

Ref: ISIL/SAF/2019/2403
July 27, 2019

To,
**The Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan
Sector 10-A,
Gandhinagar-382043**

Sub: Environment Statement for the Financial Year ending March 31st 2019 for our Katol plant


Dear Sir,

Enclosed * Pl. find herewith the Environment Statement in Form-V for the Financial Year ending March 31st 2019 for our Katol plant.

We hope that the same shall be in order

Thanking You,

Yours Faithfully
For INEOS STYROLUTION (INDIA) Limited
(Formally STYROLUTION ABS (India) Limited)


**Mayur Parekh
Manager (SHE)**


**Parvez Bata
Plant Manager**

Encl: As above
Copy to: The Regional Officer
Gujarat Pollution Control Board
20, Haidrey Society
Civil Lines road
Opp. DSP Bungalow
Godhara

FORM - V
(See Rule 14)*

From:

INEOS STYROLUTION (INDIA) LIMITED
(FORMALLY STYROLURION ABS (INDIA) Limited)
Halol – Kalol Road
Village :Katol- 389 330
Ta: Kalol, Dist: Panchmahals

To,
Gujarat Pollution Control Board,
Sector 10-A,
GANDHINAGAR – 382 010

Environmental Statement for the financial year ending 31st March **2019**.

PART – A

- | | | | |
|-------|---|---|--|
| (i) | Name & address of the owner /
Occupier of the industry operation or
process | : | Mr. Sanjiv Vasudeva,
INEOS STYROLUTION (INDIA) LTD.
(Formally STYROLUTION ABS (India)
Limited)
Halol-Kalol Road,
Katol-389 330 Ta: Kalol,
Dist: Panchmahal |
| (ii) | Industry Category
Primary – (STC code)
Secondary – (SIC code) | : | , |
| (iii) | Production Capacity Units | : | SAN Resin - 10000 MT/Month |
| (iv) | Year of Establishment | : | SAN Resin – 1993 |
| (v) | Date of the last Environmental
Statement submitted | : | 24th July 2018 |

*Submission of Environmental statement is accordance with the provisions of Rule – 14 of the Environmental (Protection) Amendment Rules, 1993 of the Environmental (Protection) Act, 1986 (29 of 1986) published vide notification dated 22.04.1993 G.S.R. 386 (E) in the Gazette of India - Extraordinary – Part – II Section – 3 Subsection (i). No. 155 dated 28.04.1993 by the Ministry of Environment and forests, Government of India : read with the Notification dated 13.03.1993 G.S.R. 329 (E) of the Gazette of India – Extraordinary Part – II Section – 3 Subsection (i) No. 120 dated 13.03.1993.

" Every Person carrying on an industry, operation or process requiring consent under Section – 25 of the Water (Prevention & Control of Pollution) Act, 1974 (6 of 1974) or under section – 21 of the Air (Prevention & Control of Pollution) Act 1981 (14 of 1981) or both or authorization under the Hazardous wastes (Management and Handling) Rules, 1989 Published under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an Environment Statement for the Financial year ending the 31st March in Form V to the Concerned state pollution control board on or before the Thirtieth day of September every year, beginning 1993."

PART – B

Water and Raw Material Consumption

01.Water Consumption M3 / day.

Process: No water used in Process.

Cooling / Boiler : 124.18

Domestic : 22.48

Name of Products	Raw Water Consumption per unit of Product output.	
	During the Previous financial year 2017-2018	During the Current financial year 2018-2019
	1	2
(1) SAN Resin	0.77 M ³ /MT	0.62 M ³ /MT
(2) ABS Sheet	N.A	N.A

(II) Raw Material Consumption

*Name of Raw Material	Name of Product	Consumption of Raw material per unit of output	
		During the Previous financial year 2017-18	During the Current financial year 2018-19
Styrene(s) ACN	SAN Resin	731.97 (Kg/Mt) <u>259.76 (Kg/Mt)</u> 991.73 (Kg/Mt)	734.19 (Kg/Mt) <u>264.60 (Kg/Mt)</u> 998.79 (Kg/Mt)
	ABS Sheet	N.A.	N. A.

*Industry may use codes if disclosing details of Raw Material would violate contractual obligations, Otherwise all industries have to name the raw materials used.

