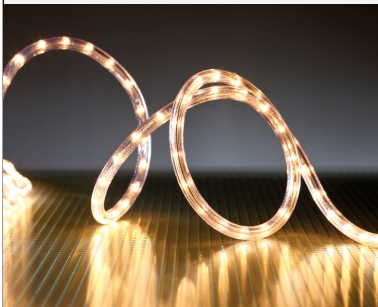




高效 / 稳定 / 环保
Efficient / Reliable / Environment Friendly

单品阻燃剂产品

Single Substance Flame Retardant



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浙江旭森阻燃剂股份有限公司

Zhejiang Xusen Flame Retardants Incorporated Company

产品类别 Product Category	MCA	APP	ATH	MPP	PPAP	ZB	ADP	T800
硅橡胶 Silicon Rubber	★	★	★			★		
环氧树脂 Epoxy Resin		★	★				★	
不饱和树脂 Unsaturated Resin	★	★	★			★	★	
通用粘合剂 Universal Adhesiv		★	★					
聚氨酯粘合剂 Polyurethane Adhesive		★	★	★			★	
PA	★			★		★	★	★
PP					★		★	★
PBT	★			★			★	
PET							★	★
PE/EVA	★		★			★		★
S-PVC			★			★		
PC								★
TPU	★						★	
TPE	★		★			★	★	
织物涂层 Fabric Coating		★		★				
防火涂料 Fire Retardant Coating		★				★		



三聚氰胺氰尿酸盐 XS-MC-10/25/50系列

Melamine Cyanurate XS-MC-10 / 25 / 50 Series

产品简介 Product Description

三聚氰胺氰尿酸盐 (MCA) 是一种无色无味无毒的白色结晶粉体, 难溶于水, 可溶于乙醇、甲醛等溶剂, 弱酸性。在300-320°C内稳定, 350°C吸热分解。

Melamine cyanurate (MCA) is a colorless, odorless and non-toxic white crystalline powder, difficult to dissolve in water, soluble in ethanol, formaldehyde and other solvents, weakly acidic. It's stabilized at 300 – 320°C and decomposed at 350°C.

产品特点 Product Characteristic

我司拥有自主的MCA表面改性技术, 解决了分散难、黑白点多等诸多使用问题。XS-MC系列产品科广泛应用在电线电缆、电子电器、建材、纺织涂层等诸多领域。

Our company has autonomous MCA surface modification technology, which solves many problems such as difficult dispersion and , many black and white points,etc. XS-MC series products are widely used in wire and cable, electronic appliances, building materials, textile coatings and many other fields.

技术参数 Technical Specification

特性 Characteristics	XS-MC-10	XS-MC-25	XS-MC-253	XS-MC-50
外观 Appearance	白色粉末 White Powder	白色粉末 White Powder	白色粉末 White Powder	白色粉末 White Powder
MCA含量% MCA Content %	≥99.5	≥99.5	≥99.0	≥99.0
白度 Whiteness	≥98	≥98	≥97	≥98
分解温度°C Decomposition°C	≥310	≥350	≥315	≥300
密度g/cm ³ , 25°C Density g/cm ³ , 25°C	1.35 ~ 1.85	1.35 ~ 1.85	1.35 ~ 1.85	1.35 ~ 1.85
含水率% Water Content%	≤0.2	≥0.3	≥0.3	≥0.3
pH	5.0 ~ 7.5	5.0 ~ 7.0	≤7.5	5.0 ~ 7.0
D ₅₀ um	≈1.1	≈3	/	6~12
D ₉₈ um	≤8	≤25	/	≤50
分散性 Dispersion	★★★	★★★★	★★★★	★★★★★
推荐使用 Recommended Use	环氧树脂 EVA/TPE/TPU 不饱和聚酯 Epoxy Resin/ EVA/TPE/TPU/ Unsaturated Polyester	PA / EVA PE/EVA 硅橡胶 Silicon Rubber	Pa66 / PA6 达到UL94-V0 PA66/PA6 Reach UL94-V0	PA非增强/ 硅橡胶/ 环氧树脂/ 不饱和聚酯 PA Non-Reinforced/ Silicon Rubber/ Epoxy Resin/ Unsaturated Polyester
可以使用 Can be Used	A/B	A/B	A	A/B

