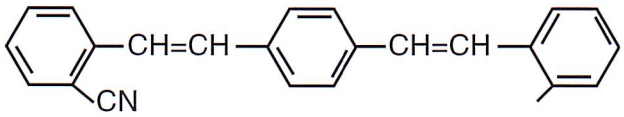
(I) ER–Series Fluorescent Whitening Agent for Plastic Chemical Fiber

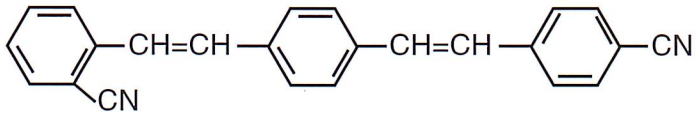
Currently,ER–series fluorescent whitening powder is being widely used at home and abroad for whitening plastic chemical fiber,adn especially in printing and dyeing industry, it has become a quality and high–efficient type of fluorescent whitening agent for polyester The eyano group contained in the product structure is capable of constituting 6 different isomers at different ortho–position, para–position, and meta–position. Meanwhile, the isomers are mutually compounded or compounded with fluorescent whitening agents of other structures, which will generate several dozens of high–quality compound–type whitening products.

ER–series fluorescent whitening powder is the typical representative of toluylene–type whitening agent, and its six isomers are shown as follows:

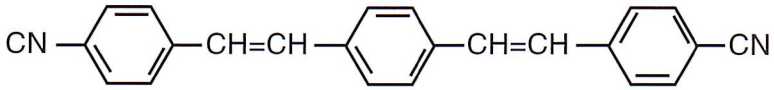
(1) 1,4–bis(2–cyano styryl)benzene



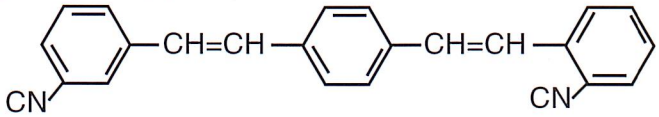
(2) (2–cyano styryl–4–para–cyano styryl)benzene



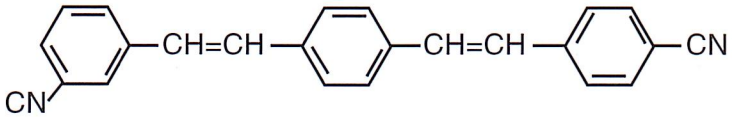
(3) 1,4–bis(para–cyano styryl)benzene



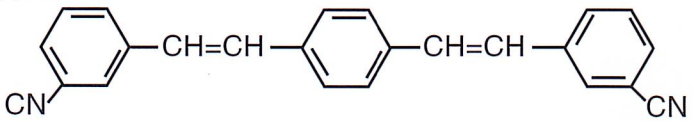
(4) (ortho–cyano styryl–meta–para–cyano styryl)benzene



(5) (para–cyano styryl–meta–cyano styryl)benzene



(6) 1,4–bis(meta–cyano styryl)benzene



The molecular formula, molecular weight, and effective content of the aforesaid six isomers are basically the same, but their appearance and melting point are different from each other.

[Purpose] It is mainly used for whitening and brightening polyester fiber, especially polyester staple fiber and polyester fabric; at the same time, it is especially suitable for whitening and brightening various kinds of plastic products, cellulose acetate fiber,polypropylene fiber, and etc.

[Application method] General use quantity of the agent for whitening polyester fiber is 100–300ppm(0.01–0.03%, relative to weight of material to be whitened).

Particular operation methods are given as follows:

Before drawing fiber, remove the sundries in polyester chips (or plastic substrates); weigh the materials and add them to the melting tank; raise the temperature to 120–130℃; vacuumize the tank to remove the moisture contained in materials; stop vacuumizing; add KB–199 whitening powder to the chips according to 150–300/ton (the quantity varies with different needs for whiteness); fully mix them, so that the dry powder could be uniformly absorbed on the surface of materials. Whem necessary, you may uniformly mix the dry powder with some titanium dioxides (rutile type) according to the ratio of 1:2 or 1:3 and then add them to the polyester chips; also, you may separately add them in the chips. When regulating colored light, you may uniformly mix whitening powder with some BEZ (0.1–0.5‰ of the polyester chips) and then add them to the polyester chips. Make the agents be fully mixed with the materials and absorbed on the surface of materials. Later, raise the temperature to 240–280℃, so that the dry powder and additives will be fully melted and mixed with polyester chips. Last, carry our fiber drawing.

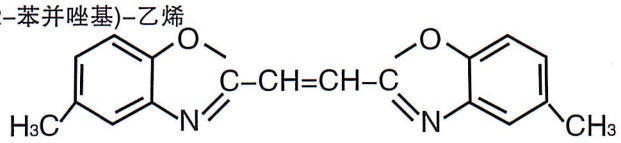
When making whitening master batch chips or bubble materials, you may use the KB–199 whitening powder which has a good whitening effect. When making master batches, the use quantity for each ton of materials will be larger than that in the state of polyester drawing; the general use quantity is 1–10% (relative to weight of materials to be whitened); the temperature shall be high enough to melt the polyester chips; it' s better to control the temperature at 240–280℃; and it' s better to the shorten the time. The use quantity in making bubble materials is almost the same as that in making master batch chips, and the formula may be prepared by referring to that when master batch chips are made; the temperature shall not be lower than 240℃ in general, and the time shall not be less than 30s.

