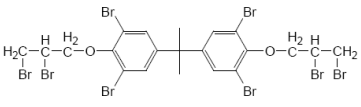
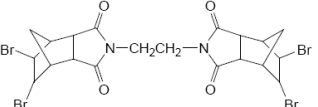
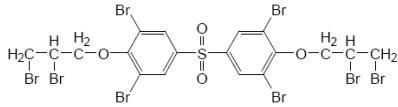
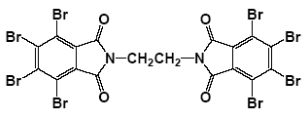
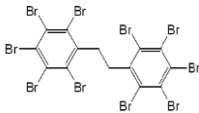
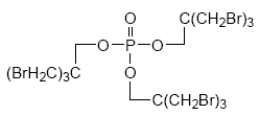


Flame Retardant - 난연제

Bromine type - 브롬계 난연제

Name	Counter Grade	Bromine wt% min.	Melting Point, °C min.	Feature(특징)	Applications
Chitex FR-900	HP800AG(A)/PE-68(G)	66	98	Low Cost	PE/PP
Chitex FR-910	Only available	45	290	Non-Blooming , V-2	PE/PP
Chitex FR-920	NonNen 52(M)	65	100	Low-Blooming	PE/PP
Chitex FR-930	BT-93W(A)	64	440	Low-Blooming & High Weather ability	TPO, TPE, HIPS
Chitex FR-940	Saytex8010(A), Firemaster2100(G)	80	345	Low Cost replacement for DBDPE, Non-Dioxin Ordinance	PS, PA, PP/PE
Chitex FR-950	FR 327(D)	68	175	Low-Blooming, Snow-White color	PE/PP, TPU

Chemical Structure

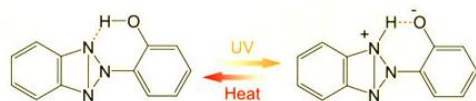
<p>CHITEX FR-900 2,2-bis-[3,5-dibromo-4-(2,3-dibromopropoxy) Phenyl]propane</p> 	<p>CHITEX FR-910 Ethylene bis-dibromonorbornane dicarboxamide</p> 	<p>CHITEX FR-920 Bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl]sulphone</p> 
<p>CHITEX FR-930 2,2'-(1,2-Ethanediy)bis[4,5,6,7-tetrabromo-1H-isindole-1,3(2H)-dione]</p> 	<p>CHITEX FR-940 Decabromodiphenylethane</p> 	<p>CHITEX FR-950 Tris(Tribromoneopentyl)phosphate</p> 

Anti-Oxidants – 산화방지제 (DEOX Series)

Name	Counter Grade	Appearance	Melting °C	Application
Hindered Phenolic				
DEOX 10	Irganox 1010	White Powder	110 - 125 °C	General application
DEOX 76	Irganox 1068 & 1078	White Powder	49-54 °C	General application
DEOX 112	Irganox 2246	White Powder	128 °C Min.	rubber
DEOX 115	Lowinox 22IB46	White Powder	160 - 164 °C	ABS/PVC
DEOX 1330	Irganox 1330	White Powder	240 - 245 °C	TPO/PP/PE
DEOX 1790	Irganox 1790	White Powder	159 - 163 °C	Spandex
DEOX 3114	Irganox 3114	White Powder	218 - 223 °C	General application
DEOX BS-1000	Irganox 1135	Colorless Liquid	-	PU
HPAO-Metal Deactivators				
DEOX MD-1012	CDA-1(Amfine)			PP, PE
DEOX MD-1060	Naugard XL-1	Off-White Powder	170 - 180 °C	PP, PE, SBR, PS
DEOX MD-1024	Irganox 1024	Off-White Powder	221 - 232 °C	PP/PE
DEOX MD-1072	Irganox 1019		170 °C Min.	Engineering Plastics
DEOX MD-1098	Irganox 1098	Off-White Powder	156 - 161 °C	Nylon
Benzofuranone based				
DEOX SP-3000	Irganox HP-2225	White Powder	114 - 160 °C	ABS/SEBS/HIPS
Revonox 7000		White Powder	105 °C Min.	PP/PE/PU
Revonox 501				PP/PE/PBT
Hydroxylamine based				
Revonox 420	Irgastab FS 042		96 - 98 °C	TPO,TPE for auto parts of constructions
Revonox 310	Irgastab FS 301			
Phosphorous based				
DEOX 68	Irganox 168	White Powder	180 °C min	General application
DEOX 604	Igafos 126	Off-white Powder	140 °C	PP/PE/General application
DEOX 3030		White flake	118 - 121 °C	
DEOX BS-1500				Plastisol
Sulfur based				
DEOX 520	Irganox 1520	Light Yellow Liquid	-	ABS, Adhesive
DEOX 726	Irganox 1726	White wax-solid	28 °C	Rubber, Epoxy
DEOX 565	Irganox 565		91 - 96 °C	Rubber
DEOX 1412		White Powder	48 - 52 °C	Engineering Plastics

