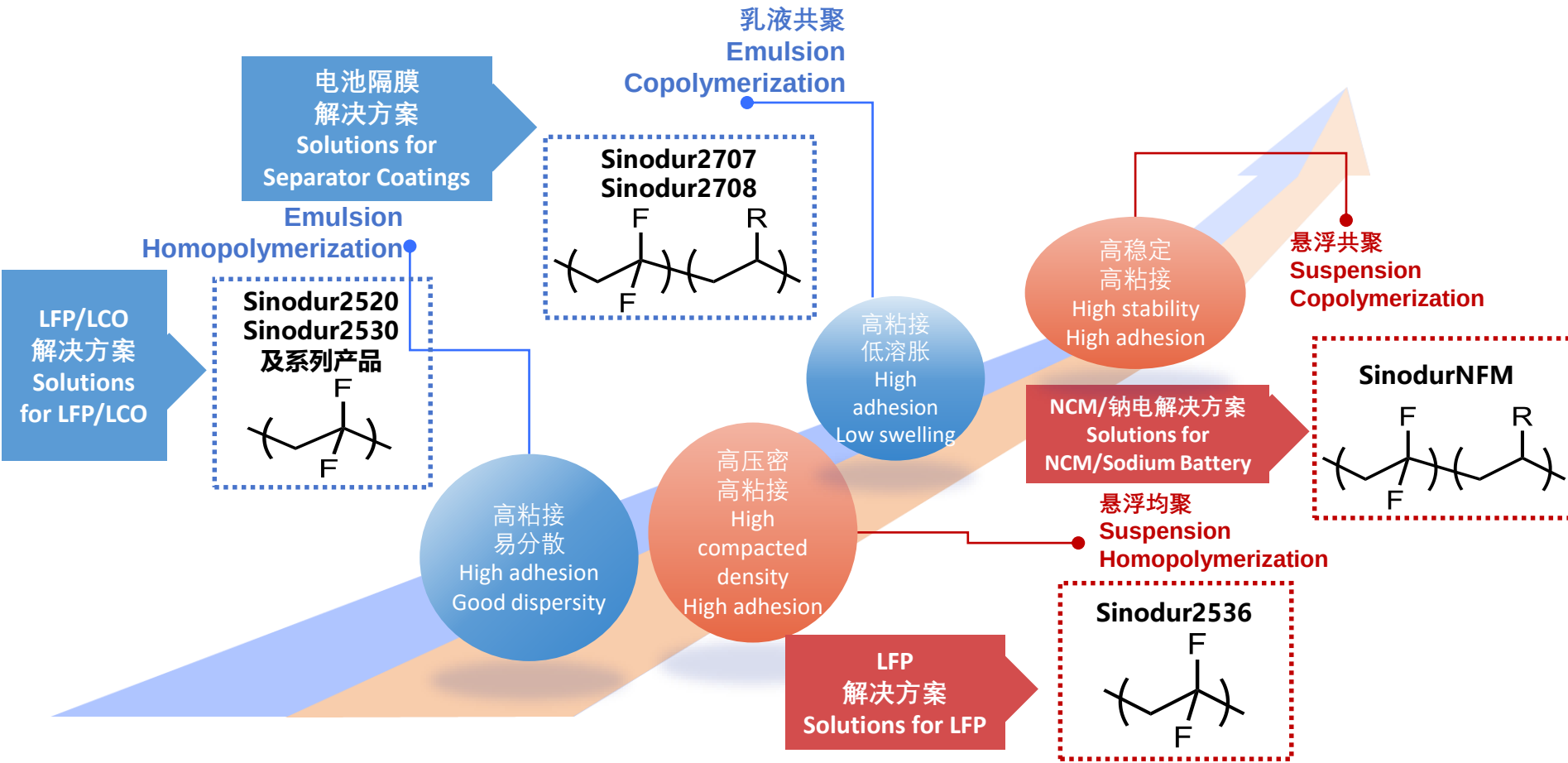


高性能中耐PVDF-正极粘结剂产品解决方案

Cathode Binder Solution



产品数据Product Data

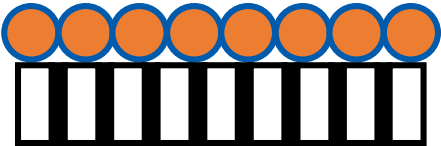
测试标准 Testing Standard		单位 Unit	中耐2520 Sinodur2520	中耐2530 Sinodur2530	晨光2520A Chenguang2520A	中耐 2536 Sinodur2536	中耐25628 Sinodur25628	中耐25630 Sinodur25630
			乳液均聚 Emulsion Homopolymerized	乳液均聚 Emulsion Homopolymerized	乳液均聚 Emulsion Homopolymerized	悬浮均聚 Suspension Homopolymerized	悬浮共聚 Suspension Copolymerized	悬浮共聚 Suspension Copolymerized
物理性能 Physical Properties								
外观 Appearance	目测 Visualization	-	白色粉末 White powder	白色粉末 White powder	白色粉末 White powder	白色细小 颗粒 White fine particles	白色细小 颗粒 White fine particles	白色细小 颗粒 White fine particles
