Products For The **Rubber** Industry

Second Edition

Predispersions

Process Promoters

Release Agents

RheinChemie RC

A Bayer Company

RHEIN CHEMIE PRODUCT CONTENTS

■ **NEW PRODUCTS**

RheinChemie
A Bayer Company

Customer Service

Phone 1-800 BUY CHEM

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ACCELERATORS

■ NEW PRODUCTS

Chemical Description		Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
CBS N-cyclohexyl-2-benzothiazyl sulfenamide CAS #95-33-0		**Rhenogran® CBS-80**	EPDM/EVA	80	Off-White Pellets	1.18
		POLY-DISPERSION® A(SAN)D-65	NBR	65	Beige to Tan Slabs	1.15
DCBS N,N'-dicyclohexyl-2-benzothiazyl sulfenamide CAS #4979-32-2		**Rhenogran DCBS-80**	EPDM/EVA	80	Beige Pellets	1.12
DETU N,N'-diethylthiourea CAS #105-55-5	■	**Rhenogran DETU-80**	EPDM/EVA	80	Beige Granules	1.1
DOTG di-ortho-tolylguanidine CAS #97-39-2		**Rhenogran DOTG-70**	EPDM/EVA	70	White to Gray Pellets	1.09
DPG diphenylguanidine CAS #102-06-7		**Rhenogran DPG-80**	EPDM/EVA	80	Violet Pellets	1.12
DPTH-DPTT dipentamethylene thiuram hexasulfide/tetrasulfide CAS #971-15-3		**Rhenogran DPTT-70**	EPDM/EVA	70	Light Tan Pellets	1.25
		POLY-DISPERSION E(TET)D-70	EPM	70	Cream Slabs	1.23
DPTU diphenyl thiourea CAS #102-08-9		**Rhenogran DPTU-80**	EPDM/EVA	80	White Pellets	1.20
ETU ethylene thiourea CAS #96-45-7		**Rhenogran ETU-75**	EPDM/EVA	75	White Pellets	1.25
	■	**Rhenogran ETU-70/ECO**	ECO	70	White Granules	1.3
		POLY-DISPERSION END-75	EPM	75	White Slabs	1.22
		POLY-DISPERSION GND-75	ECO	75	White Slabs	1.30
GENIPLEX 80 Zinc dicyanatodiammine CAS # Trade Secret	■	**Rhenogran GENIPLEX-80**	EPDM/EVA	80	White Granules	1.5
HMT hexamethylenetetramine CAS #100-97-0		**Rhenogran HEXA-80**	EPDM/EVA	80	Beige Pellets	1.22
		POLY-DISPERSION SHD-65	SBR	65	White Slabs	1.13
		POLY-DISPERSION JHD-60	NR	60	Light Tan Slabs	1.12
MBS 2-(morpholinothio) benzothiazole CAS #102-77-2		**Rhenogran MBS-80**	EPDM/EVA	80	Pink Pellets	1.28
MBT 2-mercaptobenzothiazole CAS #149-30-4		**Rhenogran MBT-75**	EPDM/EVA	75	Off-White to Tan Pellets	1.29
		POLY-DISPERSION EMD-75	EPM	75	Gray-Tan Slabs	1.26
MBTS benzothiazyl disulfide CAS #120-78-5		**Rhenogran MBTS-75**	EPDM/EVA	75	Tan to Off-White Pellets	1.30
		POLY-DISPERSION AAD-75	NBR	75	Tan Slabs	1.34