PART – C

Pollution discharged to Environment / Unit of Output.
(Parameter as specified in the Consent issued)

Pollution	Quantity of Pollution's discharged (Mass / day)	Concentration of Pollution's discharges (Mass / volume)	Percentage of variation from prescribed standards with reason.
(a) Water	See Annexure – 1		
(b) Air	See Annexure - 2		

PART – D
HAZARDOUS WASTES

(As specified under Hazardous Wastes (Management and handling) Rules, 2008)

Hazardous Wastes	Total Quantity (Kg.)	
	During the Previous financial year 2017-18	During the Current financial year 2018-19
(a) From Process	1,14,170	1,16,710
(b) From Pollution control facilities	N.A	N.A

PART – E
Solid Wastes

	Total Quantity (Kg.)	
	During the Previous financial year 2017-18	During the Current financial year 2018-19
(a) From Process	N.A	N.A
(b) From Pollution control facilities (ET Plant Sludge) (Incinerator ash, Boiler ash, Incinerator Plant Ash, Asbestos containing material, Empty drums, liners & Used Resin)	1840 Kg	2530 Kg
	8650 Kg.	3200 Kg
(c) (1) Quantity recycled or re-utilized Within the unit.	N.A	N.A
(2) Sold	N.A	N.A
(3) Disposed (ET Plant Sludge) (Incinerator ash, Boiler ash, Incinerator Plant Ash, Asbestos containing material, Empty drums, liners & Used Resin)	1390 Kg.	2430 Kg
	8650 Kg.	3200 Kg

PART – F

Please specify the characterizations (In terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1. The nature of Hazardous waste (Liquid) (waste category No. 20.2, 1.4, 3.2, 5.1, 5.2,) i.e. Waste contains organic sulfur compound, Waste from Vessel cleaning and silicon Oil, Solid/Liquid/Pasty contains Non Halogenated Hydrocarbon & Solvent, H₂SO₄, Tertiary Butyl Catechol, Spent Oil and Cotton Waste generated from Maintenance activities.
Total Quantity Generated: 116710 Kg (In current financial year 2018-19)
It is collected in 200 Liters. M.S. Drums and transferred in to a Storage Tank for further disposal at RSPL for co-processing.
2. Solid Waste from ET Plant falls on Waste Category No.34.3 Chemical Composition Inorganic and No Hazardous Mostly calcium elements.
Total Quantity Generated: 2530 Kg (In current financial year 2018-19)
It is collected in polyethylene bags and stored In Hazardous Waste Storage Area near Incinerator. It is disposed to TSDF managed by NECL.
3. Solid waste (Asbestos – containing residues) Category No. 15.1 : Inorganic solids and no Hazardous Material.
Total Quantity Generated: 00 Kg (Roof sheet) (In current financial year 2018-19)
It is collected in polyethylene bags and stored In Hazardous Waste Storage Area near Incinerator. It is disposed to TSDF managed by NECL
4. No E- waste generated in current financial year 2018-19.
Total Quantity Generated: 00 Kg (In current financial year 2018-19)

PART – G

Impact of the pollution abatement measures has taken on conservation of natural resources and on the cost of production.

- The Source of water is internal and external bore wells .Water meters are installed at various locations to monitor and control the consumption of water. The treated water quality is monitored by our own laboratory as well as by third party and results are submitted to GPCB every month. The treated water is used for gardening within the plant premises and also for floor washing and toilet flushing.
- Concept of rain water Harvesting implemented at site.
- Rain water collection trench with water retaining pond at nearby Katol village to collect the storm water to conserve the rain water is funded by the company.

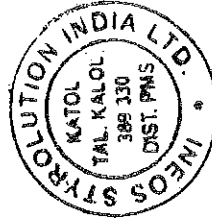
Annexure-1
WASTEWATER SAMPLES COLLECTED AND ANALYSED BY M/s KADAM ENVIRONMENTAL CONSULTANTS, VADODARA

