

ADKSTAB AS-301E

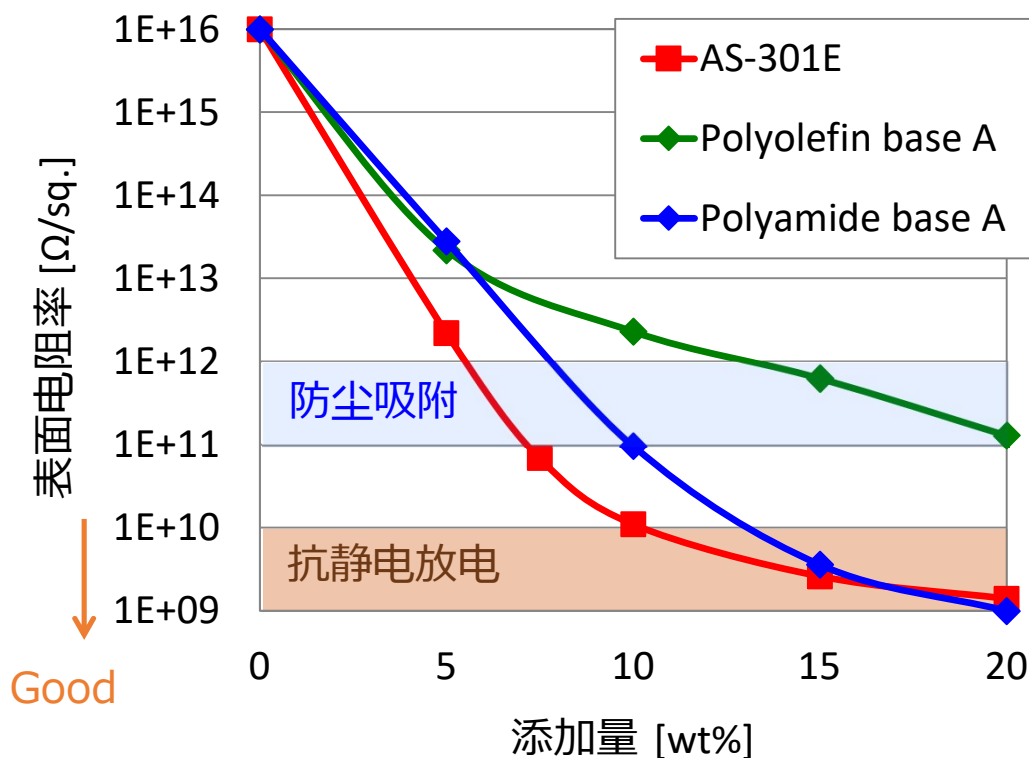


- 相比与其他永久性抗静电剂，可以在少量的添加量内提供卓越的抗静电性能
- 易于加工成形的颗粒状
- 长时间保持抗静电效果
- 适用于各类树脂，例如聚丙烯，聚乙烯，高抗冲聚苯乙烯等

属性	结果
外观	淡黄色颗粒
熔点	ca. 92 (°C, DSC)
加热减量 (under N ₂)	ca. 300 °C (-1 wt% @TG-DTA)
表面电阻率	10 ⁷ (Ω/sq. @50 %R.H.)



抗静电性能



Formulation

HPP (100-X;8dg/min)
Antistatic Agent (X)
AO-60 (1000ppm)
2112 (1000ppm)
Cast (500ppm)

Processing

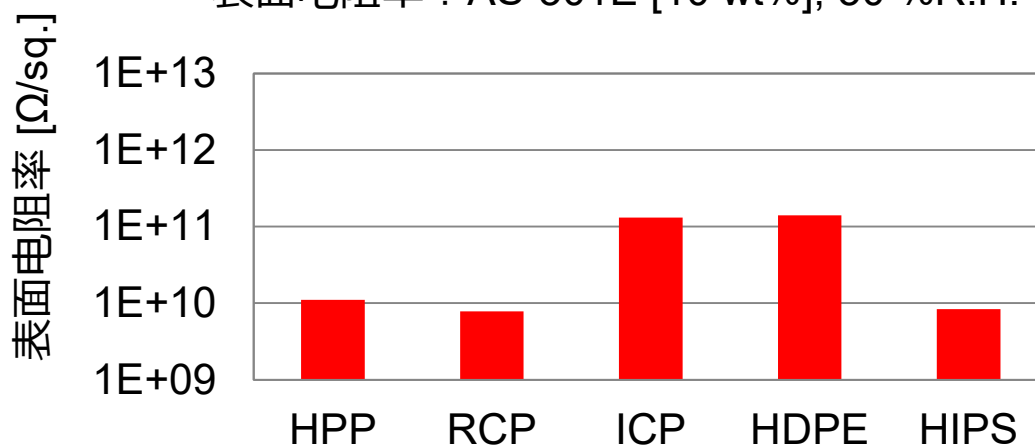
Extrusion @230 °C
Injection @230 °C
Mold Temp. @40 °C

Measurement

1mm thickness
SR: JIS 6911
(25 °C, 50 %R.H.)

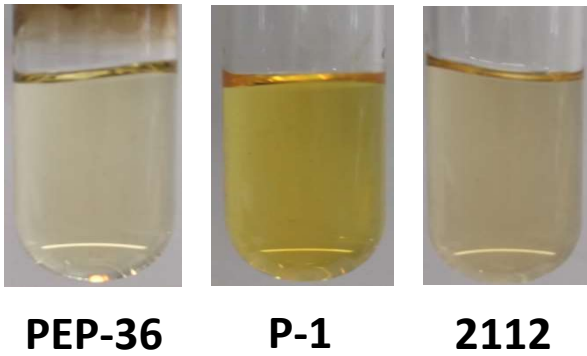
适用于各类树脂

表面电阻率 : AS-301E [10 wt%], 50 %R.H.