重均分子量 Weight-average Mw	GPC*	*10^4 g/mol	60-100	-	90-110	100-160	100-160	100-160
密度 Density	ASTM D792	g/cm³	1.74-1.78	1.74-1.78	1.74-1.78	1.74-1.78	1.74-1.78	1.74-1.78
含水量 Water Content	GB/T 6283	ppm	≤1000	≤1000	≤1000	≤1000	≤1000	≤1000
热性能 Thermal Property								
熔点 Boiling Point	ASTM D 3418	°C	158-166	159-167	160-166	168-174	166-174	160-170
胶液性能 Adhesive Performance								
溶液粘度 (7wt%) Solution Viscosity	GB/T 10247	mPa.s	1000-3000	500-2500 (5wt%)	3000-5000	3000-6000	2000-4000	2000-6000

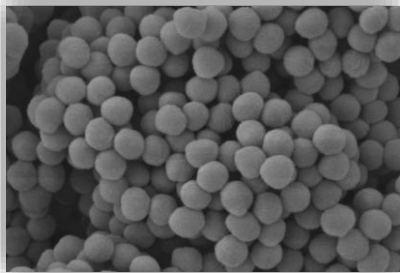
高性能中耐PVDF-隔膜涂覆解决方案

Separator Coating Solution

PVDF隔膜树脂
Separator coating used PVDF resin

PE多孔基膜
Porous PE base film



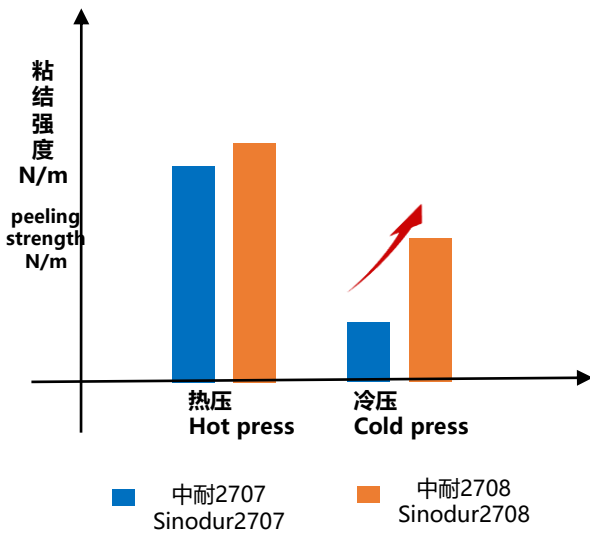
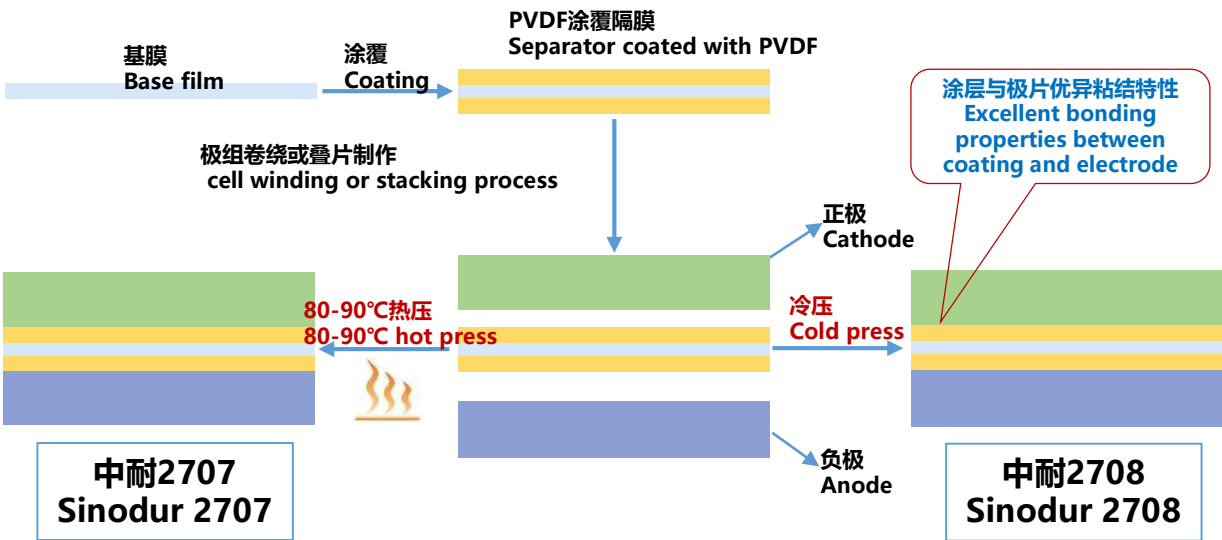


