



Rubber Chemicals Competitive Cross Reference

Acetales
Aldehyde Amines
Amines
Benzimidazoles
Dithiocarbamates
Guanidines

Masterbatches
Peptizers
Peroxides
Phenolics
Phenylene Diamines
Quinolines

Retarders
Specialty Accelerators
Sulfenamides
Thiazoles
Thioureas
Thiurams



AKROSPERSE® (Slab)
AKROFORM® (Pellet)
MASTERBATCH



**LANXESS
RHEIN CHEMIE**

**HARWICK/MLPC
TAMINCO**

CHEMTURA

VANDERBILT

CHEMICAL

| Aldehyde Amines | | | | | | |
|---|--------------------|------------------------|-------------------------|-------------------------------|------------------------------|-----------------|
| Aldehyde Amine | | Accelerator 40B (liq.) | Vulkacit® 576 | Accelerator 832 | Beutene® | Vanax® 808 |
| Dithiocarbamates | | | | | | |
| Zinc Dibutyl Dithiocarbamate | BZ-75/EPR; ZDBC-75 | Accelerator BZ/BZX | Vulkacit® LDB | Perkacit® ZDBC | Butazate® | Butyl Zimate® |
| Zinc Diethyl Dithiocarbamate | EZ-75/EPR; ZDEC-75 | Accelerator EZ/EZX | Vulkacit® LDA | Perkacit® ZDEC | Ethazate® | Ethyl Zimate® |
| Zinc Dimethyl Dithiocarbamate | MZ-75/EPR; ZDMC-75 | Accelerator MZ/MZX | Vulkacit® L (obs.) | Perkacit® ZDMC | Methazate® | Methyl Zimate® |
| N,N Dimethyl Cyclohexyl Ammonium Dibutyl Dithiocarbamate | | Accelerator CZ-1 | | RZ-100 (obs.) | | |
| Bismuth Dimethyl Dithiocarbamate | | Bismet | | | | Bismate® |
| Copper Dimethyl Dithiocarbamate | CuDD-75 | CuDD | | | | Methyl Cumate® |
| Zinc Dibenzyl Dithiocarbamate | ZBED-70 | ZBED | Vulkacit® ZBEC | Perkacit® ZBEC | Arazate® | Benzyl Zimate® |
| Tellurium Diethyl/Dithiocarbamate | TDEC-80/EPR | TDEC | | Perkacit® TDEC | | Ethyl Tellurac® |
| Zinc Dibutyl Dithio/Dibutyl Amine Complex | | ZDBCX | | | | |
| Guanidines | | | | | | |
| Diphenyl Guanidine | DPG-75/EPR; DPG-80 | DPG | Vulkacit® D | Ekaland™ DPG Perkacit® DPG | | DPG |
| N,N' Di-O-Tolyguanidine | DOTG-75/EPR | DOTG | | Ekaland™ DOTG | | DOTG |
| Sulfenamides | | | | | | |
| Benzothiazyl 1,2-Dicyclohexyl Sulfenamide | | DCBS | Vulkacit® DZ | Santocure® DCBS | | |
| N-Cyclohexyl Benzothiazole Sulfenamide | CBS-75 | CBTS | Vulkacit® CZ | Santocure® CBS | Delac® S | Durax® |
| N-Butyl 2-Benzothiazole Sulfenamide | TBBS-75 | BBTS | Vulkacit® NZ | Santocure® TBBS | Delac® NS | Vanax® NS |
| Thiocarbamyl Sulfenamide | OTOS-70 | Cure-Rite® 18 | | | | Cure-Rite® 18 |
| N-Oxydiethylene Benzothiazole Sulfenamide | MBS-80 | OBTS | Vulkacit® MOZ | Santocure® MBS | Delac® MOR NOBS SP (obs.) | Amax® |
| 90% N-Oxydiethylene Benzothiazole Sulfenamide/10% Benzothiazole Disulfide | | OMTS | Vulkacit® MOZ-90 (obs.) | Santocure® MOR-90 (obs.) | NOBS #1 (obs.) | Amax® #1 (obs.) |