应用领域：A—热塑性材料 B—热固性材料及粘合剂 C—涂料涂层

Application Fields: A-Thermoplastic Material B-Thermosetting Material and Adhesive C-Coating



旭森阻燃剂·产品中心



三聚氰胺氰尿酸盐 XS-MC-15系列

Melamine Cyanurate XS-MC-15 Serie

产品简介 Product Description

三聚氰胺氰尿酸盐 (MCA) 是一种无色无味无毒的白色结晶粉体, 难溶于水, 可溶于乙醇、甲醛等溶剂, 弱酸性。在300°C内稳定, 350°C吸热分解。

Melamine cyanurate (MCA) is a colorless, odorless and non-toxic white crystalline powder, difficult to dissolve in water, soluble in ethanol, formaldehyde and other solvents, weakly acidic. It's stabilized at 300°C and decomposed at 350°C.

产品特点 Product Characteristic

我司拥有自主的MCA表面改性技术, 解决了分散难、黑白点多等诸多使用问题。XS-MC系列产品科广泛应用在电线电缆、电子电器、建材、纺织涂层等诸多领域。

Our company has the special MCA surface modification technology, which solves many problems such as difficult dispersion and many black and white points, etc. XS-MC series products are widely used in wire and cable, electronic appliances, building materials, textile coatings and many other fields.

技术参数 Technical Specification

特性 Characteristics	XS-MC-15	XS-MC-15P	XS-MC-151	XS-MC-153	XS-MC-154
外观 Appearance	白色粉末 White Powder	片状颗粒 Flaky Particle	白色粉末 White Powder	白色粉末 White Powder	白色粉末 White Powder
MCA含量% MCA Content %	≥99.5	≥99.5	≥99.5	≥99.0	≥99.0
白度 Whiteness	≥98	≥98	≥98	≥98	≥98
分解温度°C Decomposition°C	300	300	300	300	300
密度g/cm ³ , 25°C Density g/cm ³ , 25°C	1.35 ~ 1.85	1.35 ~ 1.85	1.35 ~ 1.85	1.45 ~ 1.65	1.35 ~ 1.85
含水率% Water Content%	0.2	0.2	0.2	0.2	0.2
pH	5.0 ~ 7.5	5.0 ~ 7.5	5.0 ~ 7.5	5.0 ~ 7.5	5.0 ~ 7.5
D ₅₀ um	≈3	/	≤3	≤3	≤3
D ₉₈ um	≤10	/	≤10	≤10	≤10
分散性 Dispersion	★★★	★★★★	★★★★★	★★★★★	★★★★★
推荐使用 Recommended Use	A/B/C	PA6/66	TPE/PE/EVA	PA6/66	TPE/TPU
可以使用 Can be Used	A/B/C	A/B/C	A/B/C	A/B/C	A/B/C

应用领域: A—热塑性材料 B—热固性材料及粘合剂 C—涂料涂层

Application Fields: A-Thermoplastic Material B-Thermosetting Material and Adhesive C-Coating



旭森阻燃剂·产品中心



高聚合聚磷酸铵 XS-APPII系列

High-polymerization Ammonium Polyphosphate XS-APPII Series

产品简介 Product Description

聚磷酸铵为磷氮复合型无卤环保阻燃剂。该产品为白色粉末，磷氮含量高，水溶性小，稳定性高，阻燃效果好。能与其它阻燃剂高效协同阻燃。

Ammonium polyphosphate is a phosphorus and nitrogen compounded, environmental-friendly halogen-free flame retardant. The product is a white powder with high phosphorus and nitrogen content, low water solubility, high stability and good flame retardant effect. It can be effectively cooperated with other flame retardants.