UV Absorbers - UV 흡수제

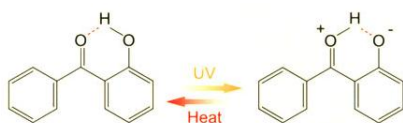
Benzotriazoles type



Name	Chemical Name	Physical form	Color	Application
Chiguard P (Tinuvin P)	2-(2'-Hydroxy-5'-methylphenyl)-benzotriazole	Crystal	Light yellow	PVC, UPR
Chiguard 234 (Tinuvin 234)	2-[2-hydroxy-3,5-di-(1,1-dimethylbenzyl)]-2H-Benzotriazole	Powder	Off-white	Nylon, PBT
Chiguard 326 (Tinuvin 326)	2-(3'-t-butyle-2'hydroxy-5'mehtylphenyl_5-chlorobenzotriazole	Powder	Light yellow	HIPS/SEBS/Coatings
Chiguard 327 (Tinuvin 327)	2-(3',5'-di-t-butyl-2'hydroxyphenyl)-5-chlorobenzotriazole	Powder	Light yellow	ABS/HIPS
Chiguard 328 (Tinuvin 328)	2-(3',5'-di-t-amy-2'-hydroxyphenyl)benzotriazole	Powder or flake	Light yellow	ACO
Chiguard 5411 (Tinuvin 329)	2-(2'-Hydroxy-5'-tert-octylphenyl)-benzotriazole	Powder	Off-white	PVC. PET
Chiguard 5431 (Tinuvin 360)	2,2'-Methylene bis(6-(2H-benzotriazol-2-yl)-4-,1,1,3,3,tetramethylbutyl)phenol)	Powder	Off-White to slightly yellow	PC
Chiguard5228 (Tinuvin 928)				ACO
Chiguard 5530* (Tinuvin 1130)	Benzotriazol composite, mixture	Liquid	Light yellow	IC, ACR
Chiguard 5571 (Tinuvin 571)		Liquid	Vicous clear yellow liquid	PUR
Chiguard 5582* (Tinuvin 99-2) (Tinuvin 348-2)	Benzotriazol composite, mixture	Liquid	Light yellow	ACO
Chiguard 5584 (Tinuvin384/99)				ACO

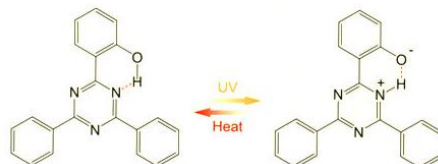
UV Absorbers - UV 흡수제

Benzophenones type



Name	Chemical Name	Physical form	Color	Application
Chiguard BP-1 (Lowilite 24)	2,4-Dihydroxy Benzophenone	Powder	Yellow	PVC
Chiguard BP-2 (Univul 3050)	2,2',4,4'-Tetrahydroxybenzophenone	Powder	Light yellow	Cosmetics, Contact lens
Chiguard BP-3 (Cyasorb UV-9)	2-Hydroxy-4-methoxybenzophenone	Powder	Light yellow	Cosmetic, PVC
Chiguard BP-4 (Lowilite 20)	2-Hydroxy-4-methoxybenzophenone-5-sulfonic acid	Powder	Off-white	Cosmetics
Chiguard BP-6	2,2'-Dihydroxy-4,4'-dimethoxy benzophenone	Powder	Light yellow	Film
Chiguard BP8 (Cysorb UV24)		Powder	Light yellow	Film
Chiguard BP-12 (Cyasorb UV531)	2-Hydroxy-4-n-octyloxybenzophenone	Powder	Pale yellow	PVC