CHEMICAL

| THIAZOLES | | | | | | |
|--|--------------------|---------------------|-----------------------------|--|---------------|-------------------------|
| 2-Mercaptobenzothiazole | MBT-75 | MBT | Vulkacit® Merkaptio | Perkacit® MBT | Naugex® MBT | Captax® |
| Benzothiazole Disulfide | MBTS-75 | MBTS | Vulkacit® DM | Perkacit® MBTS | Naugex® MBTS | Altax® |
| Zinc Mercaptobenzothiazole | ZMBT-75 | ZMBT | Vulkacit® ZM | Perkacit® ZMBT | OXAF | Zetax® |
| THIOUREAS | | | | | | |
| N,N'-Diethyl Thiourea | DETU-75/EPR | DETU | | Ekaland™ DETU | | Thiate® H |
| Ethylene Thiourea | ETU-75/EPR | ETU | END-75 Rhenogran® ETU-75 | Ekaland™ ETU | | |
| N,N'-Diphenylthiourea (Thiocarbanilide) | DPTU-75/EPR | Accelerator Thio #1 | Stabilizer C/Rhenocure® CA | A-1 Thiocarb'de/Thiocarbanilide Ekaland™ DPTU | | |
| THIURAMS | | | | | | |
| Dipentamethylene Thiuram Tetra/Hexasulfide | DPTT-70/EPR | DPTT | Tetrone® A | Ekaland™ DPTT Perkacit® DPTT | | Sulfads® |
| Tetraethyl Thiuram Disulfide | TETD-75/EPR | TETD | | Perkacit® TETD | Ethyl Tuex® | Ethyl Tuads® |
| Tetramethyl/Ethyl Thiuram Disulfide | | TM/ETD | | | | Methyl/Ethyl Tuads® |
| Tetrabutyl Thiuram Disulfide | | TBUT (liq.) | | | | Butyl Tuads® |
| Tetramethyl Thiuram Disulfide | TMTD-75/EPR | TMTD | Vulkacit® Thiuram | Perkacit® TMTD | Tuex® | Methyl Tuads® |
| Tetramethyl Thiuram Monosulfide | TMTM-80/EPR | TMTM | Vulkacit® Thiuram MS | Perkacit® TMTM Ekaland™ TMTM | Monex® | Unads® |
| Tetrabenzyl Thiuram Disulfide | TBzTD-75/EPR | TBzTD | | Perkacit® TBzTD Ekaland™ TBzTD | Benzyl Tuex® | Benzyl Tuads® |
| N, N, N', N'-tetrakisobutylthiuram disulfide | | TiBTD | | | | Isobutyl Tuads® |
| SPECIALTIES | | | | | | |
| 4,4'-Dithiodimorpholine | DTDM-80/EPR | Accelerator R | Rhenocure® M | Ekaland™ DTDM Sulfasan® DTDM | Naugex® SD-1 | Vanax® A |
| Zinc Dibutyl Phosphorodithioate | VS-50/EPR | Accelerator VS | Rhenocure® TP | Vocol® ZBPD | Royalac® 136A | |
| Zinc Iso-propylxanthate | | ZIX | | | | Propylzithate |
| PEPTIZERS | | | | | | |
| 2,2'-Dibenzoamido Diphenyldisulfide | Peptizer 66-80/EPR | Peptizer 66, 4P | Renacit® 11 | | | Pepton® 44/66 (Swan) |
| Aryl Amine Hydrocarbon | | Peptizer 9344 | | | | |
| Alkyl Sulfide Hydrocarbon | | Peptizer 9349 | | | | |