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
MPTD dimethyl diphenyl thiuram disulfide CAS #53880-86-7	**Rhenogran MPTD-80**	EPDM/EVA	80	Beige Pellets	1.20
MTT 3-methyl-thiazolidinethione-2 CAS #1908-87-8	**Rhenogran MTT-80**	EPDM/EVA	80	Gray-Beige Pellets	1.25
OTBG ortho-tolylbiguanide CAS #93-69-6	**Rhenogran OTBG-50**	EPDM/EVA	50	White-Gray Pellets	1.25
TBBS N-tert-butyl-2-benzothiazole-sulfenamide CAS #95-31-8	**Rhenogran TBBS-75**	EPDM/EVA	75	Off-White Pellets	1.16
TBzTD tetrabenzylthiuram disulfide CAS #10591-85-2	**Rhenogran TBzTD-70**	EPDM/EVA	70	Beige Granules	1.16
TDEC tellurium diethyldithiocarbamate CAS #20941-65-5	**Rhenogran TDEC-70**	EPDM/EVA	70	Yellow to Brown Pellets	1.24
TETD tetraethylthiuram disulfide CAS #97-77-8	**Rhenogran TETD-75**	EPDM/EVA	75	Beige to Gray Pellets	1.26
TMTD tetramethylthiuram disulfide CAS #137-26-8	**Rhenogran TMTD-75**	EPDM/EVA	75	Off-White Pellets	1.24
	POLY-DISPERSION V (MT)D-75	EPM/EVA	75	Pale Blue Slabs	1.25
TMTM tetramethylthiuram monosulfide CAS #97-74-5	**Rhenogran TMTM-80**	EPDM/EVA	80	Light Yellow Pellets	1.22
ZBEC zinc dibenzyldithiocarbamate CAS #14726-36-4	**Rhenogran ZBEC-70**	EPDM/EVA	70	White-Gray Pellets	1.22
ZDBC zinc dibutyldithiocarbamate CAS #136-23-2	**Rhenogran ZDBC-75**	EPDM/EVA	75	Off-White Pellets	1.09
ZDEC zinc diethyldithiocarbamate CAS #136-23-2	**Rhenogran ZDEC-80**	EPDM/EVA	80	Gray to Yellow Granules	1.33
ZDMC zinc dimethyldithiocarbamate CAS #137-30-4	**Rhenogran ZDMC-80**	EPDM/EVA	80	Gray to Yellow Pellets	1.43
ZEPC zinc ethylphenyldithio-carbamate CAS #14643-93-6	**Rhenogran ZEPC-80**	EPDM/EVA	80	White to Gray Granules	1.34
ZMBT zinc-2-mercaptobenzothiazole CAS #155-04-4	**Rhenogran ZMBT-80**	EPDM/EVA	80	White to Yellow Pellets	1.45

ANTIOXIDANTS

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
BPH 2,2'-methylene-bis-(4-methyl-6-tert-butylphenol) CAS #119-47-1	Rhenogran BPH-80	EPDM/EVA	80	Gray-White Pellets	0.99
IPPD N-isopropyl-N'-phenyl-p-phenylenediamine CAS #101-72-4	Rhenogran IPPD-80	EPDM/EVA	80	Gray to Black Pellets	1.10
MBI 2-mercaptobenzimidazole CAS #583-39-1	Rhenogran MBI-80	EPDM/EVA	80	White to Gray Pellets	1.28
MMBI-MTI 2-mercapto-4(5)methyl-benzimidazole CAS #53988-10-6	Rhenogran MMBI-70	EPDM/EVA	70	Beige Pellets	1.16
	POLY-DISPERSION E(MTI)D-70	EPM	70	Off-White Slabs	1.15
NBC-NDBC nickel dibutyldithio-carbamate CAS #13927-77-0	Rhenogran NDBC-75	EPDM/EVA	75	Dark Green Pellets	1.16
■	Rhenogran NDBC-70/ECO	ECO	70	Dark Green Granules	1.21
	POLY-DISPERSION E(NBC)D-70	EPM	70	Dark Green Slabs	1.08
NKF sterically hindered bisphenol CAS #33145-10-7	Rhenogran NKF-80	EPDM/EVA	80	Yellowish Pellets	1.07
PCB poly carbonamide CAS #81972-48-7	Rhenogran P-50	EVA	50	Brown-Beige Pellets	1.01
PBN phenyl-ß-naphthylamine CAS #135-88-6	Rhenogran PBN-80	EPDM/EVA	80	Light Gray-Pink Pellets	1.15
ZMMBI zinc salt of 4-and 5-methylmercaptobenzimidazole CAS #61617-00-3	Rhenogran ZMMBI-50	EPDM/EVA	50	Beige Granules	1.15
ZMTI zinc-2-mercapto toluimidazole CAS #61617-00-3	POLY-DISPERSION A(ZMTI)D-50	NBR	50	Off-White Slabs	1.24
ZMTI/AMINOX zinc-2-mercapto toluimidazole CAS #61617-00-3 diphenylamine-acetone reaction product CAS #9003-79-6	POLY-DISPERSION A(ZMAM)D-666P	NBR	44/22	Tan Pellets	1.25