(二)荧光增白剂PF

化学名称： 1,2-双(5-甲基-2-苯并唑基)-乙烯

物化性能：

【结构式】



【分子式】C18H14N2O2　【分子量】290

【C.I.号】135　【CAS号】12224-12-3

【外 观】黄色结晶粉末

【含 量】≥98%

【熔 点】182-184℃

【用 途】本品对涤纶聚酯纤维在较低温下增白效果良好，制成浆液产品广泛应用于印染行业，具有优良的日晒牢度和耐氯漂性能。同时对PE、PP、PS、ABC、PVC等塑料制品有优良的增白增亮作用，特别适用于中低温(130-180℃)时的塑料增白增亮。亦对涂料、油墨、油漆等良好增白效果。

应用方法：

1.根据白度要求不同，一般用量为0.01-0.05%(相对增白重量)。

2.增白应用的温度与时间(30分钟160℃，1分钟180-190℃)。

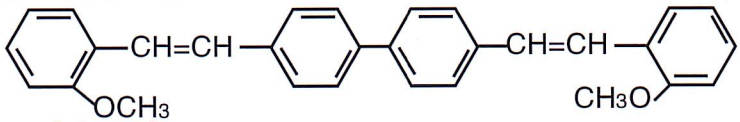
3.本品可采用增塑剂溶解，再经三辊磨研成悬浮液，将悬浮液均匀加入塑料中，在合适温度(150-180℃)下成型即可增白。

(三)荧光增白剂FP-127

化学名称： 4,4-双(邻甲氧基苯乙烯基-)联苯

物化性能：

【结构式】



【分子式】C30H26O2　【分子量】418

【C.I.号】378　【CAS号】40470-68-6

【外 观】乳白带绿色结晶粉末

【含 量】≥98%

【熔 点】216-218℃

【特 点】①用量少、白度高、色光纯正，耐热性能优异；且有很高的耐迁移牢度。

②对人造革制品的增白增艳效果特别理想，且长期存放不泛黄、不退色。

③对聚氯乙烯PVC和聚酯乙烯PS有很好的配伍性和优异的增白效果。

④本产品毒性极低，可用于食品包装用塑料制品及儿童玩具用品增白。

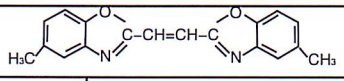
【用 途】适用于各种塑料制品的增白增亮；亦可用于涂料、油墨、合成纤维等的增白增亮(如尼龙纤维增白的日晒牢度很好)；还可以用于家电产品、电子产品及包装材料等。

应用参考用量：

物料类别	增白透明用量(每100公折物料加入FP-127增白剂)	
	增白	透明
聚氯乙烯(PVC)	10-50克	0.1-1克
聚苯乙烯(PS)	10-50克	0.1-1克
ABS	10-50克(消除ABS中固有的黄色)	
其他塑料	增白增艳0.04-0.05%(相对物料重)	

(II) Fluorescent Whitening Agent PF

Chemical name: 1,2–bis (5–methy–2–benzoxazole)–ethylene
Physical and chemical properties

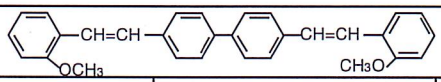
[Structural formula]			
[Molecular formula]	C18H14N2O2	[Molecular Weight]	290
[C.1.No.]	135	[CAS No.]	12224–12–3
[Appearance]	Yellow crystal powder		
[Content]	⩾98%		
[Melting point]	182–184℃		
[Purpose]	The product has good effect in whitening polyester fiber under low temperature. The liquid products made of it are widely used in printing and dyeing industry. It has excellent fastness to light and chlorine–resistant property, It also has good effect in whitening plastic products such as PE, PP, PS, ABC, and PVC, especially plastics under low and middle temperature (130–180℃), as well as coating, printing ink, and print.		

Application method:

1.(relative to weight of materials to be whitened)
2. Temperature and time (30 minutes, 160℃; one minute, 180–190℃)
3. The product may be firstly dissolved by using plasticizer, and then grinded into suspension liquid by triple–roller mill.Uniformly add the suspension liquid to plastics which will be whitened under proper thmperature(150–180℃).

(III) Fluorescent Whitening Agent FP–127

Chemical name: 4,4–bis (o–methoxy–styryl)–biphenyl
Physical and chemical properties

[Structural formula]			
[Molecular formula]	C30H26O2	[Molecular Weight]	418
[C.1.No.]	378	[CAS No.]	40470–68–6
[Appearance]	Miik white green crystal powder		
[Content]	⩾98%		
[Melting point]	216–218℃		
[Features]	① Fewer consumption, high whiteness, pure colored light, excellent heat–resistant performance,and high anti–migration fasthess; ② Extremely good effect in whitening artificial leather products; free from yellowing and fading after long–term storage; ③Compatible with and excellent effect in whitening PVC and PS; ④ The product has low toxicity, and can be sued for whitening plastic products for food packaging and toys for children.		
[Purpose]	It is used for whitening and brightening various plastic products, coating, printing ink, synthetic fiber (good fastness to light for nylon fiber after it is whitened), household electrical appliances, electronic products, packing materials, and etc.		