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| RETARDERS | | | | | | |
|---|--------------------|-----------------|-------------------|------------------------------------|----------------------|----------------------------------|
| Modified Phthalic Anhydride | | Retarder AK | | | | Retarder PD (obs.) (Cyanamid) |
| Phthalic Anhydride | PX-75 | Retarder PX | Vulkalent® B | | Retarder ESEN | |
| Salicyclic Acid | | Retarder SA/SAX | Retarder W (obs.) | | | |
| Benzoic Acid | | Retarder BA/BAX | | | | |
| Aromatic Sulfonamide | | Retarder SAFE | Vulkalent® E | | | |
| 4,5-Methylbenzotriazole | | Retrocure G | Vulkalent® TM | | | |
| N-(cyclohexylthio)phthalimide | CTP-75/EPR | Retarder CTP | Vulkalent® G | Santogard® PVI | | Vantard |
| Proprietary | | Retarder RSF | | | | |
| | MASTERBATCH | | ARKEMA | AKZO NOBEL | ARKEMA | VANDERBILT |
| PEROXIDES | | | | | | |
| Di(2,4-Dichloro benzoyl) Peroxide | | DDCBP-50 | Luperox® CST | Perkadox PD-50S-ps-a | Link-Cup® DCLBP-5-Si | STI-T (DOW) |
| t-Butylperoxy Benzoate | | TBPB TBPB-40 | Luperox® P | Trigonox® C Trigonox® C-40-B-pd | Link-Cup® TBPB | Varox® TBPB |
| 1,1-di(t-butylperoxy)-3,3,5-trimethyl-cyclohexane | | TMC-40 | Luperox® 231XL | Trigonox® 29-40B-pd | Link-Cup® TMCH 40 | Varox® 231XL |
| Butyl-4,4-di(t-butylperoxy) Valerate | | VAL-40C | Luperox® 230XL | Trigonox® 17/40pd | Link-Cup® NBV 40 L | Varox® 230XL |
| Dicumyl Peroxide | DC-40/EPR | DCP | Luperox® DC/SC | Perkadox® BC-FF | Di-Cup® R | Varox® DCP-R |
| | | DC-40C | DC-40P | Perkadox® BC-40C | Di-Cup® 40C | Varox® DCP-40C |
| | | DC-40K | DC-40KEP | Perkadox® BC-40K | Di-Cup® 40KE | Varox® DCP-40KE |
| T-Butylperoxy-Diisopropyl Benzene | VC-40/ERR | VCP | Luperox® F/R | Perkadox® 14-S F L | Vul-Cup® R | Varox® VC-R |
| | | VC-40C | Luperox® F-40 | Perkadox® 14-40B | Vul-Cup® 40C | |
| | | VC-40K | Luperox® F-40KEP | Perkadox® 14-40K | Vul-Cup® 40KE | Varox® 802-40KE |
| 2,5-Dimethyl-2,5-Di(t-butylperoxy) Hexane | | DDPH | Luperox® 101 | Trigonox® 101 | Link-Cup® DBPH | Varox® DBPH |
| | | DDPH-50 | Luperox® 101 XL | Trigonox® 101-45B-pd | Link-Cup® DBPH50C | Varox® DBPH-50 |
| 2,5-Dimethyl-2,5-Di(t-butylperoxy) Hexyne-3 | | 2,5 Tri | Luperox® 130 | Trigonox® 145-E85 | Link-Cup® DYBP | Varox® 130 |