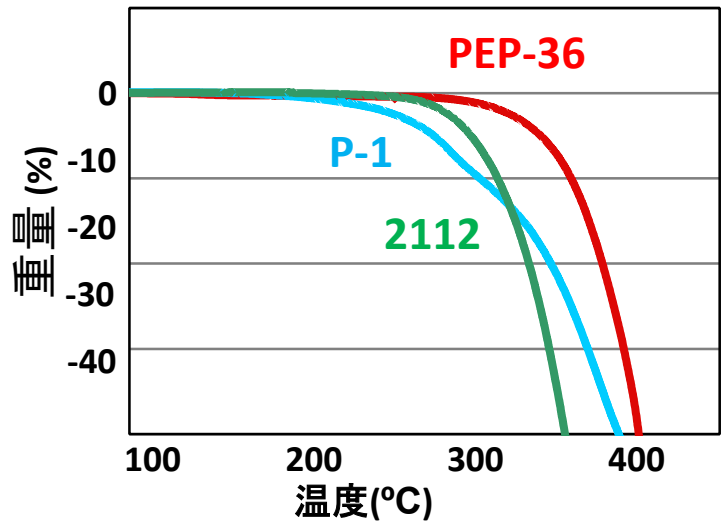


ADKSTAB PEP-36

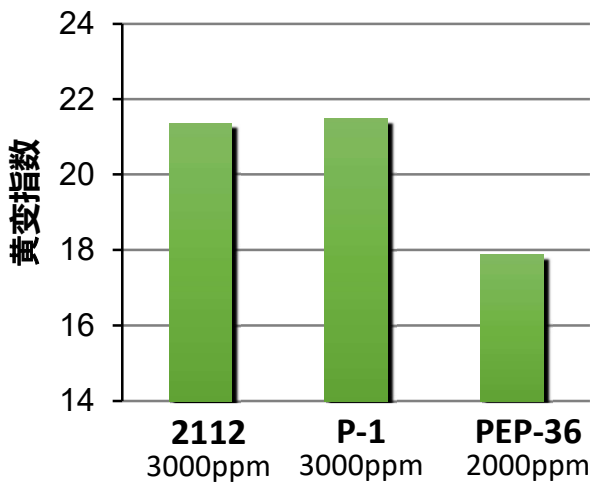
加热溶解色测试
(280°C, 60min)



亚磷酸酯的耐热性

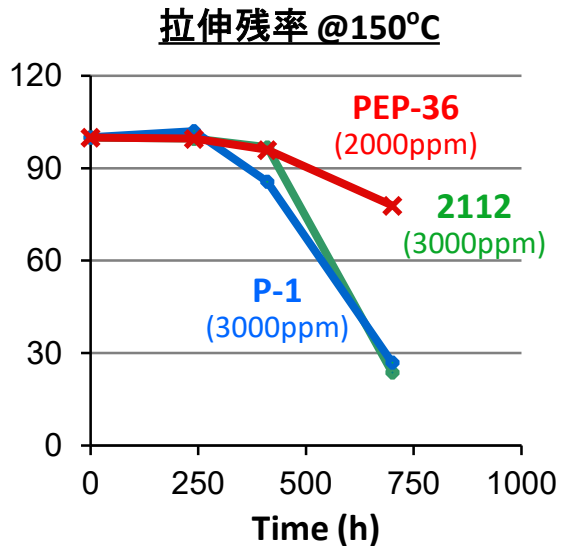


YI / GF-PP



PP/ MA-PP/ GF =57/3/40 ,
AO-60 2000ppm +Phosphite

TS / GF-PP



PP/ MA-PP/ GF =57/3/40 ,
AO-60 2000ppm +Phosphite



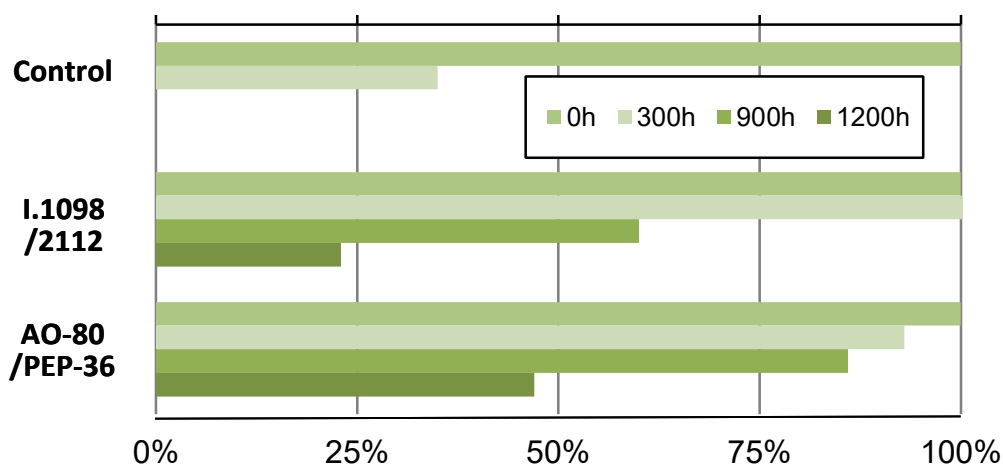
PBT的色调比较

受阻酚,亚磷酸酯 (each 2000ppm)

