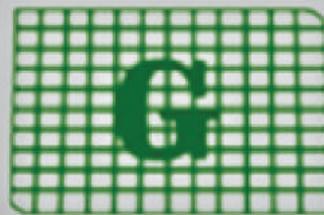


WATERPROOFING SYSTEMS FOR TUNNELS AND UNDERGROUND STRUCTURES

PVC WATERPROOF MEMBRANE & GEOTEXTILE



Gayatri Polymers & Geo Synthetics

ISO 9001 : 2008 CERTIFIED

PROFILE



Gayatri polymers & geosynthetics is a dedicated team of civil engineers, polymers engineers and geotechnical experts committed to provide world class services for civil engineering and environmental solution using spatiality geosynthetics products.

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Our's is ISO 9001 / 2008 certified manufacturing company having state of art extrusion multilayer wide width higher thickness and high output film / sheet plant. We can process PVC – HD / LD / MLD / LLD. We are the only manufacturer in India to introduce textured one side / both side geomembrane.

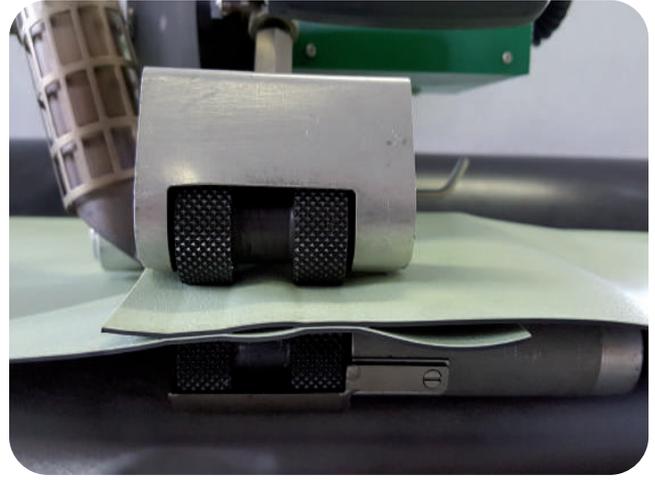
We follow international standards and have full fledged in house testing laboratory to ensure stringent quality measures at production, post production and dispatch level.

PVC/HDPE film and sheet are U.V stabilized, black in colour. Impermeable flexible liner and are resistant to ground water source from being contaminated by the toxic leachate produced by water percolation through solid waste. Liquid waste, impoundment cut off walls, Tunnels Waterproofing and Municipal waste and spill containment system etc.

WATERPROOFING



WELDING SYSTEMS

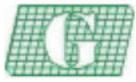


PRODUCTION LINES



TESTING AND APPROVAL SYSTEMS





PVC WATERPROOF GEOMEMBRANE-2 MM THICK

SCOPE:

The purpose of the PVC membrane waterproofing to underground/submerged structure is to prevent leakage of water into structure.

The waterproofing system would consist 3 layer-

1st or inner layer non woven needle punched geotextile,

2nd or middle layer PVC waterproofing membrane.

3rd or outer layer non woven needle punched geotextile as protective layer.

SELECTION OF PVC MEMBRANE

Suitable against hydrostatic resistance.-**15 Kg/cm² -D of IS:2076**

High Puncture resistance.- **18 Kg/cm² -B of IS:2076**

High Tear resistance-**MD/CD- 60/75 Kg/cm² -C of IS:2076**

Low temperature crack resistance. **Shall not break or crack C of IS:2076**

Water absorption--1% max.

Resistance to soil burial.

Easy to install.

INSTALLATION OF PVC MEMBRANE

The PVC membrane would be installed to cover structure and 1st layer of geotextile by thermal welding, adjacent PVC membrane shall be joined through double weld to ensure 100% waterproofing.



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WEB SITE:www.gayatrigeosynthetics.com. email: sales@gayatrigeosynthetics.com

Issued to: KONKAN RAILWAY CORPORATION LIMITED.

Report no.: 17101602/1710160202

Date: 24-10-2017

OFFICE OF DY. CHIEF ENGINEER,
DISTT. REASI,
J&K

Sample Description:

DOR: 16-10-2017

"WATERPROOFING MEMBRANE 2mm THICK"

BRAND: GAYATRI GEOSYNTHETICS; SOURCE: GAYATRI & POLYMERS & GEOSYNTHETICS
FOR THE CONSTRUCTION OF BALANCE TUNNELLING WORKS OF TUNNEL-T5 TWIN TUBE
ON THE KATRA DHARAM SECTION OF UDHAMPUR SRINAGAR- BARAMULLA RAIL LINK PROJECT.