DURING THE PERIOD FROM 01.04.2018 TO 31.03.2019

SAMPLING POINT: ET PLANT OUTLET

TYPE OF COLLECTION: GRAB

Sr. No	PARAMETER	UOM	GPCB Limit	DATE OF SAMPLING (DD.MM.YY)											
				05.04.18	07.05.18	11.06.18	17.07.18	23.08.18	14.09.18	14.10.18	27.12.18	01.01.09	14.02.19	05.03.19	
1	PH	-	6.5 - 8.5	7.16	7.21	7.31	7.23	7.34	7.35	7.26	7.23	7.09	7.19	7.3	7.45
2	Temperature	°C	40	31	30	30	29	29	29	29	28.7	28.5	28.3	28.6	28.9
3	Colour	Pt CO	100	20	20	20	20	20	20	20	25	25	25	25	25
4	TDS	mg/lit.	2100	1096	1108	1204	1176	1216	1164	1092	940	644	680	460	496
5	Suspended solid	mg/lit.	100	34	38	40	37	37	32	29	23	28	30	21	28
6	COD	mg/lit.	100	56	52	56	52	48	53	48	69	28	20	24	28
7	BOD	mg/lit.	30	17	16	17	16	14	15	13	16	7	5	5	7
8	Amn.Nitrogen	mg/lit.	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05
9	Chlorides	mg/lit.	600	337	328	337	356	374	330	302	93	49	64	81	90
10	Sulphates	mg/lit.	1000	200	217	262	231	221	256	232	124	235	233	116	130
11	Sulfides	mg/lit.	2.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
12	Hexa Chromium	mg/lit.	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
13	Total Chromium	mg/lit.	2.0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
14	Oil & Grease	mg/lit.	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
15	Phenolic Compounds	mg/lit.	1.0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
16	Cyanide	mg/lit.	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
17	Fluorides	mg/lit.	1.5	0.56	0.52	0.5	0.62	0.56	0.59	0.72	0.49	1.27	1.21	1.4	1.35
18	Insecticides	-	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
19	SAR	-	26	1.92	1.76	1.99	1.84	1.93	1.69	1.57	0.91	0.67	0.62	1.36	1.25
20	Arsenic	mg/lit.	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
21	Bio-Assay	%	90	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
22	Copper	mg/lit.	2	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
23	Total Residual Chl	mg/lit.	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1



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Annexure-II

Stack Monitoring Done By M/S Kadam Environment Consultant, Vadodara
During the Period From 01.04.2018 To 31.03.2019

SOURCE: Incinerator

Sr.No	PARAMETERS	GPCB Limit	SAMPLING DATE	
1	PM (mg/NM ³)	150		
2	SO ₂ (PPM)	100		
3	NO _x (PPM)	50		
4	Velocity (m/s)			
5	HC (PPM)			
6	VOC (PPM)			

Stack Monitoring Done By M/S Kadam Environment Consultant, Vadod
During the Period From 01.04.2018 To 31.03.2019

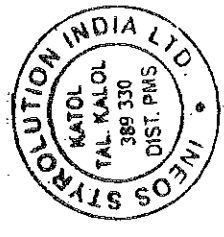
SOURCE: Boiler

Sr.No	PARAMETERS	GPCB Limit	SAMPLING DATE			
			12.06.18	14.09.18	27.12.18	05.03.19
1	PM (mg/NM ³)	150	26	22	19	15
2	SO ₂ (PPM)	100	ND	ND	ND	ND
3	NO _x (PPM)	50	8.92	8.15	8.28	7.83
4	Velocity (m/s)		7.2	5.97	7.2	5.85

Stack Monitoring Done By M/S Kadam Environment Consultant, Vadod
During the Period From 01.04.2018 To 31.03.2019

SOURCE: Hot oil unit-1

Sr.No	PARAMETERS	GPCB Limit	SAMPLING DATE				
			05.04.18	12.06.18	14.09.18	27.12.18	05.03.19
1	PM (mg/NM ³)	150	38	39	25	28	26
2	SO ₂ (PPM)	100	N.D	ND	ND	ND	ND
3	NO _x (PPM)	50	11.25	9.52	9.1	9.51	7.44
4	Velocity (m/s)		9.71	6.9	5.7	6.4	5.96



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Stack Monitoring Done By M/S Kadam Environment Consultant, Vadod
During the Period From 01.04.2018 To 31.03.2019

SOURCE: Hot oil unit - 2

Sr. No	PARAMETERS	GPCB Limit	SAMPLING DATE					
			05.04.18	12.06.18	14.09.18	27.12.18	05.03.19	
1	PM (mg/NM ³)	150	28	34	30	18	22	
2	SO ₂ (PPM)	100	N.D	ND	ND	ND	ND	
3	NO _x (PPM)	50	12.15	9.87	10.19	9.82	10.1	
4	Velocity (m/s)		9.37	6.9	6.43	7.2	5.31	

Stack Monitoring Done By M/S Kadam Environment Consultant, Vadodara
During the Period From 01.04.2018 To 31.03.2019