Recommended use quantity:

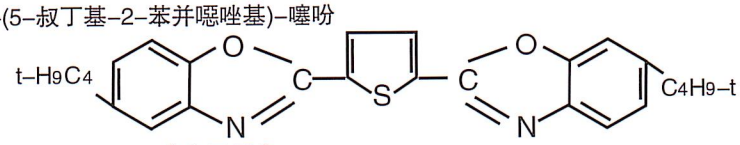
Material category	Use quantity for whitening and making materials transparent (FP–127 whitening agent for every 100kg of materials)	
	Whitening	Making materials transparent
Polyvinyl chloride (PVC)	10–50g	0.1–1g
Polystyrene (PS)	10–50g	0.1–1g
ABS	10–50g (remove the inherent yellow of ABS)	
Other plastics	Whitening and brightening: 0.01–0.05% (relative to weight of materials to be whitened of brightened)	

(四)荧光增白剂OB

化学名称： 2,5-双-(5-叔丁基-2-苯并噁唑基)-噻吩

物化性能：

【结构式】



【分子式】C26H26N2O2S 【分子量】430

【C.I.号】184 【CAS号】7128-64-5

【外 观】乳白色结晶粉末

【含 量】≥98%

【熔 点】198-201℃

【用 途】广泛应用于PE、PP、PS、ABS、PVC、SAN、SB、CA、PA、PMMA等塑料的各个品种，同时对聚酯纤维、醋酸纤维、尼龙纤维、人造纤维、油漆、油墨、涂料等的增白效果非常优良。还对家用电器、电子产品等都有非常优异的效果。

另：OB-C为黄色粉末，主要用于不透明的聚氯乙烯(PVC)塑料增白。

OB-P为黄色粉末，主要用于增塑聚氯乙烯(PVC)。

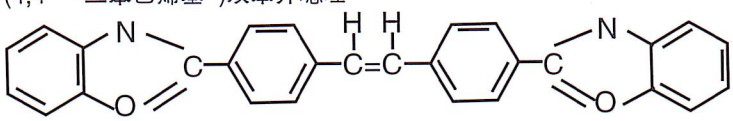
物料类别	增白用量(每100公斤塑料原料加入量)	
	增白	透明
聚烯烃	10-50克	0.1-1克
聚氯乙烯(PVC)	10-50克	0.1-1克
聚苯乙烯(PS)	10-50克	0.1-1克
ABS	10-50克	0.1-1克

(五)荧光增白剂OB-1

化学名称： 2,2'-(4,4'-二苯乙烯基-)双苯并噁唑

物化性能：

【结构式】



【分子式】C28H18N2O2S 【分子量】414

【C.I.号】393 【CAS号】1533-45-5

【外 观】黄绿色粉末

【含 量】≥98%

【熔 点】358-360℃

【特 点】①本品是目前所有增白剂产品中耐热最好的，可耐375℃高温，其粉状产品在300℃以上处理8小时而不分散。特别适合用于高熔点工程塑料(如聚砜树脂)的增白加工。

②本品化学稳定性很好，可耐热、耐光、耐氯漂、耐强酸强碱。

③本品与塑料中的其他添加剂有优良的相容性，适应性强、分期性好。

④本品毒性极低，可用于食品包装用塑料制品和儿童玩具的增白。

【用 途】用于聚酯纤维、尼龙纤维、丙纶纤维等化纤的增白；非常适于各种塑料制品的增白增亮(如PE、PP、PC、PA、PVC、ABS、HDPE、EVA等)。

应用参考用量：

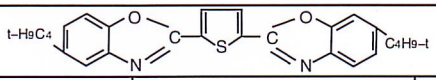
本品可单独使用，也可与ER、PF、OB、EBF、127等复配使用，从而达到更理想效果，且可降低成本。

物料类别	增白用量(每100公斤塑料原料加入量)	
	增白	透明
硬质聚氯乙烯(PVC)	10-50克	0.1-1克
聚苯乙烯(PS)	10-50克	0.1-1克
聚氯乙烯(PVC)	10-50克	0.1-1克

(IV) Fluorescent Whitening Agent OB

Chemical name: 2,5–bis–(5–tertiary butyl–2–benzoxazolyl) thiophene

Physical and chemical properties

[Structural formula]			
[Molecular formula]	C26H26N2O2S	[Molecular weight]	430
[C.1.No.]	184	[CAS No.]	7128–64–5
[Appearance]	Milk white crystal powder		
[Content]	⩾98%		
[Melting point]	198–201℃		
[Purpose]	The product is widely used for whitening various plastic products involving PE, PP, ABS, PVC, SAN, SB, CA, and PA; it has excellent effect in whitening products such as polyester fiber,cellulose acetate fiber,nylon fiber,artificial fiber, paint, printing ink, and coating; it also has good effect in whitening household appliances and electronic products. In addition, OB–C is yellow powder, mainly used for whitening non–transparent PVC plastics; OB–P is yellow powder, mainly used for plasticizing PVC.		

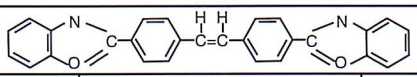
Recommended use quantity:

Material category	Quantity for whitening (quantity for every 100kg of plastic raw materials)	
		Making materials transparent
Polyolefin	10–50g	0.1–1g
Polyvinyl chloride (PVC)	10–50g	0.1–1g
Polystyrene (PS)	10–50g	0.1–1g
ABS	10–50g	0.1–1g

(V) Fluorescent Whitening Agent OB–1

Chemical name: 2,2' –(4,4' –2–styryl–) bisbenzoxazole

Physical and chemical properties

[Structural formula]			
[Molecular formula]	C28H18N2O2	[Molecular Weight]	414
[C.1.No.]	393	[CAS No.]	1533–45–5
[Appearance]	Yellow powder		
[Content]	⩾98%		
[Melting point]	358–360℃		
[Features]	① The product has the best heat–resistant performance among all current whitening agents; it is istant to the temperature of 375℃; its powder products will not disperse after processed under the temperature of 300℃ for 8 hours; it is especially suitable for whitening engineering plastics with high melting points (for example, polysulfone resin). ② The product has good chemical stability; it is resistant to heat, light, chlorine bleaching, strong acid, and strong alkali. ③ The product is compatible with other add itives in plastics, with good adaptability and dispersity. ④ The product is low in toxicity, used for whitening plastic products for food packaging and toys for children.		
[Purpose]	It is used for whitening such fibers as polyester fiber, nylon fiber, and polypropylene fiber; it is extraordinarily suitable for whitening and brightening various plastic products, such as PE, PP, PA, PVC, ABC, HDPE, and EVA.		

