0581、0582聚乙烯异相离子交换膜

0581, 0582 Polyethylene Heterogeneous Ion Exchange Membrane

聚乙烯异相离子交换膜是由苯乙烯磺酸型阳离子交换树脂、苯乙烯季胺型阴离子交换树脂以聚乙烯为粘合剂，经滚炼拉片，用增强材料加固层压而成聚乙烯阳离子交换膜（简称阳膜）和聚乙烯阴离子交换膜（简称阴膜）。

Polyethylene heterogeneous ion exchange membrane, with polyethylene as adhesive, is composed of styrene-sulfoacid-type cation exchange resin and styrene-quaternary amine-type anion exchange resin, which, through the process of rolling and pulling, is laminated with reinforcing material into polyethylene cation exchange membrane or "cation membrane" for short and polyethylene anion exchange membrane or "anion membrane" for short .



一、用途

I Application

聚乙烯异相离子交换膜含有足够的固定基因和可解离的离子，对溶液中的离子具有一定的选择透过性和导电性，广泛应用于电化学部门中，分离不同类型的离子。例如海水、苦咸水的淡化，溶液的脱盐浓缩，锅炉用水的软化脱盐，冶金、煤炭、电子、医药、化工、食品等工业品处理。使用温度不超过40℃。

选择机理：阳膜具有强酸性活性基因$R-SO_3^-$构成负电场，带正电荷的离子易吸入通过。

阴膜具有强碱性活性基因$R-N^+(CH_3)_3$构成正电场，带负电荷的离子易吸入通过。

Polyethylene heterogeneous ion exchange membrane, containing adequate fixed genes and dissociative ions, is of certain selective permeability and electrical conductivity to the ions in solution, thus widely used for electrochemical sectors to separate varied types of ions, including desalting of seawater and caustic soda water, desalination and concentration of solution, softening and desalting of boiler water, and other industrial processes such as those in metallurgical industry, coal industry, electronics, pharmaceuticals, chemical industry and food processing. The operation temperature shall not exceed 40℃.

Mechanism for selection:

Cation membrane is of strong-acidity active gene $R-SO_3^-$ forming a negative electric field, and ions with positive charge are easy to be inhaled through.

Anion membrane is of strong-basicity active gene $R-N^+(CH_3)_3$ forming a positive electric field, and ions with negative charge are easy to be inhaled through.

二、外观

II Outer appearance

聚乙烯异相离子交换膜应平整均匀、无明显的机械损伤（折伤）、无脱网轧皱、不允许有影响质量的杂质存在。

0581阳膜外观为棕黄色，0582阴膜为兰色。

I Polyethylene heterogeneous ion exchange membrane shall be of smooth uniformity without obvious mechanical damage (breakage), crease or existence of any matter impairing the quality.

0581 cation membrane comes in brown, and 0582 anion membrane in blue.

三、规格

III Specifications

聚乙烯异相离子交换膜外型尺寸规格如下：

External dimensions and specifications of polyethylene heterogeneous ion exchange membrane

厚度 Thickness	厚度允许公差 Allowable tolerance	有效面积 Effective area
0.42mm	±0.04mm（干态 dry state）	≧800×1600mm²

四、性能

IV Properties

0581、0582聚乙烯异相离子交换膜其主要物理、化学性能如下表之规定：

Main physical and chemical properties of 0581, 0582 polyethylene heterogeneous ion exchange membrane

试验项目 Test items	单位 Unit	指标 Index	
		0581	0582
含水率 Moisture content	%	35–50	30–45
交换容量 ≧ Exchange capacity ≧	mol/Kg(干 dry)	2.0	1.8
膜面电阻 ≦ Membrane surface resistance ≦	Ω·cm²	10	10
选择透过率 ≧ Selective transmittance ≧	%	90	89
脱盐率（一次）≧ Desalination rate （at a time）≧	%	40	40

注：表内“含水率”系指湿膜态下的含水率。“脱盐率”指25±1℃恒温下，200×400mm 15对膜一级二段电渗析器的一次脱盐率。

Note: "Moisture content" refers to the one when membrane is in wet state. "Desalination rate" refers to the one that an electrodialyzer (200 x 400 mm 15 membranes) can operate at a time under a constant temperature of 25±1℃.

五、标志、包装、运输、贮存

V Signs, packing, transport and storage

1、0581、0582聚乙烯异相离子交换膜以瓦楞纸板箱包装，每箱装50张，约40公斤重，箱外应标明生产单位、产品名称、批号、制造日期、规格、数量，并附有生产单位质量检验部门的合格证及运输注意事项的标志。

2、0581、0582聚乙烯异相离子交换膜应贮存在清洁、阴凉、干燥、通风的库房内，运输过程中不应受到日晒雨淋及机械损伤。

1 0581, 0582 polyethylene heterogeneous ion exchange membrane shall be packed in corrugated board carton, each carton containing 50 pieces, about 40 kg in weight, and shall be indicated on the carton with the name of manufacturer, product name, batch number, manufacturing date, specifications, quantity, and shall be accompanied with the certificate of quality to be issued by the quality inspection department of the manufacturer as well signs of attention for transport.

2 0581, 0582 polyethylene heterogeneous ion exchange membrane shall be stored in clean, cool, dry and ventilated storeroom, and shall avoid exposing to the sun and rain, or mechanical damage on the way of delivery.

六、使用说明

VI Directions for use

1、0581、0582聚乙烯异相离子交换膜在使用前必须剪去四边网布，然后在清水中浸泡24小时，浸入清水中时应不重叠，并按垂直方向放置。

2、裁剪打孔前，必须再在使用的介质或原水中浸泡24小时后裁剪，按隔板尺寸裁剪打孔。膜面积应略小于隔板面积。

1 With regard to 0581, 0582 polyethylene heterogeneous ion exchange membrane, the fabric cloth around all sides of the membrane must be cut out prior to use, and the membranes，placed in vertical direction without overlapping，shall be dipped in clean water for 24 hours.

2 The membranes must be dipped in the medium in use or in the original water for another 24 hours before they are allowed for cutting and punching according to the size of clapboard. However, the membrane size shall be cut slightly smaller than the size of clapboard.