

硅素系聚烯烃 · 聚碳酸酯树脂改性剂

聚硅烷

Silicon-based polyolefin resin and polycarbonate resin modifier / Polysilane

代理商：松金国际贸易南通有限公司

联系电话：13390981305 公司网站：www.matsukanechem.com

聚烯烃树脂改性剂 SI-10-40

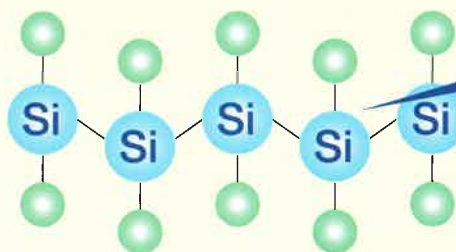
Polyolefin resin modifier OGSOL SI-10-40

硅素系聚烯烃·聚碳酸酯树脂改性剂

OGSOL SI-10-40 对于聚烯烃树脂有较高的相容性、拥有提高树脂的粘合性和耐久性的机能
OGSOL SI-10-40 has the higher compatibility in polyolefin resins such as PP and it improves the adhesivity and durability.

【聚烯烃树脂改性剂OGSOL SI-10-40的特色】

Features of the polyolefin resin modifier OGSOL SI-10-40

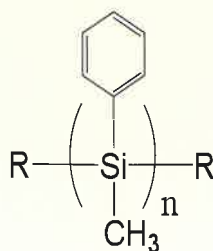


主链：Si-Si结合

Bonding: Si-Si

侧链：有机置换基

Side chain: organic substituent



● 聚烯烃树脂相容性

Polyolefin resin compatible

● 高粘性

High adhesion

● 提高耐久性

Improvement in durability

抑制酸化劣化

Inhibition of the oxidation degradation

● 高拒水性

High water repellency

		OGSOL SI-10-40
外观 Appearance	—	淡黄色粘稠液体 Light yellow Liquid (含有5%以下甲苯) (Less than toluene 5% content)
分子量 Molecular weight ※ GPC(聚苯乙烯换算)	Mn	620
	Mw	700

*可提供MB(PP+SI-10-40 10%配合)
Masterbatch containing 10wt% SI-10-40 is provided.

■ 溶剂溶解性 Solvent solubility

评价条件：制成10wt%溶液 使用振动机使之溶解

Measurement condition: SI-10-40 is solved in the solvent on the below Table by using a shaker at room temperature.

评价方法(目视)：O1小时内溶解、X不溶

Evaluation method: 10wt% solution was obtained at 1 hour (O) or not (X).

	聚醚 Ethers	芳香族 Aromatic series	酮 Ketones		酒精 Alcohols	
	THF	甲苯 Toluene	丙酮 acetone	MEK	乙醇 Ethanol	i-丙醇 i-Propanol
OGSOL SI-10-40	O	O	X	O	X	X

用途例 / Application Examples



车载部件(高粘性、阻燃性)
Car parts (High Adhesion, Flame retardance)



树脂管材(提高耐久性、抑制酸化劣化)
Resin pipes (improvement in durability, Inhibition of the oxidation degradation)



包装用薄膜(高粘性、高拒水性、高阻隔性)
Packaging films (High adhesion, High water repellency, High barrier)



建材(高粘性、高拒水性)
Building materials (High adhesion, High water repellency)