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| | | | | | | |
|---|---------------------|----------------------|---|--------------------|-------------------|-----------------------|
| 2,6-Di- <i>t</i> -butyl- <i>p</i> -cresol | Antioxidant BHT | Vulkanox® KB (obs.) | | Naugard® BHT | Vanlube® PCX | |
| Butylated rxn product of <i>p</i> -cresol & dicyclopentadiene | Antioxidant 12 | | | | Vanox® L | Wingstay® L (Eliokem) |
| Hindered Phenol | Antioxidant 32 | | | | | |
| Hindered Phenol | Antioxidant 33 | | | | | |
| Hindered Phenol | Antioxidant 43 | | | | | |
| 2,2'-methylene-bis-(4-methyl 6- <i>t</i> -butyl phenol) | Antioxidant 235 | Vulkanox® BKF (obs.) | Stangard® PC (obs.) | 2246 (Cytec) | Vanox® MBPC | CA05 (PMC) |
| 2,5-di- <i>tert</i> -amyl hydroquinone | Antioxidant 250-SVA | | Santovar® TAHQ Santovar® A (obs.) | | | |
| 4,4'-butylidenebis (6- <i>tert</i> -butyl- <i>m</i> -cresol) | Antioxidant 383-SWP | | Santowhite BBMC Santowhite Powder (obs.) | | Vanox® SWP (obs.) | |
| Hindered Phenol | Antioxidant 1010 | | | Naugard® 10 | | Irganox® 1010 (Ciba) |
| Hindered Phenol | Antioxidant 1024 | | | | | Irganox® 1024 (Ciba) |
| Hindered Phenol | Antioxidant 1076 | | | Naugard® 75 (obs.) | | Irganox® 1076 (Ciba) |

BENZIMIDAZOLES

| | | | | | | |
|---|----------------|-----------------|---------------|--|-------------|--|
| Zn Salt of 2-Mercapto 4 (5)-Methylbenzimidazole | Antioxidant 58 | Vulkanox® ZMB-2 | | | Vanox® ZMTI | |
| 4/5-Methyl Mercapto Benzimidazole | Antioxidant 60 | Vulkanox® MB-2 | Stangard® 500 | | Vanox® MTI | |

QUINOLINES

| | | | | | | |
|------------------------------------|----------------|--------------|---------------|------------|------------------|--|
| 2,2,4-Trimethyl-1,2-Hydroquinoline | Antioxidant DQ | Vulkanox® HS | Stangard® TMQ | Naugard® Q | Agerite® Resin D | |
|------------------------------------|----------------|--------------|---------------|------------|------------------|--|

PHOSPHITES

| | | | | | | |
|---------------------------|---------------------|--|--|------------|--|--|
| Trisnonylphenyl Phosphite | Antioxidant TNPP-HP | | | Naugard® P | | |
|---------------------------|---------------------|--|--|------------|--|--|


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| AMINES | | | | | | |
|---|----------------------|----------------------|---------------------------------|---------------|--------------|-----------------------------|
| Phenyl-A-Naphthylamine | Antioxidant PANA | Additin 30 (obs.) | | Naugard® PANA | | |
| Octylated Diphenylamine | Antioxidant S | Vulkanox® OCD (obs.) | Stangard® ODP | Octamine® | Stalite® S | |
| 4,4'-Bis(α,α'-dimethylbenzyl/diphenylamine) | Antioxidant 405 | | | Naugard® 445 | Vanox® CDP | Dusantox® 86 (Duslo) |
| PHENYLENE DIAMINES | | | | | | |
| N-Isopropyl-N'-Phenyl-P'-Phenylene Diamine | Antiozonant PD-1 | Vulkanox® 4010 | Santoflex® IPPD | Flexzone® 3C | Vanox® 3C | |
| N-(1,3-Dimethyl Butyl)-N'-Phenyl-P-Phenylene Diamine | Antiozonant PD-2 | Vulkanox® 4020 | Santoflex® 6PPD | Flexzone® 7L | Antozite® 67 | Wingstay® 300 (Eliokem) |
| Mixed Diaryl-P-Phenylene Diamine | Antiozonant MPD-100 | Vulkanox® 3100 | | Novazone AS | | Wingstay® 100 /AZ (Eliokem) |
| ACETALES | | | | | | |
| Bis (1,2,3,6-Tetrahydro-benzaldehyde)-Pentaerythryl Acetate | Antiozonant 70 TBPA | Vulkanox® AFS | | | | |
| OZONE INHIBITORS | | | | | | |
| Nickel Dibutyl Dithiocarbamate | NiBud NDBC-75/EPR | | Perkacit® NDBC Ekaland™ NDBC | Naugard® NBC | Vanox® NBC | |

(obs.) = obsolete



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