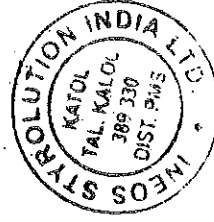
SOURCE: D.G.Set 1-A

Sr.N	PARAMETERS	GPCB Limit	SAMPLING DATE					
			12.06.18	14.09.18	27.12.18	05.03.19		
1	PM (mg/NM ³)	150	71	65	66	60		
2	SO ₂ (PPM)	100	12.99	11.36	19.1	21.6		
3	NO _x (PPM)	50	10.72	10.14	9.66	9.19		
4	Velocity m/s		7	8.93	7.9	9.46		

Stack Monitoring Done By M/S Kadam Environment Consultant, Vadodara
During the Period From 01.04.2018 To 31.03.2019

SOURCE: D.G.Set 1-B

Sr. No	PARAMETERS	GPCB limit	G DATE					
			12.06.18	14.09.18	27.12.18	05.03.19		
1	PM (mg/NM ³)	150	67	72	79	54		
2	SO ₂ (PPM)	100	14.61	14.26	17	25.9		
3	NO _x (PPM)	50	9.27	9.95	7.63	8.49		
4	Velocity m/s		7	8.95	7.8	9.91		



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**Stack Monitoring Done By M/S Kadam Environment Consultant, Vadodara
During the Period From 01.04.2018 To 31.03.2019**

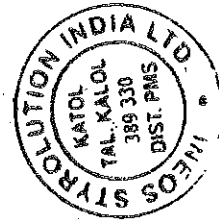
SOURCE: D.G.Set 2-A		GPCB Limit	SAMPLING DATE	
Sr.N o	PARAMETERS		12.06.18	27.12.18
1	PM (mg/NM ³)	150	87	72
2	SO ₂ (PPM)	100	12.29	19.4
3	NO _x (PPM)	50	9.81	9.15
4	Velocity m/s		7	9.87

**Stack Monitoring Done By M/S Kadam Environment Consultant, Vadodara
During the Period From 01.04.2018 To 31.04.2019**

SOURCE: D.G.Set 2-B		GPCB Limit	SAMPLING DATE	
Sr.N o	PARAMETERS		12.06.18	05.03.19
1	PM (mg/NM ³)	150	77	60
2	SO ₂ (PPM)	100	11.83	17.3
3	NO _x (PPM)	50	10.63	8.22
4	Velocity m/s		7.4	9.89

**Stack Monitoring Done By M/S Kadam Environment Consultant, Vadodara
During the Period From 01.04.2018 To 31.03.2019**

SOURCE: D.G.Set 3		GPCB Limit	SAMPLING DATE	
Sr.N o	PARAMETERS		12.06.18	05.03.19
1	PM (mg/NM ³)	150	82	49
2	SO ₂ (PPM)	100	11.65	23.7
3	NO _x (PPM)	50	10.49	9.78
4	Velocity m/s		7.6	10.36



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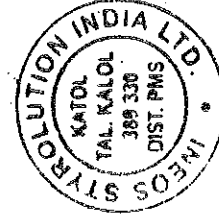
Ambient Air Monitoring Done By M/S Kadam Environment Consultant, Vadodara
During the Period From 01.04.2018 To 31.03.2019

Annexure II

Location : Near Safety Office (Main Gate)													
Sr. No	Parameters	GPCB Limit	SAMPLING DATE										
			07.04.18	07.05.18	11.06.18	18.07.18	23.08.18	12.09.18	12.10.18	16.11.18	27.12.18	01.01.19	14.02.19
1	PM10 $\mu\text{g}/\text{m}^3$	100	87	90	96	87	74	87	81	93	62	92	93
2	PM 2.5 $\mu\text{g}/\text{m}^3$	60	31	48	49	33	25	29	60	21	14	20	18
3	SO ₂ $\mu\text{g}/\text{m}^3$	80	11	9.6	12.1	16.4	12.9	12.69	11.63	8.49	7.54	7.7	6.72
4	NO _x $\mu\text{g}/\text{m}^3$	80	11.2	10.1	9.8	13.9	11.3	9.13	8.61	19.6	17.2	19.3	16.9
5	HC $\mu\text{g}/\text{m}^3$		ND			ND			ND			ND	
6	VOC $\mu\text{g}/\text{m}^3$		ND			ND			ND			ND	