2707-乳液共聚
(均衡电解液浸润性、耐高温性和粘结性)

2707-Emulsion Copolymerization
(balanced electrolyte absorption, high temperature stability, and adhesion)

2708-乳液共聚
(优异粘结性及冷压特性)

2708-Emulsion Copolymerization
(excellent adhesion at r.t. pressing condition)



产品数据Product Data

测试标准 Testing Standard		中耐2707 Sinodur2707 水性 Water-based	中耐2708 Sinodur2708 水性 Water-based
外观 Appearance	单位 Unit	白色粉末 White powder	白色粉末 White powder
重均分子量 Weight-average Mw	*10 ⁴ g/mol	60-100	40-70
HFP	mol%	1.5-2.5	3.5-5.0
熔点 Boiling Point	°C	148-156	138-146
1%热分解温度 1% Thermal Decomposition Temperature	°C	>410	>410
粒径 (D50) Particle Size	μm	≤10	≤10
电解液饱和吸液率 Saturation Absorption Rate of Electrolyte	%	25-35	≥40
粘结强度 Bonding Strength	N/m	5-7	≥8

水膜级PVDF树脂
PVDF Resin in Membrane



中耐 PVDF树脂以其卓越的耐化学性、机械韧性和耐久性而被作为微滤膜和超滤膜的理想材料。

其可溶于常规的溶剂以及加工成型性能较好，堆积密度大，可以同时满足NIPS和TIPS制膜工艺。我们有一系列的中耐 PVDF树脂供客户选择：

乳液产品：中耐 2201，中等分子量粘度，适用于制作大通量膜丝；

悬浮产品：中耐 2212，分子量相对较低、粘度较小、溶解性较好，适用于均质超滤膜制作；中耐 2215，分子量居中、粘度居中，可应用于支撑、均质两种体系；中耐 2220分子量高、粘度较高，适用于支撑体系。



Sinodur PVDF resin has excellent chemical resistance, mechanical properties and durability which makes it as an ideal material for MF and UF membranes. It can be dissolved in general solvents, and has good processing properties and high bulk density. It is suitable to make PVDF membrane by NIPS and TIPS methods. We have a series of Sinodur PVDF resins for different customers to choose. Emulsion polymer: Sinodur 2201, with medium molecular weight and medium viscosity suitable for membrane with high water flux. Suspension polymer: Sinodur 2212, with relatively low molecular weight, low viscosity, and good solubility, suitable for UF hollow fiber membrane; Sinodur 2215, with medium molecular weight and medium viscosity, suitable for both reinforced and unreinforced hollow fiber membrane; Sinodur 2220, with high molecular weight and high viscosity, suitable for reinforced hollow fiber membrane.

产品数据Product Data

测试标准		单位	中耐 2201 Sinodur 2201	中耐 2212 Sinodur 2212	中耐 2215 Sinodur 2215	中耐 2220 Sinodur 2220
外观	目测	--	白色粉末	白色细小颗粒	白色细小颗粒	白色细小颗粒
DMAc旋转粘度	GB/T 10247	mPa.s	≥500	90~115	200~400	350~650
特性粘度	GB/T 1632.1	ml/g	170-200	110~130	155~175	170~200
表观密度	GB/T 1636	g/ml	-	0.3~0.6	-	0.30~0.60
含水量	GB/T 6283	%	≤0.2	≤0.2	≤0.2	≤0.2
熔点	ASTM D 3418	℃	≥168	≥168	167-175	≥168
熔指	GB/T 3682.1	g/10min	-	2.5~3.5 (230℃, 5kg)	4.0~6.0 (230℃, 21.6kg)	1.0~3.0 (230℃, 21.6kg)
热分解 (1%, N ₂)	/	℃	-	≥410	≥410	≥410

制品PVDF树脂

PVDF Resin in moldings

中耐 PVDF树脂具有较高的拉伸强度，其韧性、硬度、耐磨性较优，且由于它的熔融温度约为170℃，有出色的熔融加工性能，可以用通用的加工成型设备进行模塑、挤塑和注塑加工现正在加快推出高纯PVDF树脂用于电子行业超纯水输送管道及阀门系统。

