Genestar™

The Smart Choice for FCV Stack Manifold

GENESTAR[™] is a brand name of heat resistant polyamide developed by Kuraray. GENESTAR[™] PA9T series in that brand is a well-balanced long-chain polyphthalamide (PPA) that combines low water absorption and high mechanical properties over a broad temperature range.

With the concern of pollution and the need to create a sustainable future, there is a push for automobiles to be moved by green energy. One such green energy is fuel cell, where a fuel cell combines hydrogen and oxygen to produce electricity, heat and water.

The requirements for stack manifold are as follows:

- Acid resistance
- Toughness at low temperature
- Volume resistivity at high temperature and water condition
- Low ion extraction

GENESTAR[™] PA9T offers the following advantages (not limited to) that meet these requirements:

Good acid resistance compared to other P(P)As

Retention of tensile strength(%)	PA9T*	PA6T/6I/66	PA46	PA66
Engine oil	98	91	98	94
Methanol	86	61	64	50
Sulphuric acid (10%aq.)	89	78	50	64
Sodium hydroxid e (50%aq.)	96	89	95	94
Hot water (80°C)	86	65	64	55
Hot water (80°C)	86	65	64	55

Toughness at low temperature(S-S Curve)

*GENESTAR[™] N1000A

٠



immersion in water





PA6T/XT-GF 35

PPS-GF40

generation performance of the fuel cell

	не/ в				mg /L		
Materials	Ca	Si	S	Fe	к	а	Br
PA9T- GF35 *	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PA6T/XT- GF35	N.D.	N.D.	6.0	N.D.	6.4	0.2	27.7
PP S-GF40	N.D.	N.D.	10.6	N.D.	N.D.	N.D.	N.D.

50% ECC (Eucl. coll ant).95°C x1.008ho urs immersion Ca, Si, S, Fe, K(µg/g) : ICP-AES

Cl, Br (mg/L) : Ion Chromatography

Volumeresistivity (0-cm)

1.E+05

1 E+03

1.E+01

PA9T-GF35*

*GENESTAR[™]G1350A

If the information in this article is of interest to you, please find the contact details below to get in touch with us.

Kuraray India Private Limited

Prius Platinum, 2nd Floor B Wing, Rear Side, D3 District Centre, Saket New Delhi-110017, India

Tel +91 11 4090 4400

Email: genestar.in@kuraray.com

Website: www.genestar.kuraray.com/en/

ara

is a trademark or registered trademark of Kuraray Co., Ltd. Trademarks may not be applied for or registered in all countries. The information, recommendations and details given in this document have been compled with care and to our best knowledge and belief. They do not entail an assurance of properties above and beyond the product specification. The user of our products is responsible for ensuring that the product is suitable for the intended use and conforms to all relevant regulations. Kuraray Co., Ltd. and its affiliates do not accept any guarantee or liability for any errors, inaccuracies or omissions in this document.