产品特点 Product Characteristic

我司拥有自主的聚磷酸铵合成技术，稳定性高、粘度低、分散性好、水溶性小，抗析出、耐迁移性能优异。聚合度高，高聚合分子量分布范围集中。

Our company has autonomous ammonium polyphosphate synthesis technology, which is with high stability, high viscosity, good dispersion, low water solubility, excellent precipitation resistance and migration resistance. The product is with high polymerization degree, the distribution range of high polymerization of molecular weight is concentrated.

技术参数 Technical Specification

特性 Characteristics	XS-APPII-040	XS-APPII-100	XS-APPII-200	XS-APPII-400D
磷含量% Phosphorus Content%	30.5~32.5	27.0~30.5	29.5~30.0	27.0~30.0
氮含量% Nitrogen Content%	14~15	14~17	13~15	13~15
白度 Whiteness	85	≥90	≥88	62~67
含水率% Water Content%	≤0.5	≤0.5	≤0.5	≤0.5
分解温度°C Decomposition°C	≥260	≥260	/	≥260
密度g/cm ³ , 25°C Density g/cm ³ , 25°C	1.9	1.9	1.9	1.9
堆积密度 Bulk Density	≈0.7	≈0.7	≈0.7	≈0.8
D ₅₀ um	18~25	10~20	10~20	≤25
PH	5.5~7.5	6.5~9.5	6.5~8.5	6.5~8.5
粘度MPa.s Viscosity MPa.s	≤100	≤50	≤50	/
水溶解度 Water Solubility	≤0.5	≤0.3	≤0.5	≤0.3
分散性 Dispersion	★★★★	★★★★	★★★★★	★★★★★
推荐使用 Recommended Use	涂料/热固性树脂/橡胶 Coating/ Thermosetting/ Rubber	涂料/热固性树脂/涂层 Coatings/ Thermosetting/ Coating	硅橡胶/涂层 Silicon Rubber / Coating	环氧树脂 Epoxy Resin
可以使用 Can be Used	A / B / C	B / C	B / C	B

应用领域：A—热塑性材料 B—热固性材料及粘合剂 C—涂料涂层

Application Fields: A-Thermoplastic Material B-Thermosetting Material and Adhesive C-Coating



旭森阻燃剂·产品中心



氢氧化铝 XS-ACW系列

Aluminum Hydroxide XS-ACW series

产品简介 Product Description

氢氧化铝具有阻燃消烟填充功能，无毒，对基材腐蚀性小，不产生二次污染。产品为白色粉末，弱酸性，难溶于水和醇，易溶于酸和强碱，分解温度200°C。

Aluminum hydroxide has the function of flame retardant and smoke suppression, which is non-toxic, less corrosive to the substrate, without producing secondary pollution. The product is a white powder, weak acidity, insoluble in water and alcohol, easily soluble in acid and strong alkali, and it is decomposed at 200°C.

产品特点 Product Characteristic

我司拥有自主的氢氧化铝表面改性处理技术，提高了产品的分散性、不易析出，有机聚合物相容性，降低了对基材的物理性能影响，并可根据用户需要进行改性处理。

Our company has autonomous aluminum hydroxide surface modification technology, which improves the product dispersion and organic polymer compatibility, low precipitation, reduces the impact on the physical properties of the substrate, and can be modified according to the needs of clients.