Triazine type & Others



Name	Chemical Name	Physical form	Color	Applications
Chiguard 5540 (Tinuvin 120)	2,4-Di-tert-butylphenyl 3,5-di-tert-butyl-4-hydroxybenzoate	Powder	White	Automobile / UV Coating
Chiguard 335	Ethyl-2-cyano-3,3-diphenyl acrylate	Powder	White	95-100 °C
Chiguard 336 (Univul 3039)	2-Ethylhexyl-2-cyano-3,3-diphenyl acrylate	Liquid	Light yellow	PVC
Chiguard 1108 (Cyasorb UV-2908)		Powder	White to off-white	PP / PE
Chiguard 380 (Cyasorb 3638)	2,2-(1,4-phenylene)bis((4H)-3,1-benzoxazon-4-on) and other composite	Powder	Off-white	300 °C min.
Chiguard 1077 (Tinuvin 1577)				PE / PC
Chiguard 5400 (Tinuvin 400)				Automobile / UV coating

Chiguard 5405 (Tinuvin 405)				Engineering Plastics
Chiguard 1064 (Cysorb UV-1164)	2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-(octyloxy)phenol	Powder	Light yellow	PP/PE/TPE
Chiguard 1064L (Cysorb UV-1164L)	2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-(isooctyloxy)phenol, 60~65% in xylenes	Liquid	Light yellow	ACR
Chiguard 1033 (Tinuvin 312)	2-Ethyl-2'-ethoxy-oxalanilide	Powder	White	Acrylic / PVC

Formulated UV 흡수제

Name	Counter grade			Applications
Chiguard 1099	CIBA 5060 / Tinuvine 5060			Alkyl
Chiguard U-988	Proprietary			TPU
Chiguard U-800	Tinuvin B 75			
Chiguard A680	Proprietary			
Chiguard 6447	Cyasorb THT 4611, 4801, Cyasorb UV4611			PE / PP
Chiguard 9735	Proprietary			Epoxy flooring
Chiguard 3053	Tinuvin 5050, Eversorb 84			Acrylic emulsion
Chiguard 3253	Tinuvin 5151, Eversorb 83			Wood coating
Chiguard 8431	Proprietary			Solar film

Optical Brightner

Name	Counter grades		Applications
Chitex OB	Unitex 3BSA, OB, Tinopal OB		General Applications

Light Stabilizers - 광 안정제 (HALS)

Name	Chemical name	Physical form	Color	Applications
Chiguard 228 (Tinuvin 119)	N,N',N'',N'''-trtrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	Powder	Light yellow	Non-migrating film application
Chiguard 353 (Tinuvin 292)	Bis(1,2,2,6,6-pentamethyl-4-piperideyl)sebacate	Liquid	Light yellow	Automobile coating / water borne
Chiguard 622LD (Tinuvin 622)	4-Hydroxy-2,2,6,6-tetramethyl-1-piperidine-ethanol polymer with dimethyl succinate	Granule	White	Olefin
Chiguard 770 (Tinuvin 770)	Bis(2,2,6,6,-tetramethyl-4-piperidinyl)decanedioate	Powder or granule	White	Engineering Plastics
Chiguard 944 (Chimassorb 944)	N,N'-bis(2,2,6,6-Tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymer with 2,4,6-trichloro-1,3,5-triazine and 2,4,4-trimethyl-1,2-pentanamine	Powder or granule	Light yellow	Olefin
Chiguard 405 (Uninul 4050)		Crystalline powder	White	Olefin
Chiguard 100 (Tinuvin 144)	Bis(1,2,2,6,6,-pentamethyl-4-piperidinyl)-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	Powder	White	ACO/ACR/IC
Chiguard 101 (Tinuvin 144)	Bis(1,2,2,6,6,-pentamethyl-4-piperidinyl)-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	Powder	White	Powder coatings