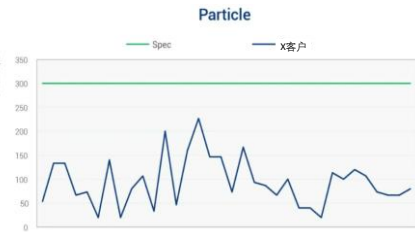
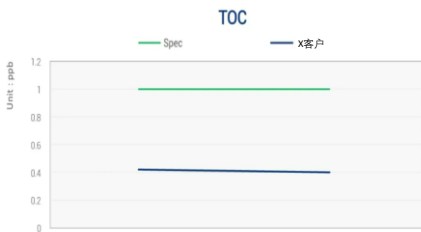
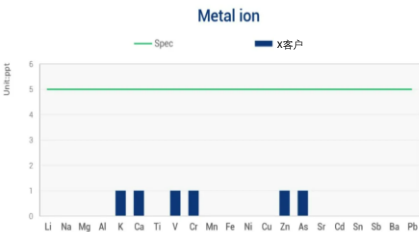
另外，其良好的耐候性，电绝缘性等特性，在光伏背板上广泛应用。



Sinodur PVDF resin has high tensile strength, excellent toughness, hardness, and wear resistance, and has excellent melt-addition properties due to its melting temperature of about 170 °C. It can be molded, extruded, and injection molded with common processing and molding equipment. In addition, Sinodur PVDF resin is widely used in solar cell back sheets because of its good weather resistance and electrical insulation properties.

产品数据Product Data

基本性能	测试标准 Standard	单位 Unit	中耐 2305 Sinodur 2305	中耐 2320 Sinodur 2320	中耐 2375 Sinodur 2375
外观	目测	--	粉末/颗粒	粉末/颗粒	粉末/颗粒
熔体流动速率 230℃, 5kg	GB/T 3682	g/10min	1~6	15~25	0.5~3.0
熔点	ASTM D 3418	℃	165~175	≥165	138~148
热分解 (1%, N2)	/	℃	≥390	≥390	≥380
水分含量	GB/T 6284	%	≤0.2	≤0.2	≤0.2
邵氏硬度	ASTM D3418	D	70~80	70~80	≥50
拉伸强度	GB/T 1040.1 GB/T 17037.1	MPa	≥30	≥40	≥40
断裂伸长率	GB/T 1040.1 GB/T 17037.1	%	≥25	≥25	≥300



涂料级PVDF树脂

PVDF Resin in Fluorocarbon Coatings

中耐 PVDF与丙烯酸树脂、添加剂等混配可形成性能优越的烘烤型PVDF氟碳涂料。该涂料可用于铝制工件及铝幕墙，如板材、型材、窗框、门框等，使用寿命可达二十年以上。涂装前基材须经过前处理，一般采用二涂一烘、三涂一烘的施工工艺。

中耐 2110B产品特点是不含有 PFOA，更加环保，其性能与中耐 2110相近。我们提供性能优异的涂料级PVDF树脂以及PVDF氟碳涂料满足您的需求。



Sinodur PVDF can be mixed with acrylic resin and additives to form a baked PVDF fluorocarbon coating with excellent performance. This coating can be used for aluminum work piece and aluminum curtain wall, such as plate, profile, window frame, door frame, etc. The service life can reach more than 20 years. Before coating, the substrate must be pretreated, it could be applied with wet on wet process, i.e. 2C-18 or 3C-18 system.

Sinodur 2110B is an updated product of Sinodur 2110 which is characterized by PFOA-free surfactant polymerization process, more environmentally friendly. We provide excellent performance PVDF resin and PVDF fluorocarbon coating to meet your requirements.

商务垂询：
中化蓝天氟材料有限公司 地址：浙江省上虞区杭州湾化工园区纬五路31号
电话：0575-82739991 网址：www.sinochemlt.com

产品数据Product Data

基本性能	测试标准 Standard	单位 Unit	中耐 2110 Sinodur 2110	中耐 2110B Sinodur 2110B
外观	目测	--	白色粉末	白色粉末
含水率	GB/T 6284	%	≤ 0.2	≤ 0.2
热稳定性	/	级	1	1
分散细度 (30min)	/	μm	≤35	≤35
研磨细度 (5min)	GB/T 6753.1	μm	≤35	≤35
斯托默粘度	GB/T 1723	KU	60~90	60~90
熔点	ASTM D3418	°C	158~168	158~168
热分解 (1%, N ₂)	/	°C	≥390	≥390
熔融指数	ASTM D1238 (230°C, 10kg)	g/10min	≤1.0	≤1.0