技术参数 Technical Specification

特性 Characteristics	XS-ACW-2	XS-ACW-5	XS-ACW-8	XS-ACW-10
外观 Appearance	白色粉末 White Powder	白色粉末 White Powder	白色粉末 White Powder	白色粉末 White Powder
Al(OH) ₃ 含量% Al(OH) ₃ content%	≥99.5	≥99.5	≥99.5	≥99.5
SiO ₂ 含量% SiO ₂ content%	≤0.08	≤0.05	≤0.05	≤0.05
Fe ₂ O ₃ 含量% Fe ₂ O ₃ content%	≤0.03	≤0.03	≤0.03	≤0.03
Na ₂ O含量% Na ₂ O content%	≤0.45	≤0.30	≤0.3	≤0.3
PH值 PH Value	7.5~10	7.5~10	7.5~10	7.5~10
灼烧减重% Loss at Ignition	34±1	34±1	34±1	34±1
白度 Whiteness	≥96	≥96	≥96	≥96
水含量% Water Content%	≤0.50	≤0.50	≤0.50	≤0.50
相对密度g/cm ³ Relative Density g/cm ³ , 25°C	2.4~2.45	2.4~2.45	2.4~2.45	2.4~2.45
D ₅₀ um	1~3	3~5	7~10	10~13
分散性 Dispersion	★★★★	★★★★	★★★★★	★★★★★
推荐使用 Recommended Use	环氧树脂、聚酯树脂、聚氨酯树脂、硅橡胶等热固性材料 PVC、PE、EVA等热塑性材料 Epoxy Resin, Polyester Resin, Polyurethane Resin, Silicone Rubber and Other Thermosetting Materials PVC, PE, EVA and Other Thermoplastic Materials			
可以使用 Can be Used	A/B			

应用领域：A—热塑性材料 B—热固性材料及粘合剂 C—涂料涂层

Application Fields: A-Thermoplastic Material B-Thermosetting Material and Adhesive C-Coating



旭森阻燃剂·产品中心



聚磷酸三聚氰胺 XS-MPP

Melamine Polyphosphate XS-MPP

产品简介 Product Description

三聚氰胺聚磷酸盐 (MPP) 是一种高效氮磷膨胀型阻燃剂。该产品具有热稳定性高、水溶性低、不析出、阻燃性能优异等特点。

XS-MPP is a nitrogen and phosphorus compounded intumescent flame retardant. This product has the characteristics of high thermal stability, low water solubility, no precipitation, excellent flame retardant efficiency, etc.

产品特点 Product Characteristic

本品可用于高温尼龙、玻纤增强尼龙 6/尼龙 66/PBT、聚氨酯及纤维织物等材料的阻燃改性/后处理等，也可以与其他材料配合使用，得到最佳的阻燃效果。

XS-MPP can be used for flame retardant modification/post treatment of high temperature nylon, glass fiber reinforced PA6/ 66, PBT, PU and textiles. Also as a synergic agent with other flame retardant to obtain better flame retardancy.

技术参数 Technical Specification

特性 Characteristics	指标 Value
外观 Appearance	白色粉末 White Powder
N含量 (%) N Content (%)	42.0~44.0
P含量 (%) P Content (%)	12.0~14.0
水份 (%) Water Content%	≤0.5
pH值 pH Value	4.5~6.5
溶解度 (20℃) Solubility (20℃)	≤0.05
1%分解温度 (℃) 1% Decomposition Temperature (℃)	≥320



旭森阻燃剂·产品中心



焦磷酸哌嗪 XS-PPAP系列

Piperazine Pyrophosphate XS-PPAP Series

产品简介 Product Description

焦磷酸哌嗪是一种高效氮磷膨胀型阻燃剂，可用于多种树脂基体材料，如均聚PP、共聚PP、玻纤增强PP、HDPE、LDPE、EPDM、TPE、EVA等，可明显提升阻燃性能。

Piperazine Pyrophosphate (XS-PPAP), is an efficient P & N compounded intumescent flame retardant. It could be used for kinds of resin materials, such as homo-PP, Co-PP, Fiberglass reinforced PP, HDPE, LDPE, EPDM, TPE, EVA, etc., could improve flame retardant performance obviously.

产品特点 Product Characteristic

焦磷酸哌嗪成碳性好，可与多种阻燃剂复配使用，热分解温度高，稳定性好，可适用于多种树脂加工成型，燃烧时烟释放量小，因此得到各个行业的广泛应用。

Piperazine pyrophosphate has good char formation properties and can be used in combination with multiple flame retardants. It has high thermal decomposition temperature and good stability. It can be applied to a variety of resin processing and molding, and the amount of smoke emission during combustion is small, so it is widely used in various industries.

