



中国认可
国际互认
检测
TESTING
CNAS L14475

Test Report 检测报告

Report No. 报告编号: LAX-2023-494-01

Client: Tianjin Pengrui safety technology CO.LTD.
客户: 天津鹏瑞安全科技有限公司
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Date of Receipt: 2023/7/4
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Client Request: /
客户需求: /



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注: 本报告的所有测试结果仅对所测样品负责。本实验室不对客户提供的信息负责。未经安思尔(厦门)防护用品有限公司实验室书面批准, 不得部分复制(全文复制除外)本检测报告。本报告涂改无效。检测报告未加盖本实验室的“检测报告专用章”(包括复印件)无效。对于检测报告若有异议, 应于报告收到之日起十五日内向本实验室提出。逾期未提出异议的, 视为承认检验结果。

Approved by 批准:

Amber Zheng

Amber Zheng, Lab Assoc Manager
郑嘉敏, 实验室副经理

Sample information 样品信息

Sample Code 样品编号	Sample Description 样品描述
202349401	Chemical protective clothing 化学防护服

Sample as received for analysis (photo) 样品照片



Samples were pre-conditioned in accordance with relevant standards.
样品已按照相关标准进行预处理。

Testing Results 检测结果

Sample info 样品信息: 202349401 Chemical protective clothing 化学防护服

Seam Strength 接缝强度	GB/T 13773.2-2008, GB 24539-2021	Class 4 (140N) 4 级(140N)
Repellency & Penetration to the liquid chemicals-30%H ₂ SO ₄ 拒液性能测试-30%硫酸	GB 24539-2021	I _{rmin} : Class 3; I _{pmax} : Class 3 拒液指数: 3 级; 穿透指数: 3 级
Repellency & Penetration to the liquid chemicals-10%NaOH 拒液性能测试-10%氢氧化钠	GB 24539-2021	I _{rmin} : Class 3; I _{pmax} : Class 3 拒液指数: 3 级; 穿透指数: 3 级
Permeation 渗透	GB/T 23462-2009, GB 24539-2021	Class 6 (>480min) 6 级 (>480min)

Seam Strength

Test method 测试方法: GB/T 13773.2-2008
Test parameter 测试参数:

Gauge length 夹距长度	100 mm
Width of test specimens 试样宽度	100 mm
Rate of extension 拉伸速度	50 mm/min

Test result 测试结果:

Sample info 样品信息: 202349401 Chemical protective clothing 化学防护服

Unit 单位	Specimen 样品					Average 均值	Result 结果
	1	2	3	4	5		
N	157.90	149.70	130.85	128.89	137.36	140.94	140
Rupture position 断裂位置	Fabric jaw 织物钳口	Fabric jaw 织物钳口	Fabric jaw 织物钳口	Fabric jaw 织物钳口	Fabric jaw 织物钳口		

Classification according to GB 24539-2021: **Class 4**

依据 GB 24539-2021，该样品满足 4 级的要求

GB 24539-2021 Classification of seam strength 接缝强力分级

Class 级别	Seam strength 接缝强力
6	> 500 N
5	> 300 N
4	> 125 N
3	> 75 N
2	> 50 N
1	> 30 N



Repellency & Penetration to the liquid chemicals 拒液性能测试

Test method 测试方法: GB 24539-2021

Test result 测试结果:

Sample info 样品信息: 202349401 Chemical protective clothing 化学防护服

Chemical 化学品	Unit 单位	Direction 方向	I _p	I _a	I _r
30%H ₂ SO ₄ 30%硫酸	%	CD	0.2	1.9	97.5
		CD	0.1	1.6	98.4
		CD	0.0	1.5	97.6
		MD	0.3	2.1	97.6
		MD	0.0	2.4	97.5
		MD	0.2	2.5	97.2

Chemical 化学品	Unit 单位	Direction 方向	I _p	I _a	I _r
10%NaOH 10%氢氧化钠	%	CD	0.2	2.2	96.7
		CD	0.1	1.5	98.0
		CD	0.1	1.7	96.9
		MD	0.0	1.5	97.5
		MD	0.4	1.8	97.3
		MD	0.0	2.3	97.1

* MD: Machine direction/Warp; CD: Cross direction/Weft * MD: 经向; CD: 纬向

* I_p: Index of penetration; I_a: Index of absorption; I_r: Index of repellency * I_p: 渗透指数; I_a: 吸收指数; I_r: 抵抗指数

According to GB 24539-2021, the classification of this sample is as below

依据 GB 24539-2021, 此样品的等级如下:

Chemical 化学品	I _{rmin}	Classification 级别	I _{pmax}	Classification 级别
30%H ₂ SO ₄ 30%硫酸	97.2	3	96.7	3
10%NaOH 10%氢氧化钠	0.3	3	0.4	3

GB 24539-2021 Classification of repellency and penetration index 拒液性能分级

Class 级别	Repellency index 拒液指数	Penetration index 穿透指数
3	> 95 %	< 1 %
2	> 90 %	< 5 %
1	> 80 %	< 10 %