Recommended use quantity:

The product can be used separately, or used with ER, PE, OB, EBF, and 127 to realize ideal effect and reduce the cost.

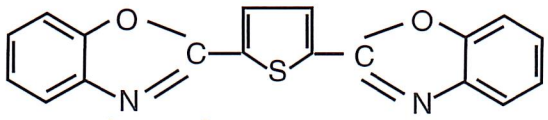
Material category	Quantity for whitening (quantity for every 100kg of plastic raw materials)	
	Whitening	Making materials transparent
Rigid polyvinyl chloride (PVC)	10–60g	0.1–1g
Polystyrene (PS)	10–60g	0.1–1g
Polyvinyl chloride (PVC)	10–60g	0.1–1g

(六)荧光增白剂BC-185(EBF)

化学名称： 2,5双-(苯并噁唑-2-基)噻吩

物化性能：

【结构式】



【分子式】C18H10N2O2S 【分子量】318

【C.I.号】185 【CAS号】12224-41-8

【外 观】乳白色结晶粉末

【含 量】≥98%

【熔 点】216-220℃

【特 点】①耐日晒牢度可达7-8级。
②耐水洗牢度、耐氯氯漂性能优异。
③耐硬水、耐碱性能优异。
④非常容易与其他结构增白剂复配使用。

【用 途】本品是目前国内外使用较普遍的涤纶增白剂，产品分为粉型和浆液型两种形态。粉型产品非常适于各类塑料制品(PE、PP、PS、ABS、PVC、PMMA等)的增白增艳，以及涂料、醋纤、棉纶、氯纶等的增白。浆液型产品在印染行业中常以10%含量应用，适合浸染、轧染工艺。

EBF(浆液)对涤纶或涤纶与纤维混纺产品增白，可采用高温高压浸染法或低温吸附固着法或轧染法。一般用量为0.2-0.8%(o.w.f)。

EBF(粉型)对塑料制品及短化纤增白增艳有优良的效果，用量为0.02-0.05%(相对物料重)。

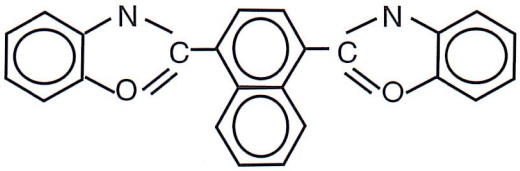
(七)荧光增白剂BC-367(KCB)

化学名称： 1,4-双(苯并噁唑-2-基)萘

物化性能：

【分子式】C24H14N2O2 【分子量】362

【CAS号】5089-22-5 【结构式】



【C.I.号】367

【外 观】黄绿色粉末

【含 量】≥98%

【熔 点】210-212℃

【用 途】本品是目前众多荧光增白剂中特优级产品之一，具有极强的增白效果，色光为鲜艳的亮蓝色。主要应用于塑料及合成纤维制品的增白，对有色塑料制品也有明显的增艳效果。还大量应用于乙烯/醋酸乙烯(EVA)共聚物中，是运动鞋鞋底增白增亮首选品种。本品也广泛应用二PE、PS、ABS、PVC等通用塑料、成型材料、注塑成型材料及聚酯纤维等。且对涂料、天然漆的增白也有显著效果。

应用参考用量：

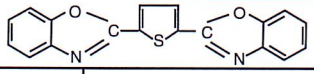
对塑料或树脂而言，一般用量为0.01-0.05%(即每公斤塑料原料中添加BC-367增白剂10-50克左右)。用户也可也根据白度要求高速具体用量，若在塑料基材中添加有紫外线吸收剂、钛白粉等，则应适当调整增白剂的最佳用量(一般情况增白剂用量须稍增加一些)。

	增白参考用量(每100公斤塑料原料加入量)					
类别	PE	PP	PS	PVC	ABS	EVA
用量(克)	10-25	10-25	10-20	10-30	10-30	10-30

若用于透明塑料薄膜时，增白剂参考用量为1-10克/100公斤塑料基材。

(VI) Fluorescent Whitening Agent BC–185 (EBF)

Chemical name: 2,5–bis–(benzoxazo–2–yl) thiophene
Physical and chemical properties

[Structural formula]			
[Molecular formula]	C18H10N2O2S	[Molecular weight]	318
[C.1.No.]	185	[CAS No.]	12224–41–8
[Appearance]	Milk white crystal powder		
[Content]	⩾98%		
[Melting point]	216–220℃		
[Features]	① The degree of fastness to light resistance mary reach level 7 to level 8. ② It is excellent in resistance to washing and chlorine bleaching. ③ It has excellent property in resistance to hard water and alkaline. ④ It is compatible with whitening agents of other structures.		
[Purpose]	The product is a kind of whitening agent for polyester commonly used at home and abroad, including two types(powder type and liquid type). The powder products are very suitable for whitening and brightening various plastic products, such as PE, PP, PS, ABS, PVC, and PMMA, as well as whitening coating, acetate fiber,chinlon, and polyvinyl chloride fiber. The liquid products are generally used in dyeing and printing industry with the content of 10%, suitable for such processes as dip dyeing and pad dyeing.		