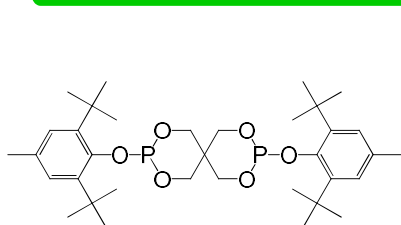
加工条件	-	AO60 -	AO60 2112	AO60 PEP36	AO60 P-1
250°C 10分滞留					
250°C 20分滞留					

PA6的耐热物性

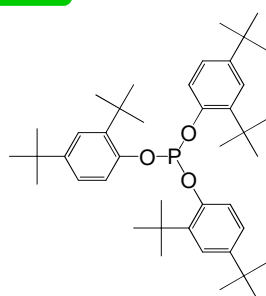
拉伸残率 @150°C

受阻酚 (5000ppm)
亚磷酸酯 (3000ppm)

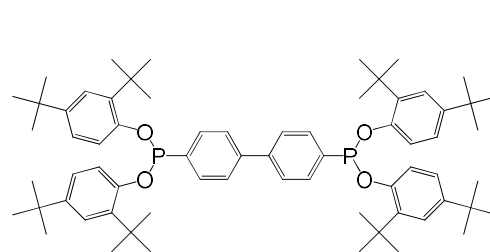
化学结构



PEP-36



2112 (168)



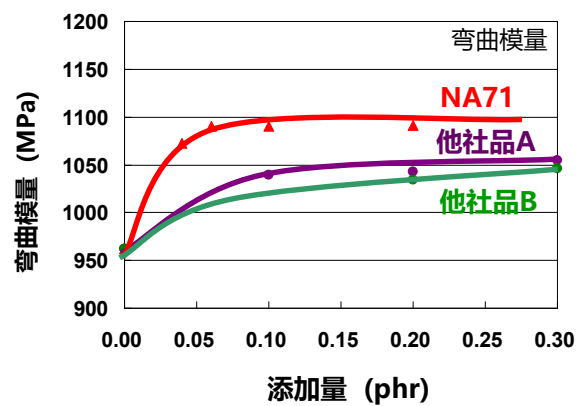
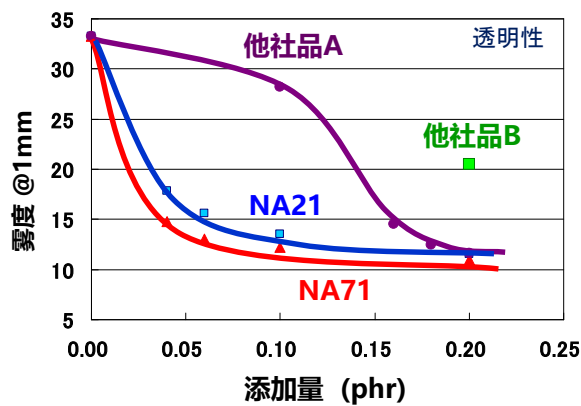
P-1



ADKSTAB NA-71

- ◆ 良好的透明度
- ◆ FDA认证

性能的比较 (Random PP, MFR=2)



NA-71在较低的添加量时,也能够有效的提升透明度和弯曲模量

耐热水析出性 (121°C沸腾水/1h)

透明剂	KMnO ₄ 消费量		最大紫外吸光度	
	mL of 0.01N		220-241nm	241-350nm
NA-71	<0.5		0.03	<0.01
NA-21	<0.5		0.05	<0.01
他社品A	3.2		0.74	0.40
他社品B	0.7		0.08	0.08

*According to Japanese Standards JIS for Medical use

从数据中可看出, NA71/21的耐析出性明显优于他社品



一步法注拉吹成型应用实例



Control	180°C	200°C	180°C	200°C	180°C	200°C	220°C
	PP-1, MFR=12		PP-1, MFR=12		PP-3, MFR=20		
	NA-21 (0.2)		NA-71 (0.2)		Solbitol C/A (0.2)		



Control	NA-21 (0.2)	NA-71 (0.2)	NA-21 (0.2)	NA-71 (0.2)	山梨醇 C/A (0.2)
注塑温度180 °C	PP-1, 融指=12		PP-2, 融指=20		PP-3, 融指=20