代理商：松金国际贸易南通有限公司

联系电话：13390981305 公司网站：www.matsukanechem.com

树脂物性 / Resin properties

■ 粘着数据 Adhesion data

SI-10-40涂布于聚烯烃薄膜贴合后
薄膜界面间无间隙,达到融着作用
因此,提高了薄膜界面的粘着强度

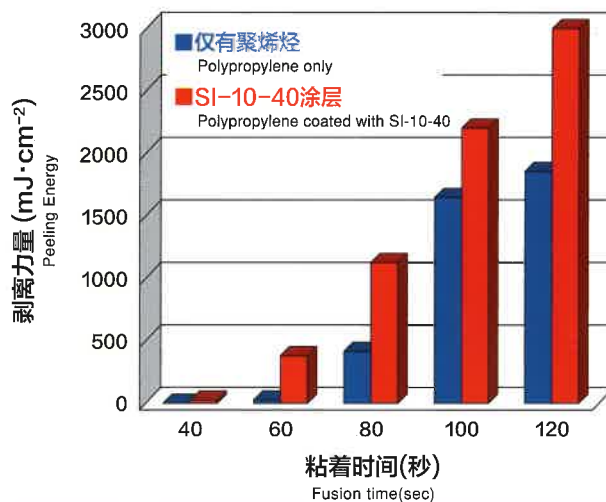
After Polypropylene films coated with SI-10-40 are pasted each other,
the interface between the films is fused rapidly by the heat.
Therefore, it improves the property of the adhesion intensity.

粘着条件: 160℃ 120秒、0.05Mpa持续加压粘着
Fusion conditions: 160℃, 120sec, 0.05MPa

实验方法 T型剥离实验
Testing method: T-peel test

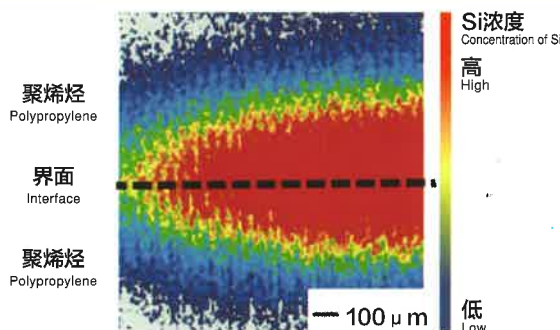
聚烯烃薄膜厚度: 0.5mm
Thickness of Polypropylene films: 0.5mm

*滋贺县立大学 德满胜久教授测定数据
Measurement data of Professor Katsuhisa Tokumitsu
(The University of Shiga Prefecture)



■ EPMA(硅素分布) Silicon mapping

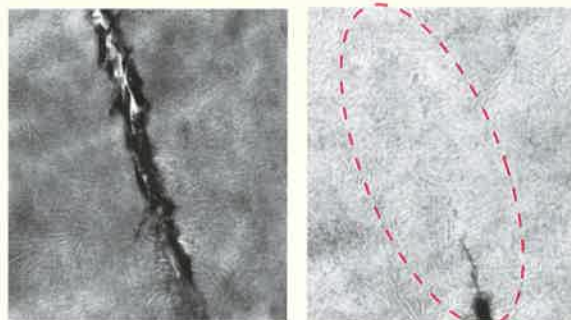
SI-10-40对于聚烯烃树脂有非常高的浸透性
SI-10-40 has the high permeability to polypropylene resin.



■ TEM(显微镜画像)

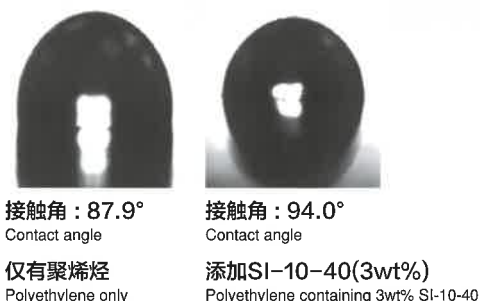
SI-10-40涂布于聚烯烃薄膜贴合后
薄膜界面无间隙达到融着
提高了接着强度。
实际也确认到融着界面的层状构造

After the interface between polypropylene films coated with SI-10-40 is fused by the heat,
the lamellar structure is observed at the fused interface of the polypropylene films.



■ 拒水性 Water repellency

在聚烯烃树脂(中浓度)里添加
SI-10-40(3wt%),提高了拒水性
Polyethylene resin (medium density) containing 3wt% SI-10-40
has the superior water repellency.



