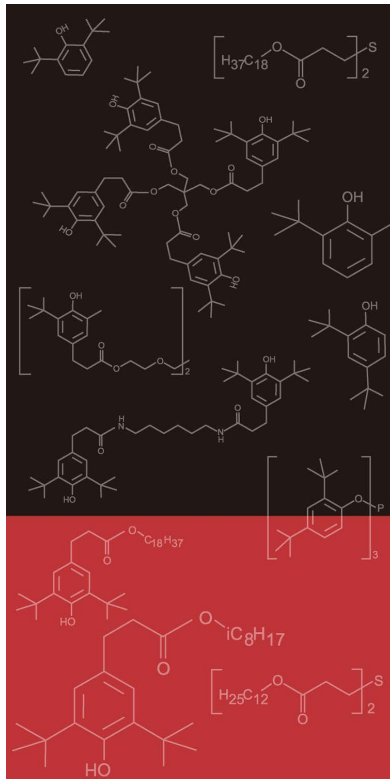




Warshel Chemical Ltd

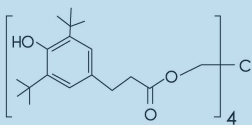
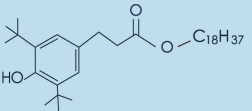
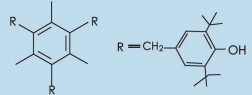
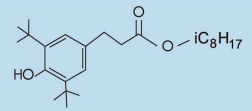
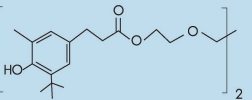
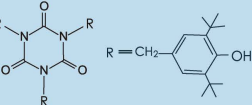
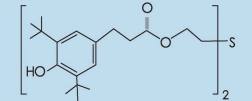
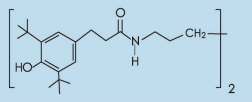
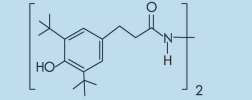
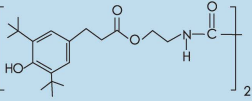
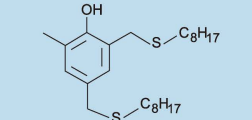
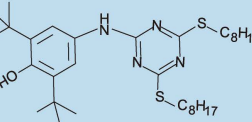
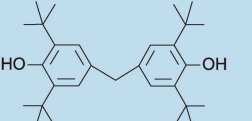
A FCAD Company

Antioxidants, UV Absorbers & Light Stabilizers

PRODUCT NAME / CHEMICAL NAME	chemical structure formula	CAS No.	melting range (°C)	TGA (°C)	application
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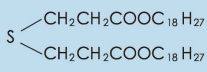
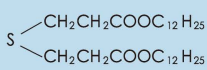
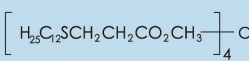
POLYMER ADDITIVES - ANTIOXIDANTS

▼ HINDERED PHENOL ANTIOXIDANT

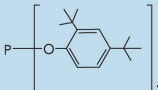
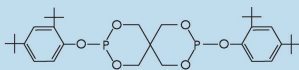
Antioxidant WANOX-1010 Pentaerythrityl Tetra- <i>is</i> [β-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl)-propionate]		6683-19-8	110-125	352 5% 365 10% 415 50%	ABS TPE (TPR) PA PE PET (PBT) PP PVC
Antioxidant WANOX-1076 Octadecyl[β-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl)-propionate]		2082-79-3	49-54	307 5% 322 10% 360 50%	ABS SBS TPE (TPR) PE PP PS PC PET PMMA PVC PU
Antioxidant WANOX-1330 1,3,5-trimethyl-2,4,6-(3,5-di- <i>tert</i> -butyl-4-Hydroxy-methyl) benzene		1709-70-2	242 - 246	330 5% 349 10% 386 50%	ABS Fiber PE PP PU
Antioxidant WANOX-1135 Benzenepropanoic acid,3,5-bis(1,1-dimethyl-ethyl)-44hydroxy-C7-C9 branched alkyl esters		125643-61-0	<10	236 5% 255 10% 302 50%	TPE (TPR) PUR PMMA PVB
Antioxidant WANOX-245 Ethylenebis(oxyethylene)bis[β-(3- <i>tert</i> -butyl-4-hydroxy-5-methylphenyl) propionate]		36443-68-2	76-79	298 5% 316 10% 362 50%	ABS PA PVC PMMA POM PUR
Antioxidant WANOX-3114 1,3,5-Tris(3,5-di- <i>tert</i> -butyl-4-hydroxy benzyl)-s-triazine-2,4,6-1H,3H,5H)trione		27676-62-6	217-219	322 5% 340 10% 379 50%	ABS Fiber PVC PP
Antioxidant WANOX-1035 3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzenepropanoic acid thiodi-2,1-ethanediyI ester		41484-35-9	63-73	301 5% 316 10% 353 50%	PE PP PUR
Antioxidant WANOX-1098 N,N'-hexane-1,6-diylbis[3-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl) propionamide]		23128-74-7	156-162	330 5% 343 10% 404 50%	PA TPE TPU
Antioxidant WANOX-1024 3-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl)-N'-[3-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl) propanoyl]propanehydrazide		32687-78-8	224-229	284 5% 295 10% 330 50%	EVA PVC PP PE
Antioxidant WANOX-697 (1,2-dioxoethylene)bis(iminoethylene) bis[3-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl)propionate]		70331-94-1	172-178	326 10% 338 20% 345 30%	ABS PE PS PVC PP PET
Antioxidant WANOX-1520 4,6-bis(octylthiomethyl)-o-cresol		110553-27-0	14-16	276 5% 286 10% 311 50%	BR NBR SBS SBR
Antioxidant WANOX-565 2,6-di- <i>tert</i> -butyl-4-(4,6-bis(octylthio)-1,3,5-triazin-2-ylamino)phenol		991-84-4	94.5-96.5	314 5% 328 10% 363 50%	BR NBR SBS SBR
Antioxidant WANOX-702 4,4'-methylene-bis(2,6-di- <i>tert</i> -butylphenol)		118-82-1	154-159		ABS PS PE PP OIL PET