NA-21和NA-71应用在PP一步法注拉吹成型时的优势

- 注射瓶胚注塑温度越低越适合一步法注拉吹成型。
- 透明性能比较NA系列  山梨醇系列。

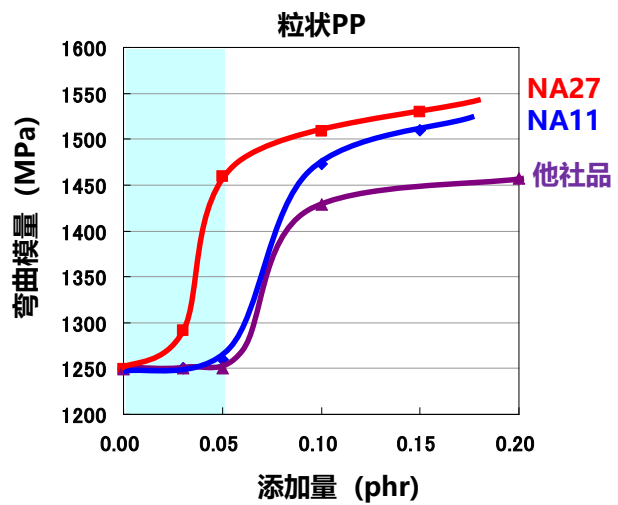
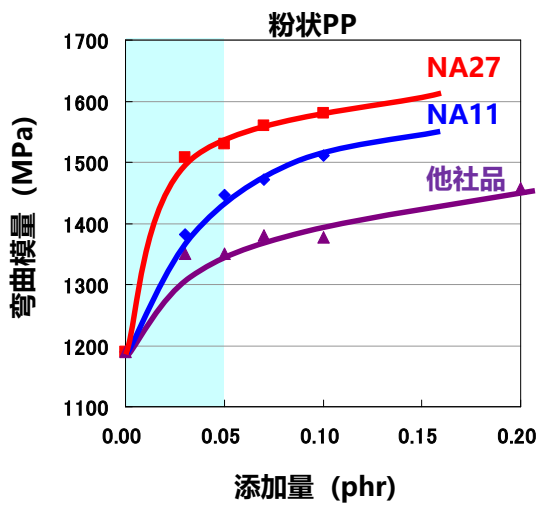


ADKSTAB NA-27

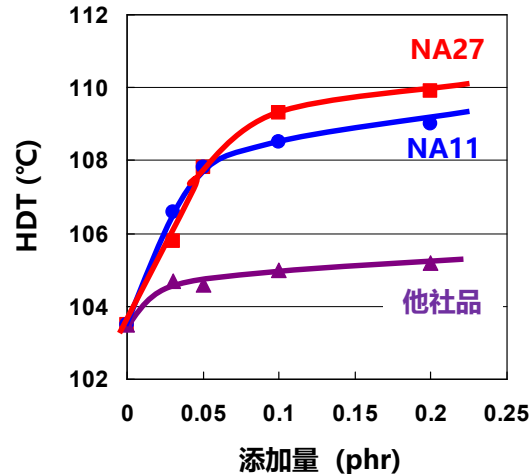
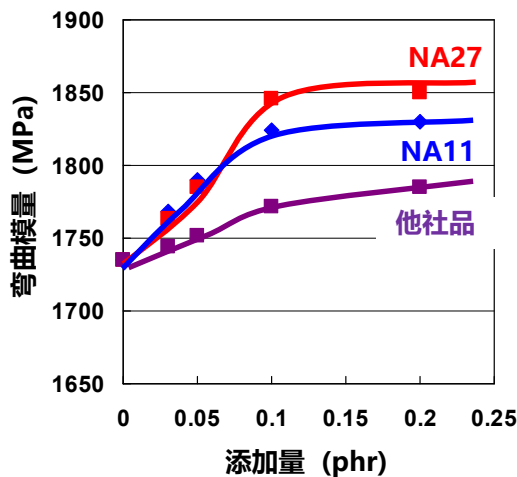
- ◆ 完美的提高机械性能
- ◆ 填充配方中同样拥有高性能

分散性的比较 (Impact PP, MFR=25)

NA27不受PP颗粒的影响



PP/talc系性能比较 (PP/Talc(10))

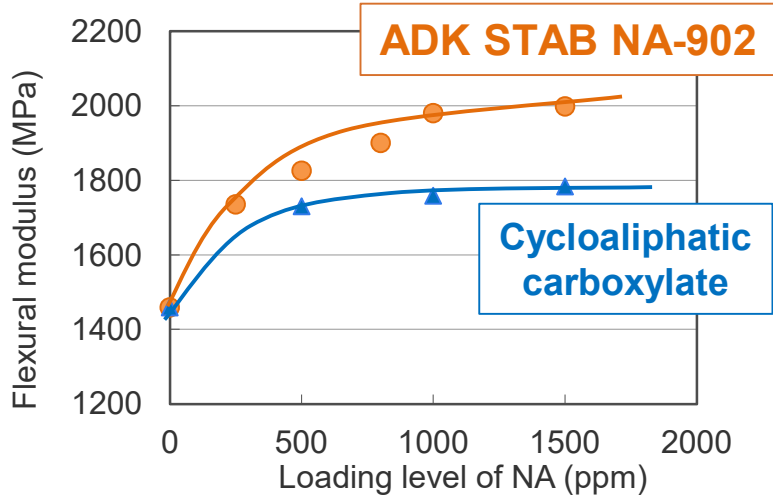


在滑石粉配方中，NA27仍能提供优异的机械性能



ADKSTAB NA-902

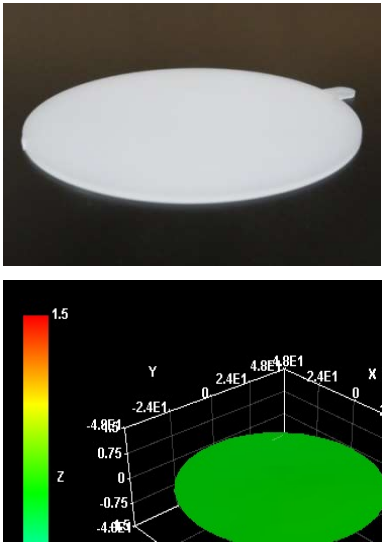
分散性的比较 (Homo PP, MFR=8)



Formulation (wt%)