技术参数 Technical Specification

特性 Characteristics	XS-PPAP-100	XS-PPAP-200
外观 Appearance	白色粉末 White Powder	白色粉末 White Powder
N含量 (%) N Content (%)	10.0~12.0	10.0~12.0
P含量 (%) P Content (%)	23.0~25.0	23.0~25.0
挥发份 (%) Volatile Matter (%)	≤0.5	≤0.5
白度 Whiteness	≥90	≥90
pH值 pH Value	3~5	3~5
溶解度 (20°C) Solubility (20 °C)	6~15	6~10



旭森阻燃剂·产品中心



硼酸锌 XS-ZB系列

Zinc borate XS-ZB Series

产品简介 Product Description

硼酸锌是一种环保型无机阻燃剂。最常用的品种为3.5水硼酸锌，分子量为：434.62，白色三斜晶或无定形粉末，微溶于水，晶体不溶于盐酸，无定形粉末则溶于盐酸。

Zinc borate is an environmental friendly inorganic flame retardant. The most commonly used product is 3.5 water zinc borate, the molecular weight is: 434.62, which is white triple oblique crystal or amorphous powder, slightly soluble in water, the crystal is insoluble in hydrochloric acid, the amorphous powder is soluble in hydrochloric acid.

产品特点 Product Characteristic

我司出品的硼酸锌，具有无毒、低水溶性、高热稳定性、超微粒径、分散性优异等特点，与其它阻燃剂复配具有良好的消烟、协效作用。

The zinc borate produced by our company has the characteristics of non-toxic, low water solubility, high thermal stability, ultra-fine size and excellent dispersion, and it has good smoke suppression and synergistic effect by compounding with other flame retardants.

技术参数 Technical Specification

特性 Characteristics	XS-ZB-2335	XS-ZB-2335A
外观 Appearance	白色粉末 White Powder	白色粉末 White Powder
ZnO 含量 (%) ZnO Content%	37~40	37~40
B ₂ O ₃ 含量 (%) B ₂ O ₃ Content%	45~48	45~48
水份 (%) Water Content%	≤0.5	≤0.5
灼烧减重 (%) Loss at Ignition	13.5~15.5	13.5~15.5
电导率 (us/cm) Conductivity (us / cm)	≤2000	≤3000
1%分解温度 (°C, N ₂ 氛) 1% Disposition Temperature (°C, N ₂ atmosphere)	> 300	> 300
平均粒径D ₅₀ (um) Average Particle D ₅₀	3~5	3~5
推荐使用 Recommended Use	PVC、PE、EVA、PP、增强聚酰胺、聚苯乙烯、环氧树脂、天然橡胶、苯乙烯丁二烯橡胶、氯丁橡胶 PVC、PE、EVA、PP、reinforced polyamide, polystyrene, epoxy resin、natural rubber, styrene butadiene rubber, neoprene	
建议用量 Suggested Dosage	作阻燃剂或阻燃协效剂使用，建议用量为材料质量的2~15%左右。其他用途用量2~30%不等。 For flame retardant or synergist use, the recommended dosage is about 2~15% of the material quality. Dosage for other uses range from 2 to 3%.	



旭森阻燃剂·产品中心



有机次磷酸铝 XS-FR-T310系列

Organic subaluminum-phosphate XS-FR-T310 series

产品简介 Product Description

XS-FR-T310系列是含有机磷酸盐结构的无卤环保阻燃剂，白色粉末。

The XS-FR-T310 series is a kind of environmental friendly, halogen-free flame retardants containing organ phosphonate white powder.

产品特点 Product Characteristic

具有很高的耐热稳定性。可广泛应用于热塑性材料、热固性树脂及各类复合材料中等，阻燃效能高，且对制品的力学性能影响小，阻燃制品还具有密度小、发烟量低、电性能优异等特点。

It has a very thermal stability, which can be widely used in thermoplastic materials, thermosetting resin and all kinds of composite materials, with high flame retardant efficiency and less impact on the mechanical properties of products, the final products also have the characteristics of small density, low smoke capacity, excellent electrical performance, etc.