PRODUCT NAME / CHEMICAL NAME	chemical structure formula	CAS No.	melting range (°C)	TGA (°C)	application
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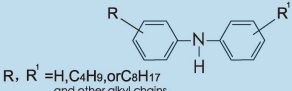
▼ SULPHUR ESTER ANTIOXIDANT

Antioxidant WANOX-DSTDP Distearyl 3,3-thiodipropionate		693—36—7	62—68	270 5% 310 10% 342 50%	PE PP ABS AS PVC
Antioxidant WANOX-DLTDP Dilauryl thiodipropionate		123—28—4	39.5—41.5	251 5% 270 10% 296 50%	PE PP ABS AS PVC
Antioxidant WANOX-412S Pentaerythritoltetrakis [3-laurylthiopropionate]		29598—76—3	48—54	335 5% 351 10% 361 15%	PE BR PP PS ABS PC AS

▼ PHOSPHITE ESTER ANTIOXIDANT

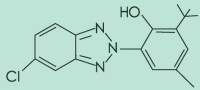
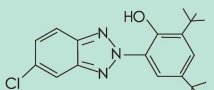
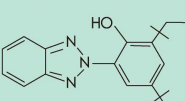
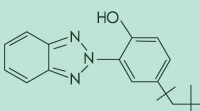
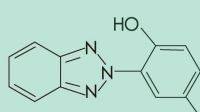
Antioxidant WANOX-618 O,O'-dioctadecylpentaerythritol bis(phosphite)		3806—34—6	54—56		PE ABS PS PC PP PVC
Antioxidant WANOX-168 Tris-(2,4-di-tert-butyl-phenyl phosphite)		31570—04—4	183—187	256 5% 271 10% 315 50%	ABS Nylon PE Polyester PP PU
Antioxidant WANOX-626 Bis (2,4-di-t-butyl-phenyl) pentaerythritol diphosphite		26741—53—7	160—180	316 5% 337 10% 387 50%	PVC PA PET PPO ABS PBT PO

▼ AMINIC ANTIOXIDANT

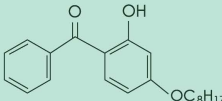
Antioxidant WANOX-5057 Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene	 R, R' =H, C4H9, or C6H17 and other alkyl chains.	68411—46—1	0—5	167 5% 185 10% 260 50%	PU PUR EVA Polyol PVC
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POLYMER ADDITIVES - UV ABSORBERS

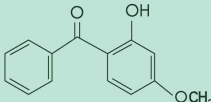
▼ AZIMINO-BENZENE

UV Absorber WSORB UV326 2-(2'-Hydroxy-3'-tert-5' methyphenyl)- 5-chlorobenzotriazole		3896—11—5	137—141	236 5% 250 10% 287 50%	ABS PE/PP PET (PBT) PS PUR PVC
UV Absorber WSORB UV327 2-(2'-Hydroxy-3',5'-di-tert-butylphenyl)- 5-chlorobenzotriazole		3864—99—1	154—158	214 5% 230 10% 267 50%	ABS PE/PP PET (PBT) PS PUR PVC
UV Absorber WSORB UV328 2-(2'-Hydroxy-3', 5'-di-tert-amylphenyl) benzotriazole		25973—55—1	80—83	233 5% 246 10% 286 50%	PAC PAM PCT PET PS
UV Absorber WSORB UV329 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3- tetramethylbutyl)phenol		3147—75—9	101—105	220 5% 246 10% 286 50%	PAC PAM PCT PET PS
UV Absorber WSORB UV-P 2-(2H-benzotriazol-2-yl)-p-cresol		2440—22—4	128—132	231 5% 245 10% 282 50%	ABS PET (PBT) PS PUR PVC