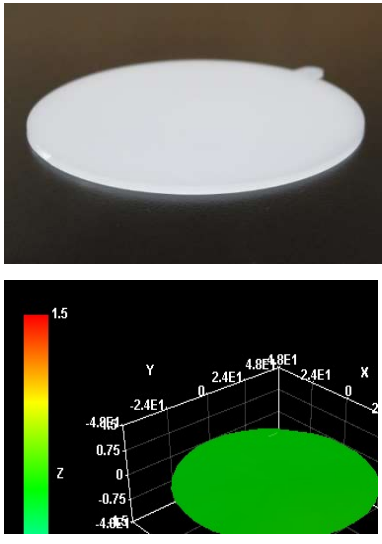
HPP (MFR 8)	100
AO-60	0,05
2112	0,05
CaSt	0,05
NA	

分散性的比较 (Impact PP, MFR=45)

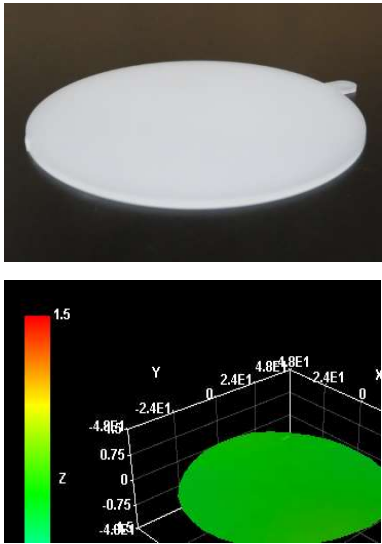


Without NA

Formulation (wt%)			
ICP (MFR 45)	100	2112	0,05
AO-60	0,05	CaSt	0,05
		NA	0,05



ADK STAB NA-902



Cycloaliphatic carboxylate

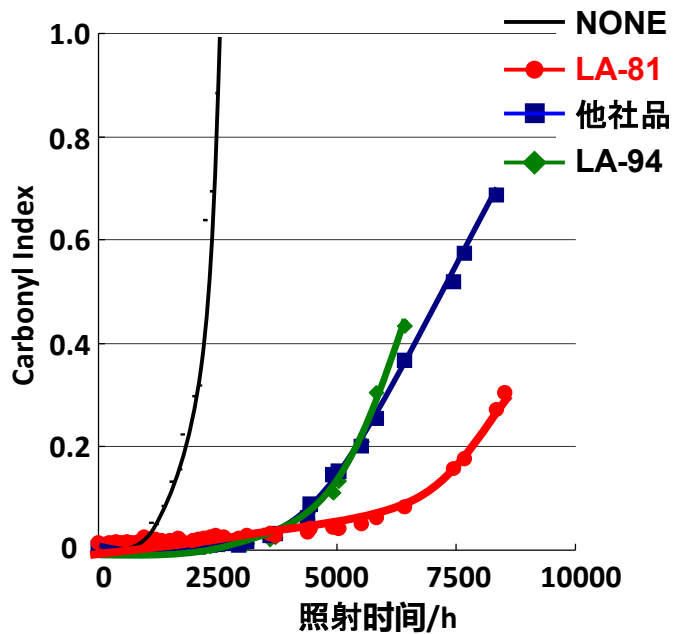
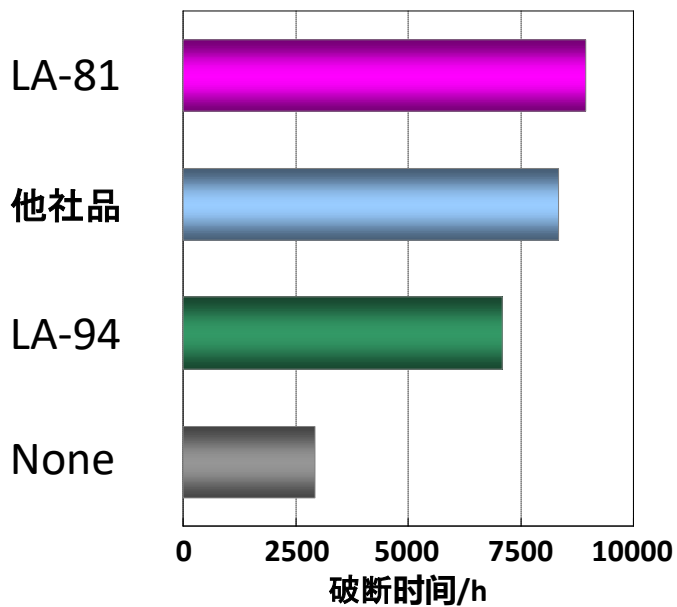
Disc
Diameter: 100mm
Thickness: 1,6mm



ADKSTAB LA-81

外观	淡黄色液体
比重	0.95 (@20°C)
粘度	1600 mPa·s (@25°C)
溶解度	>50% / 100g Heptane(@25°C)
加热减量温度	275°C (@5%重量减少)

LDPE薄膜的耐候性比较

**Formulation**

LDPE [100] / AO-60 [0.1phr] / 2112 [0.1phr] / Hydrotalcite [5.0phr] / HALS [0.4phr]