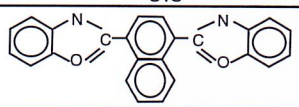
Recommended use quantity:

EBF(liquid type) is used for whitening polyester or blending products of polyester and fiber. Methods like high temperature and high pressure dip dyeing method, low temperature absorption setting method, and pad dyeing method may be used. In general, the use quantity is 0.2–0.8%(o.w.f).

EBF(powder type) has excellent effect in whitening and brightening plastic products and staple fiber, and the use quantity is 0.02–0.05%(relative to weight of materials to be whitened).

(VII) Fluorescent Whitening Agent BC–367 (KCB)

Chemical name: 1,4–bis–(benzoxazolyl–2–yl) naphthalene
Physical and chemical properties

[Molecular formula]	C24H14N2O2	[Molecular weight]	318
[CAS No.]	5089–22–5	[Structural formula]	
[C.1. No.]	367		
[Appearance]	Yellowgreen powder		
[Content]	⩾98%		
[Melting point]	210–212℃		
[Purpose]	The product is one of the products at extra–excellent level among numerous fluorescent whitening agents,having extremely strong effect in whitening, and its colored light is bright brilliant blue. It is mainly used for whitening plastic products and synthetic fiber products, also suitable for brightening colored plastic products. It is largely used in ethylene/EVA copolymer, being the firet cnoice for whitening sports shon sole. It is widely used for general–purpose plastics (such as PE, PP, PS, ABS, PVC), moulding materials,injection moulding materials, and polyester fiber. It has significant effect in whitening coating and natural paint.		

Recommended use quantity:

In terms of plastics or resin, the general use quantity is 0.01–0.05% (namely, 10–50g for every 100kg of plastic raw materials to be whitened). Users may also adjust the particular use quantity according to requirements on whiteness. If plastic materials are added with ultraviolet light absorber or titanium dioxide, the optimal use quantity may be properly adjusted (in general, the use quantity shall be increased).

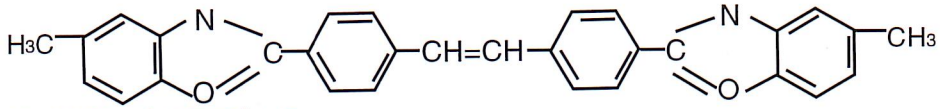
	Use quantity for whitening (quantity for every 100kg of plastic raw materials)					
Category	PE	PP	PS	PVC	ABS	EVA
Use quantity (g)	10–25	10–25	10–20	10–30	10–30	10–30

If the agent is applied to transparent plastic film, the recommended use quantity is 1–10g for every 100kg of plastic materials.

(八)荧光增白剂BC-368(KSN)

化学名称： 4,4'-双(5-甲基-2-苯并噁唑基)二苯乙烯

物化性能：

【结构式】 

【分子式】C30H22N2O2 【分子量】442

【C.I.号】368 【CAS号】5242-49-9

【外 观】黄色粉末

【含 量】≥98%

【熔 点】269-271℃

【特 性】本品属苯并噁唑类化合物，是目前众多荧光增白剂特优级产品这一，也是升级换代产品，具有用量极少，增白效果极佳的特性，有“增白王”之称。

本品色光蓝紫，相容性极佳，耐光及耐候性极佳。塑料类耐光色牢度为4-6级，涤纶纤维类可达6-7级。

适用于聚酯纤维、聚酰胺纤维、聚丙烯腈纤维的增白增亮；对各种塑料品种的增白效果很好；亦可用于涂料、油墨、油漆等材料的增白增艳；还可用于丝织品、毛织品的增白。

应用参考用量：

一般用量为0.01-0.03%(相对物料重)。

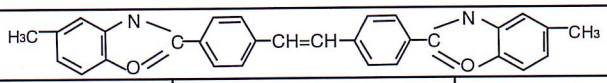
各种塑料制品增白增亮推荐用量为2-30克/100公斤塑料基材；透明塑料中推荐用量为0.5-3克/100公斤塑料基材。

适用工艺：挤压成型、注塑成型、拉膜等均适用。

(VI) Fluorescent Whitening Agent BC-368 (KSN)

Chemical name: 2,5-bis-(benzoxazole-2-yl) thiophene

Physical and chemical properties

[Structural formula]			
[Molecular formula]	C30H22N2O2	【Molecular weight】	442
[C.1.No.]	368	【CAS No.】	5242-49-9
[Appearance]	Yellow powder		
[Content]	≥98%		
[Melting point]	269-271℃		
[Purpose]	The product is a benzoxazole compound, being one of the extra-excellent fluorescent whitening agents, and an upgraded product. It features few consumption and excellent whitening property, praised as “King of Whitening Agents” . The colored light of the product is purple blue, with high compatibility and properties of light resistance and weather resistance. The color fastness to light is level 4 to level 6 for plastics, and level 6 to level 7 for polyester fiber. It is used for whitening and brightening polyester fiber, polyamide fiber, and polyacrylonitrile fiber; it has good effect in whitening various plastic products; it is used for whitening materials such as coating, pringting ink, and paint; it is also used for whitening silk fabrics and wool fabrics.		

In general, the use quantity is 0.01-00.3%(relative to weight of materials to be whitened).