ACTIVATORS and STABILIZERS (METAL OXIDES)

■ NEW PRODUCTS

Chemical Description		Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
ZnO zinc oxide and retarder CAS #1314-13-2		POLY-DISPERSION A(RZNO)D-60P	NBR	60	White Pellets	1.48
		POLY-DISPERSION A(Z-CN)D-85	NBR	85	White Slabs	3.16
ZnO zinc oxide (French process) CAS #1314-13-2		Rhenogran ZnO-85	EPDM/EVA	84	White Pellets	3.03
		Rhenogran ZnO-85 SG	EPDM/EVA	85	White Pellets	3.12
		POLY-DISPERSION AZFD-85	NBR	85	White Slabs	3.26
		POLY-DISPERSION JZFD-90P	NR	88	White Pellets	3.50
		POLY-DISPERSION SZFD-85	SBR	85	White Slabs	3.11
		POLY-DISPERSION TZFD-88P	EPDM	88	White Pellets	3.40
		(See other ZnO products on page 22)				
PbO litharge (calcined) CAS #1317-36-8	■	Rhenogran PbO-90	EPDM/EVA	90	Yellow-Orange Granules	4.7
		POLY-DISPERSION PLD-90	PIB	90	Tan Slabs	4.90
		POLY-DISPERSION PLD-90P	PIB	90	Tan Pellets	4.90
		POLY-DISPERSION T(LC)D-90	EPDM	90	Tan Slabs	4.90
PbO litharge (heat resistant) CAS #1317-36-8		POLY-DISPERSION T(HRL)D-90	EPDM	90	Tan Slabs	4.75
Pb_3O_4 red lead oxide CAS #1314-41-6		Rhenogran Pb_3O_4-90	EPDM/EVA	90	Orange Pellets	4.80
	■	Rhenogran Pb_3O_4-80/ECO	ECO	80	Red Granules	4.15
		POLY-DISPERSION ERD-90	EPM	90	Orange Slabs	4.57
		POLY-DISPERSION GRD-90	ECO	90	Orange Slabs	5.18
		POLY-DISPERSION TRD-90	EPDM	90	Orange Slabs	4.58
		POLY-DISPERSION TRD-90P	EPDM	90	Orange Pellets	4.58
DBL-PHOS dibasic lead phosphite CAS #12141-20-7		Rhenogran Pb-phosphite-80/ECO	ECO	80	Brownish-Gray Pellets	3.0
DBL-PTHL dibasic lead phthalate CAS #69011-06-9		Rhenogran Pb-phthalate-80/ECO	ECO	80	Gray-White Pellets	2.90
	■	Rhenogran Pb-phthalate-80/EV A	EVA	80	Gray-White Pellets	2.5

ACTIVATORS and STABILIZERS (METAL OXIDES)