Processing

Press: 180°C, 35um Inflation film

Acceleration test

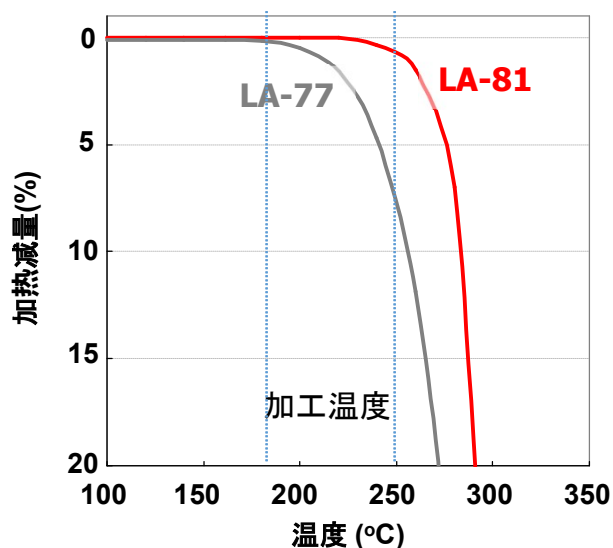
Sunshine Weather-O-Meter (63°C, Water Splay)



溶解性比較

HALS	Heptane	Methanol
LA-81	>50	0.1
他社品	1.4	0.3
LA-94	4.2	0.1
LA-77	6.6	0.3

挥发性比較



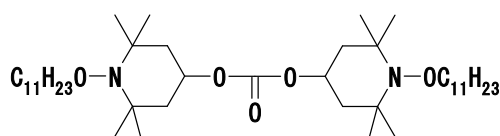
色调比較

none LA-81 LA-94 NO-AI-1

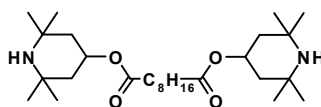


LDPE [100] / AO-60 [0.1phr] / 2112 [0.1phr] / Hydrotalcite [5.0phr] / HALS [0.4phr]

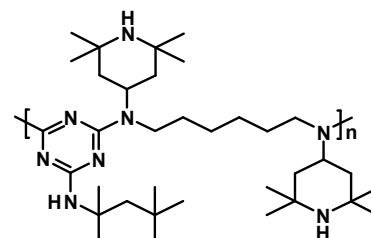
化学结构



LA-81



LA-77



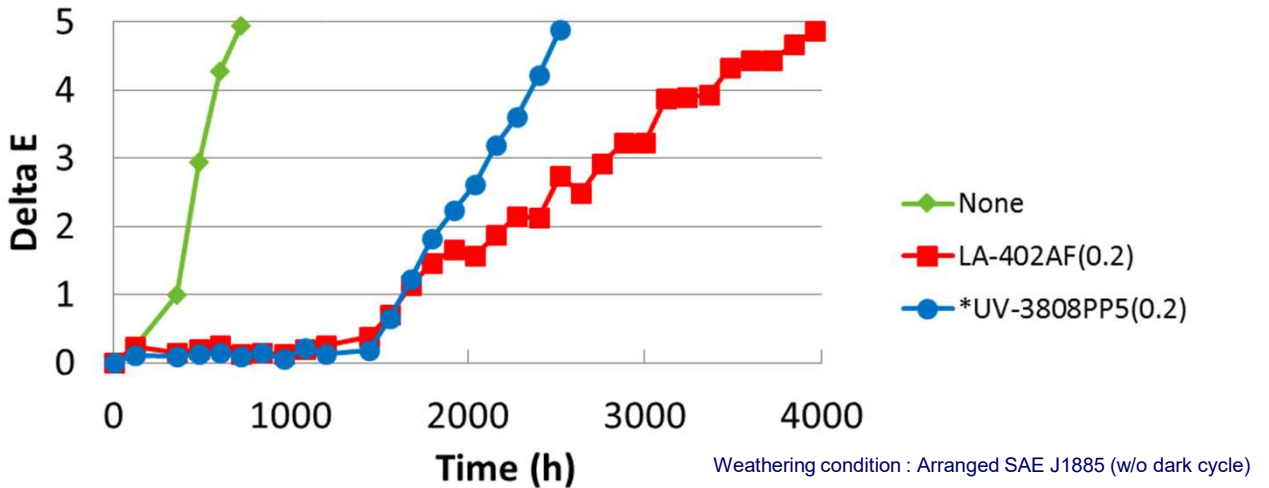
LA-94



ADKSTAB LA-402AF

- 赋予聚烯烃优异的耐候性 *Offers excellent weatherability for polyolefins*
- 防止由紫外线引起的质量减少和变色 *Protects from UV that causes gross reduction & discoloration.*
- 与传统产品相比，PP/TPE汽车用部件中表现出优异稳定性
Offers much more excellent stabilization than conventional products, especially for PP/TPE automotive parts.
- 和紫外线吸收剂并用呈现出协同作用 *Show synergetic effects with UV absorbers*

浅茶色PP中的色泽稳定性

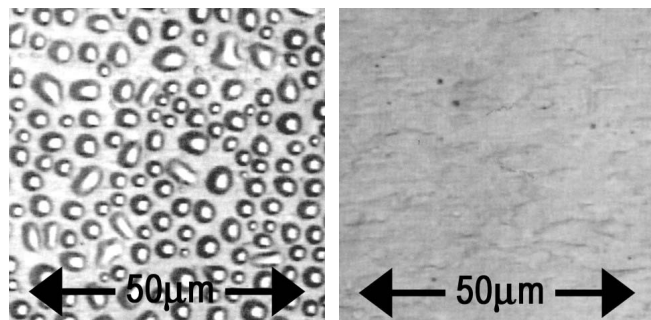


直链己烷中的溶解性比较



Salt formation of HALS (14.2 mM) with stearic acid (14.2 mM) in n-hexane solution @ 20 deg C.
LA-402: active component of LA-402AF.