技术参数 Technical Specification

特性 Characteristics	XS-FR-T310	XS-FR-T315	XS-FR-T315A
外观 Appearance	白色粉末 White Powder	白色粉末 White Powder	白色粉末 White Powder
磷含量% Phosphorus Content%	≥23	≥23	≥23
相对密度g/cm ³ Relative Density g/cm ³	1.35	1.35	1.35
堆积密度g/cm ³ Bulk Density g/cm ³	0.48	0.45	0.45
1%热分解温度°C 1%Decomposition Temperature °C	≥350	≥350	≥360
挥发份% Volatile Matter %	≤0.50	≤0.50	≤0.50
D ₅₀ um	≤40	≤6	≤6
分散性 Dispersion	★★★★★	★★★★★★	★★★★★★
推荐使用 Recommended Use	PA66、PBT、 PET	TPE、TPV、 PE/EVA、 EP、PA66/6、 PBT/PET	TPE、TPU、 PE/EVA、 橡胶、 热固性树脂、 粘合剂 Rubber, Thermosetting Resin, Adhesive



旭森阻燃剂·产品中心



耐高温无卤阻燃剂 XS-FR-T800

High Temperature Resistant halogen-free Flame Retardant XS-FR-T800

产品简介 Product Description

XS-FR-T800是一种以磷为阻燃元素的无卤环保阻燃剂，主要以气相阻燃机理发挥阻燃效果，具有很高的耐热稳定性，且析出性和腐蚀性低。

XS-FR-T800 is a non-halogen environmental friendly flame retardant with phosphorus as the flame retardant element. It mainly uses the gas phase flame retardant mechanism to exert the flame retardant effect, has high heat resistance stability, and has low migration and corrosion.

产品特点 Product Characteristic

XS-FR-T800广泛应用于各类改性材料中，但主要推荐用于PET的纤维、薄膜制品中，对制品的力学性能和透明度影响小。也可与其他无卤阻燃剂协同使用，用于PA46、半芳香尼龙（PPA，PA9T）、PPS等高温工程塑料中。

XS-FR-T800 is mainly used in various modified materials, but strongly recommended used in PET fiber and film products, and has less effect on the mechanical properties and transparency of the product. It can also be used in compositing with other non-halogen flame retardants for high temperature engineering plastics such as PA46, semi-aromatic nylon (PPA, PA9T), and PPS etc.

技术参数 Technical Specification

特性 Characteristics	指标 Value
外观 Appearance	白色粉末 White Powder
磷含量% Phosphorus Content%	≥10
密度g/cm ³ Density g/cm ³	~1.3
1%分解温度℃ Decomposition Temperature	> 350
熔程℃ Dissolution Range °C	110 ~ 150
挥发份% Volatile Matter%	< 0.5

使用说明 Instruction

本手册中的产品容易受潮，应放置于阴凉、干燥处，包装受损尽快使用。

如发现破包或受潮，100℃±10℃下干燥2小时后使用。

以上技术参数为参考值，实际技术参数以出厂COA或技术协议为准。

应用指南和案例中的数据仅供参考，不作为产品质量标准。

This product is prone to moisture. It should be placed in a cool, dry place, and need to use it as soon as possible when opened.

If broken or damp, dry at 100°C±10°C for 2 hours before use.

The above technical parameters are the reference value, and the actual technical parameters shall be subject to the factory COA or the technical agreement.

The data and information in the application guidelines and cases are for reference only and are not used as a product quality standard.

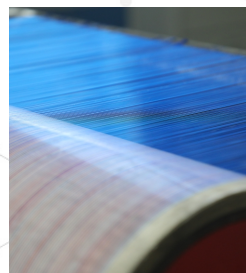
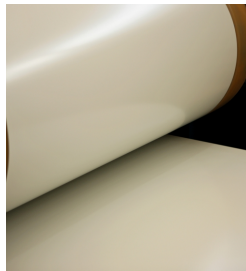
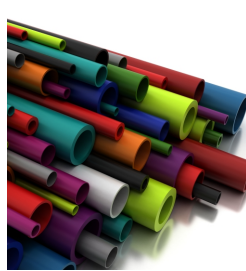


旭森阻燃剂·产品中心

应用案例

Application Case

Version 202212



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