Chemical Description		Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
DBL-PTHL dibasic lead phthalate CAS #69011-06-9		POLY-DISPERSION E(DYT)D-80	EPM	80	White Slabs	2.44
		POLY-DISPERSION H(DYT)D-80	CPM	80	White Off-White Slabs	2.74
		POLY-DISPERSION H(DYT)D-80P	CPM	80	White Off-White Pellets	2.74
		POLY-DISPERSION T(DYT)D-80P	EPDM	80	White Pellets	2.44
PbSiO lead silicate CAS #11120-22-2		POLY-DISPERSION H(202)D-80	CPM	80	Off-White Slabs	3.20
		POLY-DISPERSION H(202)D-80P	CPM	80	Off-White Pellets	3.20
TBLS tribasic lead sulfate CAS #12202-17-4		POLY-DISPERSION AV(TBS)D-80	NBR/PVC	80	White Slabs	3.16
TML tribasic lead maleate CAS #12275-07-9		POLY-DISPERSION T(TML)D-80	EPDM	80	Light Yellow Slabs	2.80
$BaCO_3$ barium carbonate CAS #513-77-9		POLY-DISPERSION G(BAC)D-80	ECO	80	Off-White Slabs	2.71
CaO calcium oxide CAS #1305-78-8		Rhenogran Ca O-80	EPDM/EVA	80	Pale Gray Pellets	2.20
MgO magnesium oxide CAS #1309-48-4	■	Rhenogran 2O6O G-75	EPDM/EVA	75	Gray-White Granules	2.0
		Rhenomag ® G 1	EPDM/EVA	60	Tan Pellets	1.65
		Rhenomag G 3	EPDM/EVA	75	Tan Pellets	1.97
		(See also Scorchguard 'O' on page 22.)				
Sb_2O_3 antimony trioxide CAS #1309-64-4	■	Rhenogran **Sb_2O_3**-80	EPDM/EVA	80	White Granules	2.84
		(See also Flame Retardant Products on page 11.)				
IRON OXIDE iron oxide III CAS #1309-37-1		Rhenogran Fe Red-70	EPDM/EVA	70	Dark Red-Brown Pellets	2.10
hydrated iron oxide III CAS #20344-49-4		Rhenogran Fe Yellow-50	EPDM/EVA	50	Yellow-Brown Pellets	2.00
TiO_2 titanium dioxide (Rutile) CAS #13463-67-7		POLY-DISPERSION A(TI)D-80	NBR	80	White Slabs	2.54
TiO_2 titanium dioxide (Anatase) CAS #13463-67-7		POLY-DISPERSION A(TI-A)D-80	NBR	80	White Slabs	2.43
Hardening Resin phenolic novolac resin		J(NOVO)D-70	NR	70	Off-White Slabs	1.15

RETARDERS

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
CTP N-cyclohexylthio-phthalimide CAS #17796-82-6	Rhenogran CTP-80	EPDM/EVA	80	Beige Pellets	1.23
benzoic acid CAS #65-85-0	Rhenogran Benzoic Acid 80	EPDM/EVA	80	Beige Pellets	1.20
sulfonamide derivative CAS #2280-49-1	Rhenogran Vulkalent E-80	EPDM/EVA	80	Ochre Pellets	1.39

BLOWING AGENTS

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
OBSH p-p'-oxybis (benzenesulfonyl hydrazide) CAS #80-51-3	Rhenoslab ® OBSH-75	EPDM/EVA	75	Off-White Slabs	1.30
ADC azodicarbonamide CAS #123-77-3	Rhenoslab AZ 130-75	EPDM/EVA	75	Yellow Slabs	1.36
	Rhenoslab AZ 150-75	EPDM/EVA	75	Yellow Slabs	1.37
	Rhenoslab AZ 199-75	EPDM/EVA	75	Yellow Slabs	1.36
	Rhenoslab AZ 1901-75	EPDM/EVA	75	Yellow Slabs	1.36
	Rhenoslab AZ 5100-75	EPDM/EVA	75	Yellow Slabs	1.36
	Rhenoslab 754-75	EPDM/EVA	75	Yellow Slabs	1.36
	Rhenoslab AD C/LC2-75	EPDM/EVA	75	Yellow Slabs	1.37
UREA CAS #57-13-6	Rhenoslab RD-1032	EPDM/EVA	75	Off-White Slabs	1.18
	POLY-DISPERSION S(UR)D-75	SBR	75	Off-White Slabs	1.18

PRODUCTS FOR BONDING SYSTEMS

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
Resorcinol 1,3,dihydroxybenzene CAS #108-46-3	Rhenogran Resorcinol 80	EPDM/EVA	80	White Pellets	1.19
	Rhenogran Resorcinol 80/SBR	SBR	80	Brownish Pellets	1.21
Hexamethylene tetramine	Rhenogran Hexa Products -	See Accelerators page 2			