耐热析出性比较 (PP, 80°C/1000h)



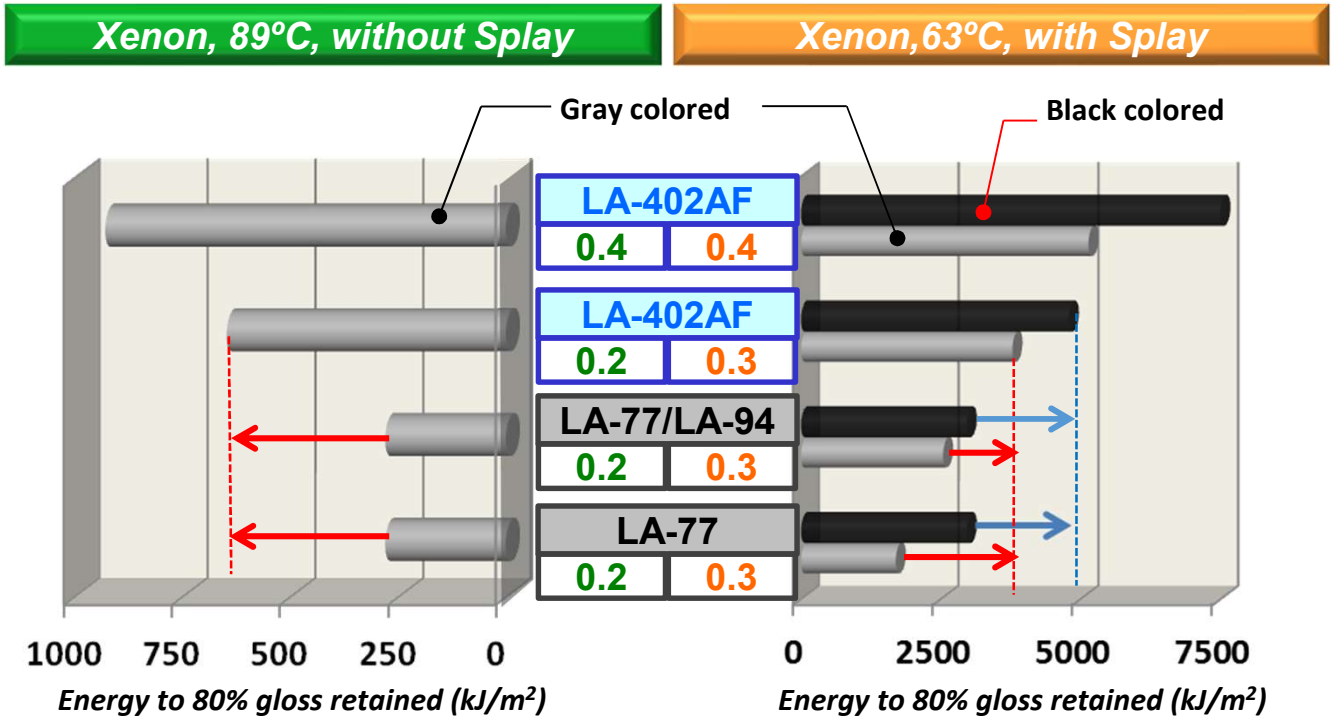
LA-77 (0.3)

LA-402AF (0.3)

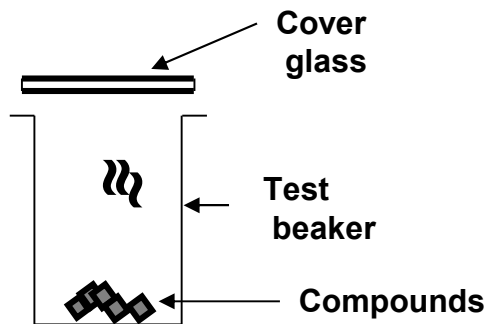
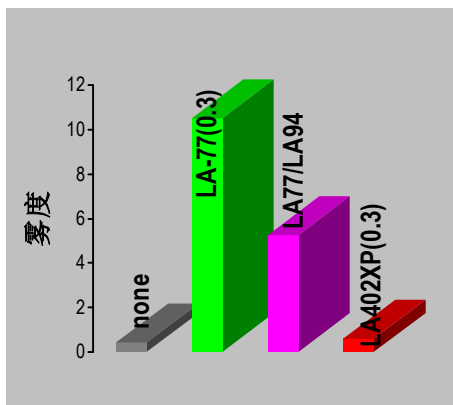
Formulation: AO-60 [0.05], 2112 [0.05], Ca-st [0.05]
Extrusion: 230°C Injection: 230°C, 2mm Embossing sheet



黑,灰色PP中的表面光泽稳定性



添加光稳定剂的PP的雾性 (100°C/24小时)



Formulation: Block-PP (60), EPR (30), Talc (10), Ca-stearate (0.1), ADK STAB AO-60 (0.1), ADK STAB 2112 (0.1), Light stabilizer (see graph)



ADKSTAB FP-2000系列

- ◆ 无卤阻燃剂 *Halogen free flame retardants*
- ◆ 低烟量, 低有害气体 *Low smoke, Low gas toxicity*
- ◆ 可与耐候剂 (LA402AF)配合使用 *Combine flame retardancy and light stability by using with LA-402AF*

	FP-2100JC	FP-2200	FP-2500S
特点 <i>Feature</i>	高耐热性 Heat durability	高阻燃性 Flame retardancy	低粉尘性 Low dust
用途 <i>Application</i>	GF-PP, PP	GF-PP, PP, PE	TPE, (PP, PE, TPU)