Photo-initiators - 광 개시제

Name	Physical form	Color	Applications	Melting point
Chivacure 173 (Irgacure 173)	Liquid	Light yellow	UV wood coating	-
Chivacure 184 (Irgacure 184)	Crystal	White	Non-yellowing clear coating for graphic art	46-50 °C
Chivacure 107 (Irgacure 907)	Crystal	Pale yellow	UV ink and solder mask	70-76 °C
Chivacure 1256 (Irgacure TPO-L)	Liquid	Light yellow	White pigmented system and thick coatings	
Chivacure TPO (Irgacure TPO)	Crystal	Bright yellow	White UV ink	88-94 °C
Chivacure BDK (Irgacure 651)	Crystal	White	Improved surface curing	64-67 °C
Chivacure 200			PI for low odor and thick coatings	
Chivacure 169 (Irgacure 369)	Powder	Pale yellow	Dark Pigmented system	
Chivacure 259 (Irgacure 2959)			PI for UV powder coating	
Chivacure 534 (Irgacure 784)			PI for Pigmented photo-imaging system such as solder mask	
Chivacure 70			Non-yellowing and ultra-thin clear coating, low migration, odorless	
Chivacure 75			Non-yellowing and ultra-thin clear coating,	
Chivacure 100 (KIP 100)			Non-yellowing and ultra-thin clear coating	
Chivacure 150 (KIP 150)			Non-yellowing and ultra-thin clear coating, low migration, odorless	
Chivacure 300 (Escacure One)			Non yellowing and ultra-thin clear coatings, low migration, odorless	
R-gen 7W			PI for water-borne UN inks and photoresists	
R-gen 2010			PI for food contact UN inks	
Celloxide 2021P			Cycloaliphatic Epoxide for Cationic UV coating (Oligomer)	
R-gen 998*	Liquid		Highly efficient photoinitiator designed specifically for clear UV system	65 °C min.

광개시제 및 관련제품

Name	Counter Grade	Applications
Photosensitizer(PS)		
Chivacure BP	Darocur BP , Omnirad BP	PS for clear coating
Chivacure OMB	Omnirad OMBB	PS for odorless and non-yellowing clear coatings
Chivacure 2-ITX	ITX, Omnirad ITX	PS for UV inks, solder masks and photoresists
Chivacure EMK	IGM-EMK	PS for dark-colored UV inks
Chivacure BMS	Omnirad BMS	PS for clear and odorless coatings
R-gen P-2000	Proprietary	PS for food contact UV inks
Chivacure DETX for Japan market	Esacure DETX, Omnirad DETX, Genocure DETX	
Photoinitiators blending		
Chivacure 1500	IGM- 4265	White or thick coating and non-yellowing clear coating
Chivacure 1600	Omnirad 500	Water-borne system
Amine synergists		
Chivacure 115	A122	Wood coating, clear coatings
Chivacure EPD	EDB, Omnirad EDB	Pigmented system
Chivacure OPD	EHA, Omnirad EHA	Pigmented system
Cationic 광개시제		
Chivacure 1190	Cyacure 6992, Omnicat 432	Stereo lithography
Chivacure 1176	Cyacure 6976	Cationic coatings
R-gen BF-1172		Benzene-free cationic clear coatings
R-gen 261	Irgacure 261, Irgacure CG24-61	Visible light cationic inks
R-gen 262		Etch resist PCB, solder masks and laser direct imaging. Suitable for water-soluble photopolymers

* 이 제품들은 세계 주요국가들에 특허 등록 되어 있는 제품으로, 관계법에 의해 보호되고 있습니다.