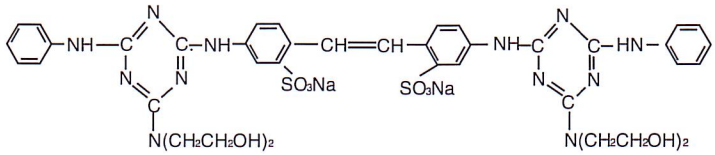
It is recommended to use 2-30g of agent to whiten or brighten 100kg of plastic products, and 0.5-3g of agent for whitening or brightening 100kg of transparent plastics.

It applies to processes like extrusion forming, injection moulding, anc film-drawing.

FLUORESCENT BRIGHTENER BA

C.I.113 CAS: 12768-92-2

STRUCTURE:



MOLECULAR FORMULA: C40H42N12O10S2Na2

MOLECULAR WEIGHT: 960.94 (As International relative Atom Mass 2005)

Max UV ABSORPTION WAVELENRHTH: 348 nm

EXCUTIVE STANDARD: HG/T3990-2007

SPECIFICATIONS:

ITEM	Indices
Appearance	light yellow uniform powder
E11(UV absorption)	350 ± 10
Color Shade	Similar to slightly Different
Moisture content	≤ 5%
Content of water-insoluble impurities	≤ 0.2%
Fineness(residual content passed through 180 μ m-pore sieve)	≤ 10%

PROPERTIES:

The product is readily soluble in water, acid-resistant, alkali-resistant, and has much better whitening effect than VBL at pH 4.5-7. Belonging to anionic type, it can be used in the one bath with anionic or nonionic surfactants.

APPLICATIONS:

Mainly applied to whiten paper pulp, surface sizing, coating, and also applied to whiten cotton, linen and cellulose fiber as well as cellulose fabrics, and to brighten light-colored cellulose fabrics.

USAGE:

1. Being used in paper-making industry, add them into the paper pulp, coating solvent and surface gluing solvent after dissolving with the 20 times water. usual dosage: 0.1-0.3% on dry pulp or dry dope.

2. When whitening of the cotton, hemp or cellulose, directly adding the fluorescent brightener dissolved with water into the dye vat, the dosage:0.08-0.3%, bath ratio:1:20-40, the dying temperature:60-100℃.

PACKAGE: Packed in cardbard bucket or plastic coating paper sack after being packed in plastic bag either 25 Kg or 50Kg per bucket or sack.

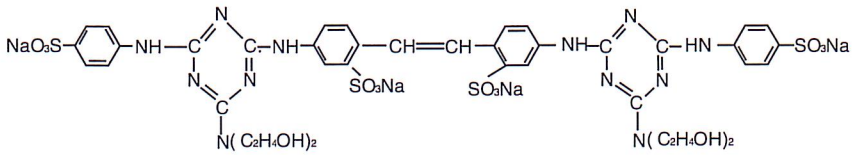
TRANSPORTAION: Should be handle carefully,avoid sunlight and moisture.

STORAGE: Should be stored in cool, dry and ventilate place, and storage peroid should not exceed 2 years.

FLUORESCENT BRIGHTENER BBU

C.I.220 CAS: 16470-24-9

STRUCTURE:



MOLECULAR FORMULA: $C_{40}H_{42}N_{12}O_{16}S_4Na_4$

MOLECULAR WEIGHT: 1165.12 (As international relative Atom Mass 1997)

Max UV ABSORPTION WAVELENRHTH: 350 nm

CHARACTER: Show anionic character and optical blue color

EXCUTIVE STANDARD: HG/T3727-2003

SPECIFICATIONS:

Item	Indices
Appearance	Light yellow uniform powder
Fluorescent strength (equivalent to the standard sample)	100
Color Shade	Similar to standard sample
Whiteness (the deviation with the standard sample)	≤ -3
Moisture content	≤5.0%
Content of water-insoluble impurities	≤0.5%
Fineness(residual content passed through 250 μ m-pore sieve)	≤ 10%

PROPERTIES:

1. Good water solubility and can be dissolved in 3-5 times boiling water, and its solubility is 300 g per liter in boiling water and 150g per liter in cooling water.
2. Good resistance to hard water, the ions of Ca2+ and Mg2+ have no influence on its whitening effect.
3. Good resistance to peroxide bleach agent and containing reductive bleaching agent (sodium hydrosulfite).
4. General acid-resistance and the optimal applied pH value>

USAGE:

1. Used for cotton fiber and glue fiber.
2. Used in the syrup of discharge pattern of printing color.
3. Used in paper pulp.
4. Used in the process of surface gluing.
5. Used in the process of coating.

PROCESS:

Bath temperaure is about 95-98℃,holaing time is about 10-20 minutes, bath ratio is 1:20, vapor steaming about 45 minutes, the dosage is 0.1-0.5%.

PACKAGE: Packed in cardboard bucket after being firstly packed in plastic bag. Net weight per bucket is 25 kg or 50 kg.

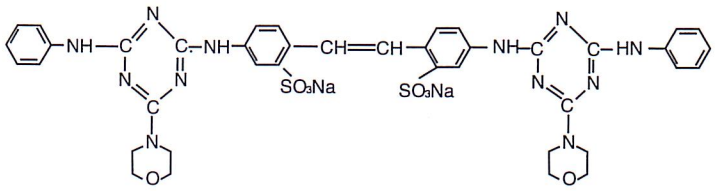
TRANSPORTAION: Should avoid sunlight and crash.