阻燃PP(V0)的燃烧比较



阻燃PP中, 相比溴系阻燃剂, 降低99%的烟密度和89%的一氧化碳排放量。

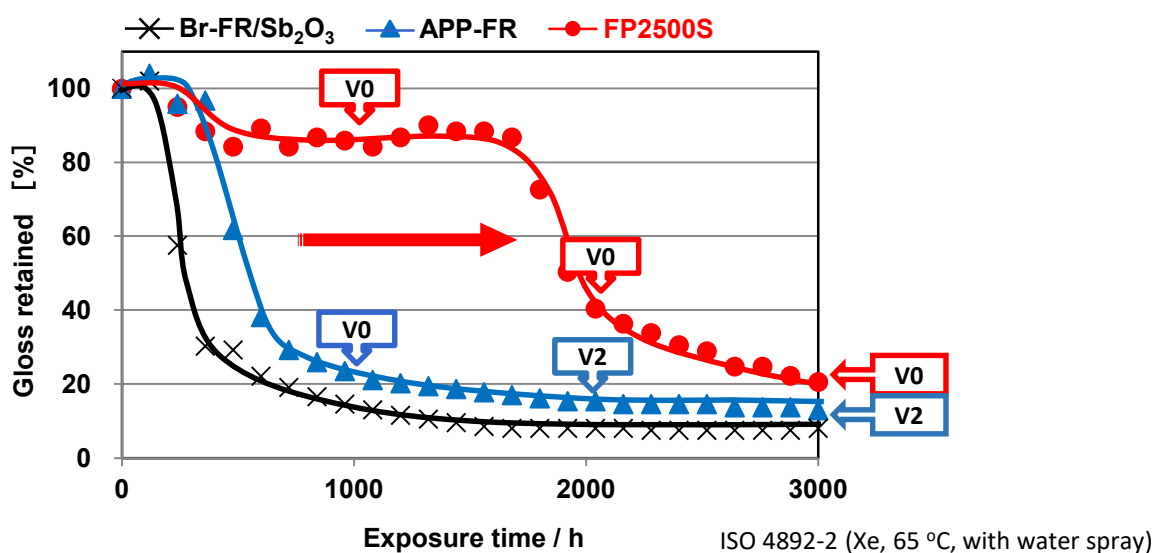


使用实例 (GF-PP)

	①	②	③
PP [MFR=30]	60	47	40
FP-2200S	20	23	30
GF	20	30	30
GWIT @ 3.0mm	850°C	850°C	930°C
GWFI @ 3.0mm	960°C	960°C	960°C
UL94 @ 1.6mm	V0	V0	5VA



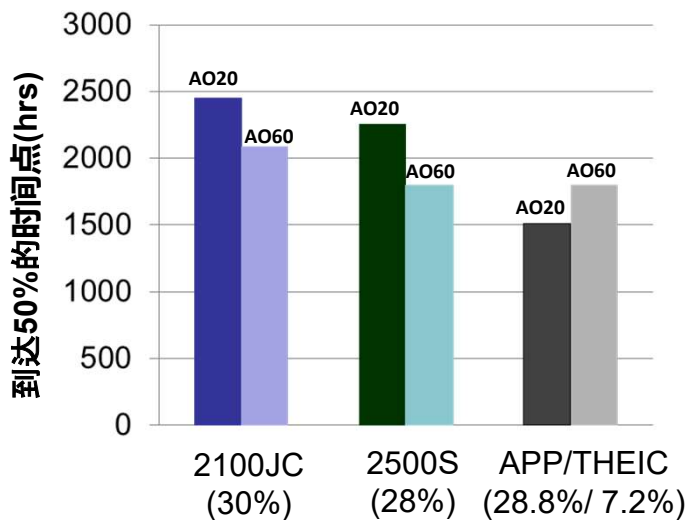
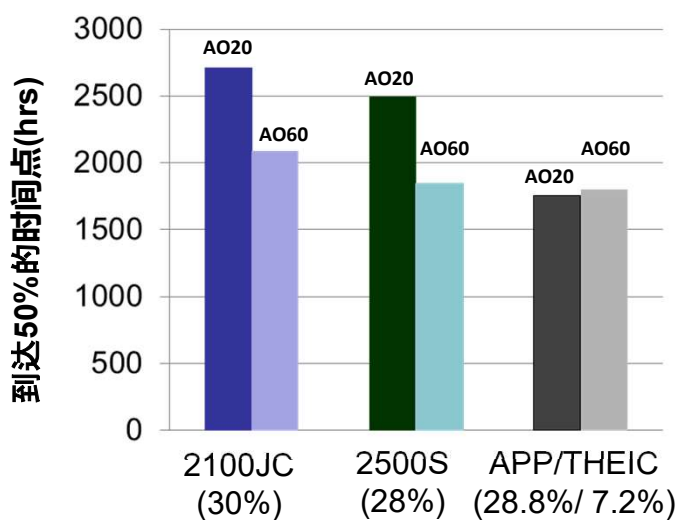
阻燃PP耐候性比较 (LA402AF 互配)



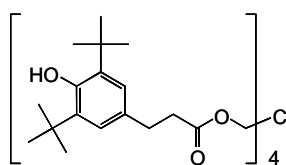
阻燃PP耐热性比较 (AO20或AO60互配) @150 °C

弯曲弹率

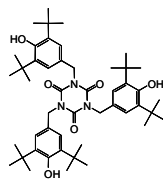
拉伸强度



化学结构



AO60(1010)



AO20