Phone/fax:

Kind Attn:

Your Ref. No. : KR/P/JK/DyCE/T5/MAXINFRA/2017-18...Dt: 12-10-2017

Date of Start of Test: 16-10-2017

Date of Completion: 24-10-2017

S.No.	TESTS	RESULTS	SPECIFIED VALUE	TEST METHOD
1.	Thickness, mm	2.1	2.0 – ±7.5%	IS 15909
2.	Specific Gravity (g/cm ³)	1.35	1.30 – 1.40	IS 15909
3.	Strength at break, kg/cm ²	188	160 Min	IS 15909
4.	Elongation at break, %	265	250 Min	IS 15909
5.	Puncture Resistance, Kg	21	15 Min	IS 15909
6.	Tear Resistance, Warp, b) Weft, cm	62 80	55 70	IS 15909
7.	Carbon Black Content, %	2.4	0.5 – 2.5	IS 15909
8.	Low Crack Resistance	No Crack	Shall not break, crack at 28°C	IS 15909
9.	Water Absorption, %	0.11	0.15	IS 15909
10.	Roll Dimension: a) Length b) Width	2.15 20.5	2.1 20	IS 15909
11.	Volume per Roll, SQM	44.075	--	IS 15909

---END OF REPORT---



TEST REPORT

Issued to: KONKAN RAILWAY CORPORATION LIMITED.
OFFICE OF DY. CHIEF ENGINEER,
DISTT. REASI,
J&K

Report no.: 17101602/1710160201

Date: 24-10-2017

DOR: 16-10-2017

Sample Description:

"NON-WOVEN POLY-PROPYLENE GEOTEXTILE@500gm/m²

BRAND: GAYATRI GEOSYNTHETICS; SOURCE: GAYATRI & POLYMERS & GEOSYNTHETICS
FOR THE CONSTRUCTION OF BALANCE TUNNELLING WORKS OF TUNNEL-T5 TWIN TUBE
ON THE KATRA DHARAM SECTION OF UDHAMPUR SRINAGAR- BARAMULLA RAIL LINK PROJECT.

Your Ref. No. : KR/P/JK/DyCE/T5/MAXINFRA/2017-18...Dt: 12-10-2017

Phone/fax:

Kind Attn:

Date of Start of Test: 16-10-2017

Date Completion: 24-10-2017

S.No.	TESTS	RESULTS	STANDARD
1.	Unit weight , g/m	511	ASTM-D 5261
2.	Thickness, mm	4.10	ASTM-D 5199
3.	Tensile Strength, KN/m	18	ASTM-D 4632
4.	Elongation at break, %	65.0	ASTM-D 4595
5.	Trapezoidal Tear, N	459	ASTM-D 4533
6.	Resistance to Punching, N	1124	ASTM-D 4833
7.	Mullen Burst, Kpa	2680	ASTM-D 3786
8.	U V Resistance, % (%retained after 500 hrs)	70	--
9.	Water Flow, l/sqm/sec	0.9	ASTM-D 4491
10.	A.O.S, μm	78	ASTM-D 4751
11.	Roll Dimension: a) Length b) Width	50 2.0	--

END OF REPORT





Certificate of Registration

(Quality Management System)

KVQA CERTIFICATION SERVICES PVT. LTD.

This is to certify that the Quality Management System of
GAYATRI POLYMERS & GEOSYNTHETICS

**28, Unique Trade Center, Opposite Hotel PM Regency,
Sayajigunj -390005, Vadodara, Gujarat, India.**

Has been found to be of the Quality Management System Standard
AS/NZS ISO 9001:2008/ISO 9001:2008

This certificate is valid for the following product or service range

**Civil Engineering Polymers, Polymers Engineering & Geotechnical Exports
To Provide World Class Civil Engineering & Environmental Solution Using
Geosynthetics Products.**

1st Surveillance Due On: 23/01/2017: Done On:
2nd Surveillance Due On: 23/01/2018: Done On:

Certificate No: **IQSC201602089**
Date Of Issue: 23, February, 2016
Valid Until: 22, February, 2019*



Issued by

Authorized signatory KVQA



JAS-ANZ is the government-appointed accreditation body for Australia and New Zealand responsible for providing accreditation of conformity assessment bodies (CABs) in the fields of certification and inspection. Accreditation by JAS-ANZ demonstrates the competence and independence of these CABs.

Accredited by a member of IAF's MLA for Quality Systems

To Check the Status of the Certification kindly log on to www.kvqa.in
F-300, Sector -63, Noida U.P., India. Ph-011-22711940, 22711941, email: delhi@kvqaindia.com
*Subject to successful completion of surveillance audits



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ISO 9001 : 2008 CERTIFIED

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