▼ BENZOPHENONE

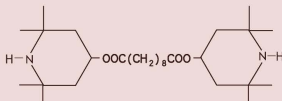
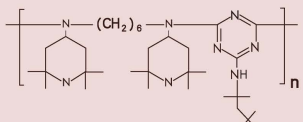
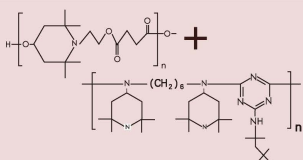
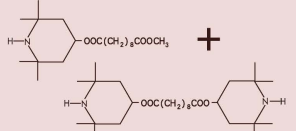
UV Absorber WSORB UV531 2-Hydroxy-4-n-Octoxybenzophenone		1843—05—6	47—50	279 5% 294 10% 334 50%	ABS Elastomers EVA PC PE Polyester PP PVC
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PRODUCT NAME / CHEMICAL NAME	chemical structure formula	CAS No.	melting range (°C)	TGA (°C)	application
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UV Absorber WSORB UV9 2-Hydroxy-4-methoxybenzophenone		131—57—7	63—64		ABS Elastomers EVA PC PE Polyester PP PVC
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POLYMER ADDITIVES - LIGHT STABILIZER

▼ HINDERED AMINE

Light stabilizer WLSTAB-770 Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate		52829—07—9	81—85	261 5% 277 10% 318 50%	PP PE PS ABS
Light stabilizer WLSTAB-622 Poly-(N-β-hydroxyethyl-2,2,6,6-tetramethyl-4-hydroxy-piperidyl succinate)		70198—29—7	>70	310 5% 322 10% 348 50%	PP PUR PE POM PS ABS
Light stabilizer WLSTAB-944 Poly {[6—[(1,1,3,3-tetramethylbutyl)amino]-1,3,5-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino]-1,6-hexanediyl[(2,2,6,6-tetramethyl-4-piperidyl)imino]}		70624—18—9	>100	385 5% 413 10% 458 50%	PP PE polyacetals polyurethanes PPE polyamides
Light stabilizer WLSTAB-783 Mixture of: Poly-[[6—[(1,1,3,3-tetramethyl butyl)-imino]-1,3,5-triazine-2,4-diyl][2-(2,2,6,6-tetramethylpiperidyl)-amino]-hexamethylene [4-(2,2,6,6-tetramethylpiperidyl)-imino]]and Poly-(N-β-hydroxyethyl-2,2,6,6-tetramethyl-4hydroxy-piperidyl succinate)		70198—29—7 70624—18—9	>90		PP PE PUR POM PA ABS
Light stabilizer WLSTAB-292 Bis (1,2,2,6,6-pentamethyl-4-piperidynil) sebacate		41556—26—7 82919—37—7		257 5% 279 10% 323 50%	PP PE PU PUR PS ABS

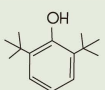
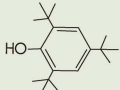
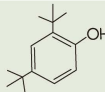
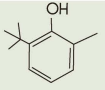
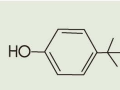
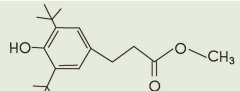
POLYMER ADDITIVES - SPECIAL ANTIOXIDANT

WANOX-960 Series for PA	WANOX-970 Series for PPR	WANOX-931 Series for petroleum resin	WANOX-980 Series for BOPP
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POLYMER ADDITIVES - BLEND ANTIOXIDANT

WANOX-B215	WANOX-B225	WANOX-B561	WANOX-B900
WANOX-B9225	WANOX-B9215	WANOX-B1171	WANOX-B3126

ALKYL PHENOLS

W-2,6-DTBP 2,6-Di-tert-butyl phenol		CAS: 128—39—2	WANOX-246-TTBP 2,4,6-Tri-tert-butylphenol		CAS: 732—26—3
W-2,4-DTBP 2,4-di-tert-butyl phenol		CAS: 96—76—4	W-OTBP Ortho-tert-butyl phenol		CAS: 88—18—6
W-2M6TB 6-tert-butyl-2-methylphenol		CAS: 2219—82—1	W-PTBP 4-tert-Butylphenol		CAS: 98—54—4
WANOX-3,5-methyl ester β-(3,5-Di-tert-butyl-4- hydroxyphenyl) propionate methyl ester		CAS: 6386—38—5	60—67°C	main raw material for hindered-phenol antioxidants Oil antioxidants	



Not all our antioxidants, UV absorbers & light stabilizers are listed. If you need other products, please contact our sales company:

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