Location : Near Boiler (Nr. ETP - ACN tank)													
Sr. No	Parameters	Limit ($\mu\text{g}/\text{m}^3$)	SAMPLING DATE										
			07.04.18	07.05.18	11.06.18	18.07.18	23.08.18	12.09.18	12.10.18	14.11.18	27.12.18	01.01.19	14.02.19
1	PM10 $\mu\text{g}/\text{m}^3$	100	93	83	92	77	81	77	69	95	91	55	47
2	PM 2.5 $\mu\text{g}/\text{m}^3$	60	44	35	42	23	30	37	30	25	40	43	15
3	SO ₂ $\mu\text{g}/\text{m}^3$	80	13.1	10.6	11.2	21.6	14.6	10.34	9.59	9.24	10.3	9.68	9.33
4	NO _x $\mu\text{g}/\text{m}^3$	80	9.9	11.3	11.1	21.7	12.6	10.29	9.3	20.4	19.6	16.1	18.1
5	HC $\mu\text{g}/\text{m}^3$		ND			ND			ND			ND	
6	VOC $\mu\text{g}/\text{m}^3$		ND			ND			ND			ND	

Location : Near Incinerator													
Sr. No	Parameters	Limit ($\mu\text{g}/\text{m}^3$)	SAMPLING DATE										
			07.04.18	07.05.18	11.06.18	18.07.18	23.08.18	12.09.18	12.10.18	14.11.18	27.12.18	01.01.19	14.02.19
1	PM10 $\mu\text{g}/\text{m}^3$	100	93	83	92	77	81	77	69	95	91	55	47
2	PM 2.5 $\mu\text{g}/\text{m}^3$	60	44	35	42	23	30	37	30	25	40	43	15
3	SO ₂ $\mu\text{g}/\text{m}^3$	80	13.1	10.6	11.2	21.6	14.6	10.34	9.59	9.24	10.3	9.68	9.33
4	NO _x $\mu\text{g}/\text{m}^3$	80	9.9	11.3	11.1	21.7	12.6	10.29	9.3	20.4	19.6	16.1	18.1
5	HC $\mu\text{g}/\text{m}^3$		ND			ND			ND			ND	
6	VOC $\mu\text{g}/\text{m}^3$		ND			ND			ND			ND	



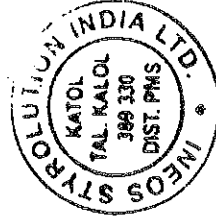
Category wise Hazardous waste Generation record for the year 2018-19

Month	Waste category as per HWMH Rules 2008														
	1.4	3.1	3.2	3.3	5.1	5.2	15.1	20.2	33.3	34.1	34.2	34.3	36.1	36.2	36.4
April	7590	0	1840	0	450	0	0	0	0	0	0	100	0	0	0
May	6000	0	50	0	0	0	0	0	0	0	0	450	0	0	0
June	4000	0	0	0	0	0	0	0	900	0	800	50	0	0	0
July	10950	0	50	0	0	0	0	0	0	0	0	150	0	0	0
August	7780	0	6100	0	1750	0	0	0	0	0	0	100	0	0	0
September	16760	0	0	0	0	0	0	0	0	0	0	100	0	0	0
October	8000	0	800	0	400	0	0	0	0	0	0	200	0	0	0
November	11170	0	1200	0	400	0	0	300	0	0	0	100	0	0	0
December	2500	0	1000	0	0	0	0	0	0	0	1200	730	0	0	0
January	11220	0	0	0	0	0	0	0	0	0	0	200	0	0	0
February	0	0	1310	0	0	0	0	0	0	0	0	100	0	0	0
March	14130	0	660	0	600	0	0	0	0	0	0	250	0	0	0

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Category wise Hazardous waste Disposal record for the year 2018-19

Month	Waste category as per HWMH Rules 2008														
	1.4	3.1	3.2	3.3	5.1	5.2	15.1	20.2	33.3	34.1	34.2	34.3	36.1	36.2	36.4
April	13590	0	4890	0	0	50	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	900	0	0	0	0	0	0	0
July	14950	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	13780	0	0	0	2200	0	0	0	0	0	0	0	0	0	0
September	16760	0	6540	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
November	16170	0	0	0	0	0	0	300	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	2000	2430	0	0	0	0
January	16720	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	4670	0	0	0	0	0	0	0	0	0	0	0	0
March	14130	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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