STORAGE: Should be stored in cool, dry and ventilate place, and storage period should not exceed 2 years.

FLUORESCENT BRIGHTENER CXT

C.I.71 CAS: 16090-02-1

STRUCTURE:



MOLECULAR FORMULA: $C_{40}H_{38}N_{12}O_8S_2Na_2$
MOLECULAR WEIGHT: 924.91 (As international relative Atom Mass 2005)
Max UV ABSORPTION WAVELENRHTH: 350 nm
EXCUTIVE STANDARD: HG/T3675-2007
SPECIFICATIONS:

ITEM	Indices
Appearance	White or light yellow even powder
E11(UV absorption)	370 ± 10
Whitening strength	100 ± 10
Color Shade	Similar
Moisture content	≤ 5.0%
Content of water-insoluble impurities	≤ 0.5%
Stacking density (g/cm3)	≤ 0.5%

PROPERTIES:

Optical Brightener CXT is regarded as one of the perfect agent used in detergent industry, Owing to introducing the morpholine group into the molecular, the properties such as acid and perborate resistance be improved. It can be used in the whitening of cellulose fiber, polyamide fiber and fabrics, showing anionis characters and has optical blue color. It has better resistance to chloride bleaching than VBL and 31#, the most favorable dyeing bath pH value is 7-10. Its sunlight fasthess is 4 grades. The most advantage used in detergent industry is its high matching capacity, high accumulated washing whitening effect. So it can meet the requirements of any matching capacity in detergent industry.

APPLICATION:

1. Used in detergent industry, for the synthetic detergent, toilet soap and soap.

2. Used in the fabric of cotton fiber, nylon, etc,taking on excellent whitening effect on artificial fiber, polyamide, vinylon,also has good whitening effect on protein fiber, amino plastics.

PROCEDURE:

Optical brightener DMS has less solubility than VBL and 31#, it can be soluble in hot water and form abut 10% suspension liquid. The liquid should be used immediately when ready and avoid sunlight. The dosage used is 0.1-0.5% in detergent industry and 0.1-0.3% in dyeing industry.

PACKAGE:

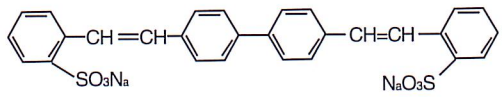
Packed in cardboard bucket or cardboard box after being firstly packed in plastic bag. Net weight per bucket is 20 kg or 25 kg.

TRANSPORTATION: Should avoid sunlight and crash.
STORAGE: Should be stored in cool, dry and ventilate place, and storage time should not exceed 2 years.

FLUORESCENT BRIGHTENER CBS-X

C.I. 351 CAS: 27344-41-8

STRUCTURE:



MOLECULAR FORMULA: $C_{28}H_{20}S_2O_6Na_2$

MOLECULAR WEIGHT: 562.60(As International relative Atom Mass 1997)

EXCUTIVE STANDARD: HG/T3726-2003

SPECIFICATIONS:

Item	Indices
Appearance	Pistachio granule
Smell	No special smell
Max UV absorption wavelength, nm	349 ± 1
Extinction value	0.829-0.885
1% Extinction coefficient	1105-1181

PROPERTY:

Optical Brightener CBS-X is a disulfonic distyrylbiphenyl compound, which is the most excellent brightener us ner used in detergent industry. It can soluble in water easily and has better whitener effect on cellulose fiber, polymide and protein fiber at room temperature. it has high brighten intensity on cotton cloth as much 2.7 times as bis (triazinylamino)stilbene derivatives, and has well optical blue color monitor, dissolve and disperse properties. It has extremely high stability with hypochlorite sodium; it is a bleaching resistant optical brightener.

APPLICATION:

Used in synthetic detergent industry and soap industry.

PROCEDURE:

1. It can be added in any procedurd of the production of synthetic detergent and soan. It can be obtainde excellent effect if used together with optical brightener 31#.

2. Recommended dosage:

Common washing powder: 0.005-0.03%

Concentrated washing powder:0.01-0.05%

Liquid detergent: 0.02-0.06%

Soap:0.01-0.05%

Soft agent of fabric fiber: 0.01-0.05%

Washing syrup: 0.005-0.02%

PACKAGE:

Packed per 25kg in cardboard bucket or cardboard box after being packed in plastic bag first.

TRANSPORTATION: Avoid inversion, sunlight, moisture and crash. Avoid damage the package.

STORAGE: Should be stored in cool, dry and ventilate place,and storage term should not exceed 2 years.