Permeation Test 渗透测试

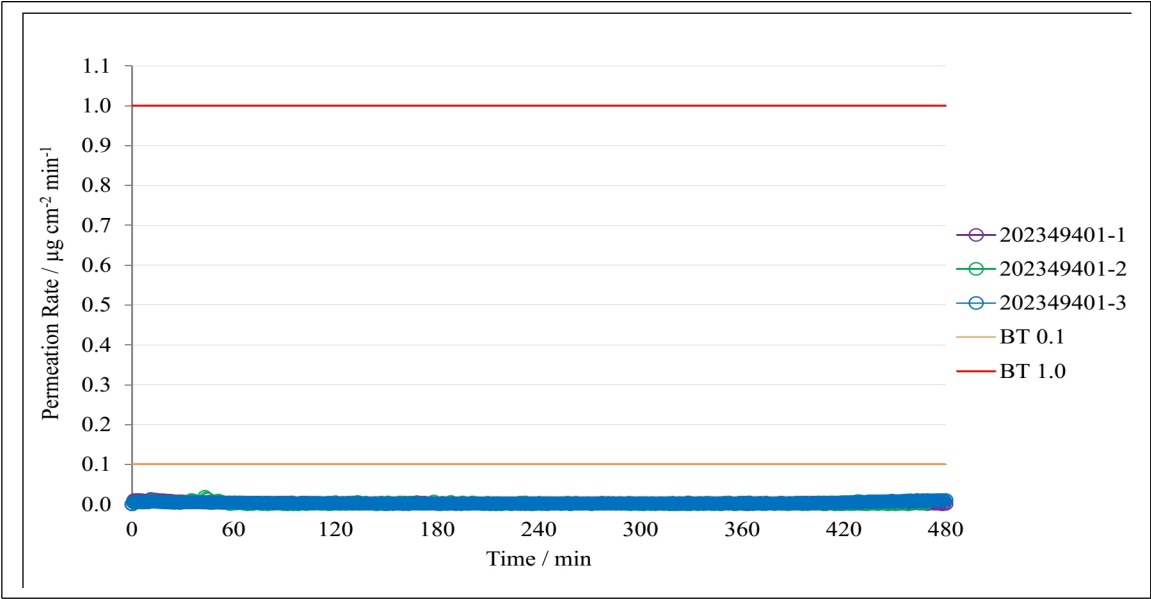
Test method 测试方法: GB/T 23462-2009

Test conditions 测试条件:

Item 项目	Test parameter 测试参数	
98% sulfuric acid by mass 98%硫酸 [CAS No.7664-93-9]	Collection medium 收集介质	Deionized water 去离子水
	System configuration 系统配置	Closed-loop 闭环
	Flowrate 流量	200 mL/min
	Equipment 设备	Electrical Conductivity 电导率测试仪
	Diameter of Test Area 测试区域直径	2 inches 2 英寸

Test results 测试结果:

Chemical protective clothing vs. 98% sulfuric acid by mass
化学防护服 vs. 98% 硫酸



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202349401 Chemical protective clothing 化学防护服							
Chemical 化学品	Specimen 样品	BT _{0.1} (min)		BT _{1.0} (min)		Visual Change 外观变化	
98% sulfuric acid by mass 98%硫酸 [CAS No.7664-93-9]	202349401-1	>480		>480		No Visual Change 无外观变化	
	202349401-2	>480		>480			
	202349401-3	>480		>480			
	Average 均值	>480		>480			
	Cumulative Permeation 累积渗透量 (μg · cm ⁻²)						
	Specimen 样品	10 min	30 min	60 min	120 min	240 min	480 min
	202349401-1	<0.2	<0.6	<1.2	<2.4	<4.8	<9.6
	202349401-2	<0.2	<0.6	2.62	3.44	<4.8	<9.6
	202349401-3	<0.2	<0.6	<1.2	<2.4	<4.8	<9.6

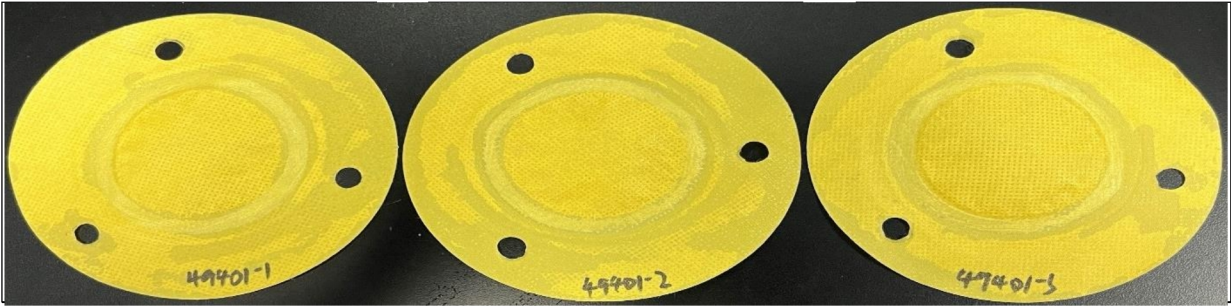
Classification according to GB 24539-2021: **Class 6**

依据 GB 24539-2021，该样品满足 6 级的要求。

GB 24539-2021 Classification of permeation resistance 渗透性能分级

Class 级别	Breakthrough time 标准透过时间
6	≥ 480 min
5	≥ 240 min
4	≥ 120 min
3	≥ 60 min
2	≥ 30 min
1	≥ 10 min

Photos of samples after testing 样品测试后照片：



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-----End of Report/报告结束-----