESERVATION The company must adopt water conservation measures in the plant including maximum recycling to maintain the raw water requirement at the present level even after the above-proposed expansion.

#### PPs Submission: Being Complied

Various Control measures have been taken for conservation of water by adopting the reduce, recycle and reuse techniques. Zero Liquid Discharge (ZLD) plant is installed in PVC Plant at the cost of Rs. 270 million in the year 2007-08 and is in operation. The total effluent water is processed through ZLD and recycled back to the process. Salt recovered from the Evaporator of ZLD is reused at Caustic Soda Plant of Plant III for Brine preparation. The overall process involves the extensive pretreatment to remove the suspended solids, oil and grease, organics and hardness. About 87 Percentage of water is recovered through dual stage High Efficient Reverse Osmosis (HERO) system. Mechanical vapor compressors are used to recover 10 Percentage of water from the RO reject after evaporation followed by centrifuge. Quantity of Water reprocessed through ZLD during the compliance period of October 2024 to March 2025 is as follows PVC Plant: 60538 KL (332.63KLD). Qty. of Salt recovered and reused: 362.21MT (1.99 MT/day) Rain water collection system from the building roofs are also implemented. Photos of Roof top rainwater harvesting system and rain water storage tanks are attached as Annexure.

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**GREENBELT** 

A green belt development plan taking into account the expanded activities, common waste disposal sites and other land uses must be made which should ensure coverage of minimum 30 percentage of the total land area.

#### PPs Submission: Complied

Extensive green belt is developed and well maintained to mitigate noise and dust emissions from the plant. The unit has covered 36.1 Percentage of the existing plot area i.e, 42.43 Acres (18680 Nos of trees) under greenbelt with native species. Photo and List of Trees planted is at Annexure.

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WASTE MANAGEMENT

State of the art incinerator with waste heat recovery and scrubbing

facility must be installed for incinerating HI boiling liquids (VCM high boils) before expansion projects are commissioned.

### **PPs Submission:** Complied

State of art Incinerator with waste heat recovery and scrubbing facility was commissioned in 1998 for incinerating VCM high boils and is being validated from time to time. Dioxins and Furans level at the incinerator outlet is being checked through M/s SMS Labs Services Private Limited (NABL and MoEF approved Laboratory) once in a year and the results are in compliance with the norms. Latest monitoring report is attached as Annexure

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WASTE MANAGEMENT

The landfill sites for hazardous waste disposal must be properly reclaimed with a time bound action plan. Ground water monitoring should be done regularly at a few selected sites within the factory estate and premises and data submitted to State Board and Ministry. The new landfill sites must be concrete impervious lining to prevent possible ground water leaching.

## **PPs Submission:** Complied

The HW landfill is of composite liner system, which is totally impervious and prevents ground water leaching, constructed as per the CPCB guidelines. Piezometric and Bore wells have been installed around the HW landfills for regular monitoring of Ground Water. Ground Water from the above scientifically identified piezometric and bore wells are being monitored yearly once by Tamil Nadu Pollution Control Board . From the year 2020, all hazardous waste is being disposed to common TSDF of M/s. Re Sustainability Limited (Formerly Known as Tamilnadu Waste Management Limited), at Virudhunagar and Pochampalli Taluk, Krishnagiri District 635206 and operation of onsite SLF is completely stopped.

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#### **Visit Remarks**

Last Site Visit Report Date: 25/11/2024

Additional Remarks:

**Note:** This acknowledgement is as per the details submitted by project proponent. In no way is this document to be considered as conclusion on any action on the compliance of the project. This is strictly for the project proponent's reference purpose.