SOLVENT DYES

序号	产品名称	C.I.	CAS.号	HUE	主要应用
COLS1001	荧光黄8G	Solvent green 5	79869-59-3	Greenish yellow	PMMA.PS.SAN.UPVC.PETROLEUM.OIL
COLS1002	透明黄3G	Solvent yellow 93	4702-90-3	Yellow	PMMA.PETP.PS.SAN.UPVC.PETROLEUM.OIL
COLS1003	透明黄G	Solvent yellow 114	75216-45-4	Greenish yellow	PMMA.PETP.PS.ABS.PC.TRANSTER PRINTING
COLS1004	荧光黄3G	Solvent yellow 98	12671-74-8	Yellow	PMMA.PS.SAN.UPVC.POLYETHYLENE(<0.05%) ANDMINERAL OIL.
COLS1005	透明黄TP	Solvent yellow 33		Bright greenish yellow	PS.WAXES.CANDLES.FUELS. COLOURED SMOKE
COLS1006	透明黄5RP	Solvent yellow 163	13676-91-0	Reddish yellow	PMMA.PETP.PS.ABS.PC.PET.PBT ANDNYLON
COLS1007	透明黄3GR	Solvent yellow 176	10319-14-9	Bright yellow	PMMA.PETP.PS.ABS.PC.TRANSTER PRINTING
COLS1008	透明黄AGR	Pigment yellow 147	4118-16-5	Yellow	PS.PET
COLS1009	透明黄HR	Pigment yellow 180	77804-81-0	Greenish yellow	PVC
COLS1010	油溶黄R	Solvent yellow 14	842-07-9	Reddish yellow	PS.WAXES.CANDLES.FUELS. COLOURED SMOKE
COLS2001	透明橙3G	Solvent orange 60	61969-47-9	Yellowish orange	PMMA.PETP.PS.ABS.PC.PET.PBT AND NYLON
COLS2002	荧光红GG	Solvent orange 63	16294-75-0	Reddish orange	PMMA.PETP.PS.SAN.UPVC AND POLYESTER RESINS
COLS2003	透明橙R	Solvent orange 107	185766-20-5	Bright reddish orange	PMMA.PETP.PS.SAN.UPVC AND TEXTILE
COLS3001	透明红EG	Solvent red 135	71902-17-5	Yellowish red	PMMA.PETP.PS.ABS.PC.PET.PBT AND NYLON
COLS3002	透明红GS	Solvent red 111	82-38-2	Bluish red	PMMA.PETP.PS.ABS.PC.PET.NYLON. COLOURED SMOKE .WAXES.CANDLES AND FUELS
COLS3003	透明红E2G	Solvent red 179	89106-94-5	Yellowish red	PMMA.PETP.PS.ABS.PC.PET.PBT AND NYLON
COLS3004	透明红HRR	Solvent red 23	85-86-9	Yellowish red-Red	PS.WAXES.CANDLES.FUELS AND PRINTING INKKS
COLS3005	透明红FBL	Solvent red 207	15958-68-6	Bluish red	PMMA. PS.ABS.ACRYLIC.HIPS AND reduction
COLS3006	透明红2B	Solvent red 195		Bright bluish red	EXTENDER FREE DYE SOLUBLE IN PLASTIC
COLS3007	透明红H5B	Solvent red 52	201-346-7	Bluish red	PMMA.PETP.PS.ABS.PC.PET.PBT AND NYLON
COLS3008	荧光红BK	Solvent red 196	52372-36-8	Bright red	PMMA.PETP.PS.ABS.PC.PET.PBT
COLS3009	荧光红GK	Solvent red 197	52372-39-1	Bright red	PMMA.PETP.PS.ABS.PC.PET.PBT AND A BRILLIANT IN TIO2 REDUCTIONS
COLS3010	荧光红HFG	Solvent red 149	71902-18-6	Bright red	PMMA.PETP.PS.ABS.PC.PET.PBT AND A BRILLIANT IN TIO2 REDUCTIONS
COLS3011	荧光红5B	Vat red 41		Red	PMMA.PS.SAN.UPVC ANDPRINTING
COLS3012	透明红5B	Solvent red 27	1320-06-5	Bluish red	PMMA.PETP.PS.ABS.PET.PBT.OIL. FATS.WAXES.CANDLES.FUELS
COLS4001	透明紫B	Solvent violet 13	81-48-1	Bright bluish violet	PMMA.PETP.PS.ABS.PC.PET.PBT
COLS4002	透明紫R	Solvent violet 59	6408-72-6	Bright reddish violet	PMMA.PETP.PS.ABS.PET.PBT.PC
COLS4003	透明紫2BR	Solvent violet 31	70956-27-3	Violet	PMMA.PETP.PS.ABS.PET.PBT.PC
COLS4004	透明紫FBL	Solvent violet 36	61951-89-1	Reddish violet	PMMA.PETP.PS.ABS.PET.PBT.PC
COLS5001	透明蓝2N	Solvent blue 35	17354-14-2	Bright greenish blue	PS.WAXES.CANDLES.FUELS.OIL. PETROLEUM.ACRYLIC
COLS5002	透明蓝AP	Solvent blue 36	14233-37-5	Bright blue	PMMA.PETP.PS.ABS.PET.PBT
COLS5003	透明蓝2B	Solvent blue104	116-75-6	Blue	PMMA.PETP.PS.ABS.PC.PET.PBT
COLS5004	透明蓝R	Solvent blue 97	61969-44-6	Bright reddish blue	PMMA.PETP.PS.ABS.PC.PET.PBT
COLS5005	透明蓝2R	Solvent blue 122	67905-17-3	Reddish blue	PMMA.PETP.PS.ABS.PC.PET.PBT. POLYESTER ENGINEERING PLASTIC
COLS5006	透明蓝GP	Solvent blue 78	2475-44-7	Blue	PMMA.PETP.PS.ABS.PET.PBT. PETROLEUM.MINERAL OIL
COLS5007	透明蓝N	Solvent blue 59	6994-46-3	Bright reddish blue	PMMA.PETP.PS.ABS.PC.PET.PBT.RESINS TO PROVIDE A FLUORESCENT BLUE CANDLES
COLS6001	透明绿5B	Solvent green 3	128-80-3	Bluish green	PMMA.PETP.PS.ABS.PC.PET.PETROLEUM .SMOKE.WAXES.CANDLES AND FUELS
COLS6002	透明绿G	Solvent green 28	71839-01-5	Bright green	PMMA.PETP.PS.ABS.PET.PBT.PC.ACRYLIC