■ 抑制酸化劣化(防止铜害)

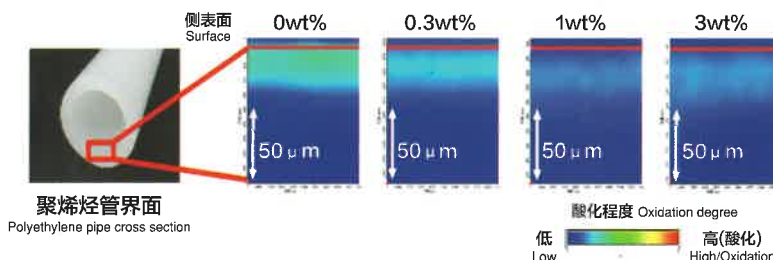
Inhibition of the oxidation degradation / Effect of Copper inhibitor

在聚烯烃树脂(中浓度)里添加具有拒水性的SI-10-40
防止聚烯烃的酸化

Polyethylene resin (medium density) containing 3wt% SI-10-40 inhibits the oxidation degradation.

评价条件: 聚烯烃配管在10wt%的氯化铜溶液里浸渍4500小时后
利用FT-IR观察

Evaluation method: After immersion in 10 wt% CuCl₂aq for 4500 hours,
Polypropylene pipe was observed by FT-IR images.



聚碳酸酯树脂改性剂 OGSOL SI-30-10

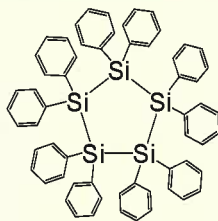
Polycarbonate resin modifier OGSOL SI-30-10

硅素系聚烯烃·聚碳酸酯树脂改性剂

通过SI-30-10与聚碳酸酯混合,提高阻燃性

Polycarbonate blended with SI-30-10 have the superior properties of the flame retardancy.

构造 / Structure



OGSOL SI-30-10

外观: 白色粉末
Appearance: White powder

特长 / Features

- 阻燃性
Flame retardance
- 高耐热性
High heat resistance
- 树脂分散性
Resin dispersibility
- 高拒水性
High water repellency

用途例 / Application Example

- 车载部件
Car parts
- 电子部件
Electronic parts
- 薄膜
Films

物性表 / Physical Properties Table

		OGSOL SI-30-10
GPC纯度 Purity(GPC)	%	99≧
熔点 Melting point	℃	192
耐热性(5%重量减) Heat resistance(5% weight reduction)	℃	400≧
折射率(589nm) Refractive index(589nm)	—	1.74

添加SI-30-10的聚碳酸酯特色 / Properties of Polycarbonate with SI-30-10

通过SI-30-10与聚碳酸酯混合,提高阻燃性

Flame retardancy is improved by blending SI-30-10 with Polycarbonate.

		Ref(聚碳酸酯) Ref(Polycarbonate only)	添加SI-30-10的聚碳酸酯(3phr) Polycarbonate blended with SI-30-10
配合比 Compounding ratio	聚碳酸酯(份) Polycarbonate(phr)	100	100
	阻燃剂A(份) Flame retardant A(phr)	0.1	0.1
	阻燃助剂SI-30-10 The flame retardant promoter SI-30-10(phr)	0	3
阻燃性(UL94规格、1/8英寸) Flame resistance (UL94, 1/8inch)		V-2	V-0
透明性 Transparency		○	○

对于聚碳酸酯树脂的分散性 / Dispersibility in the polycarbonate resin

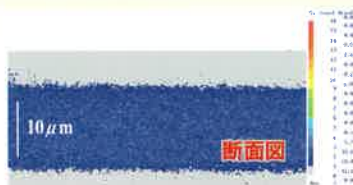
对于添加了SI-30-10的聚碳酸酯树脂拥有优越的分散性

SI-30-10 is dispersed homogeneously in Polycarbonate.

■ SI-30-10

膜厚方向均一分散

Dispersed homogeneously in Polycarbonate in the film thickness direction



Cross-sectional view

■ 硅 Silicon

局限于膜的表面

Localized at the film surface



Cross-sectional view

代理商: 松金国际贸易南通有限公司

联系电话: 13390981305 公司网站: www.matsukanechem.com