SPECIAL ACCELERATORS and SULFUR DONORS

Chemical Composition	Product Name	Density (g/cm³) (approx.)	Appearance/ Form
Amine-dithioate with silica and elastomer binder	Rhenocur e® ADT/G	1.11	Beige Granules
Possible Effects	When used in combination with sulfur and accelerator of the thiazole class, it causes a very fast cure to the ENB type EPDM compounds. Does not show tendency to stain.		
Potential Applications	Technical molded and extruded articles such as profiles, air hoses.		
Copper-dithioate, elastomeric binder, (50% active)	Rhenocure CUT/G	1.10	Yellow-Green Elastomer-bound Granules
Possible Effects	Scorch resistant, fast vulcanization, high degree of cross-linking and low compression set. Vulcanizates show very good aging resistance. Slightly staining.		
Potential Applications	EPDM and diene rubbers: molded and extruded mechanical goods of all kinds, e.g. profiles, foils, buffers, dock fenders, etc.		
50% Zinc-dithioate 50% elastomeric binder	Rhenocure TP/G	1.25	Beige Elastomer-bound Pellets
Possible Effects	Scorch resistant, medium-fast vulcanization, good degree of cross-linking.		
Potential Applications	EPDM and diene rubbers: molded and extruded mechanical goods of all kinds, e.g. profiles, hoses, sheeting.		
Zinc dithioate (50% active)	■ Rhenocure ZDT/G	1.18	Beige Granules
Possible Effects	Non-staining accelerator for rapid vulcanization of EPDM and other rubbers. Nitrosamine-free.		
Potential Applications	Injection molded and extruded technical articles of all types including profiles, sheeting and tank linings.		
Zinc dithioate complex, (70% active); 30% elastomeric binder	Rhenocure ZADT/G	1.10	White-Gray Elastomer-bound Granules
Possible Effects	Provides fast vulcanization, high degree of cross-linking, low compression set, good aging resistance.		
Potential Applications	EPDM and diene rubbers; molded and extruded mechanical goods of all kinds, e.g. hoses, dock fenders, sheeting, etc.		
Zinc dithioate complex (70% active)	■ Rhenocure ZA T-70/G	1.15	Gray Granules
Possible Effects	Special accelerator for the acceleration of EPDM and other diene rubbers.		
Potential Applications	Technical molded and extruded articles such as hoses, fenders, foils, etc.		
Phosphoryl polysulfide (50% active)	■ Rhenocure SDT/G	1.15	Brown Granules
Possible Effects	Cured compounds show excellent reversion resistance as observed in the broad curing plateau of the Rheometer curve. Suitable in NR compounds and all cases where high temperatures occur during curing. Can also be used to improve heat-aging properties of compounds based on SBR, NBR and EPDM.		
Potential Applications	Improved reversion resistance of NR articles, e.g. tire carcasses, engine mounts etc.		

Also Available: Nitrosamine-Free Combinations

CURING AGENTS

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
S					
sulfur (RUBBER GRADE) CAS #7704-34-9	Rhenogran S-80	EPDM/EVA	80	Yellow Pellets	1.64
	POLY-DISPERSION ASD-75	NBR	75	Yellow Slabs	1.62
	POLY-DISPERSION SSD-80	SBR	80	Yellow Slabs/Pellets	1.6
	POLY-DISPERSION TSD-80	EPDM	80	Yellow Slabs	1.62
S/G dithiodicaprolactam CAS #23847-08-7	Rhenocure S/G	–	–	Yellowish to Gray Granules	1.25
Possible Effects	Fast vulcanization with good scorch resistance.				
Potential Applications	For NR and SR; reversion resistant goods, e.g. tire carcasses, with thiuram secondary accelerator for nitrile rubber seals; aging resistant goods based on SBR, NBR, EPDM.				
M/G 4,4'-dithiodimorpholine CAS #103-34-4	Rhenocure M/G	EPDM/EVA	80	Gray Pellets	1.24
	POLY-DISPERSION E(SR)D-75	EPM	75	Off-White Slabs	1.18
	POLY-DISPERSION J(SR)D-70	NR	70	Off-White Slabs	1.18
Possible Effects	Fast vulcanization with good scorch resistance.				
Potential Applications	Reversion resistant goods based on NR, such as tire carcasses and aging resistant goods based on SBR, NBR and EPDM, e.g. mechanical rubber goods of all kinds.				
Sx					
insoluble sulfur (polymer) CAS #9035-99-8	POLY-DISPERSION ECSD-70	EPM	70	Yellow Slabs	1.46
	POLY-DISPERSION I(CS-HS)D-70	IR	70	Yellow Slabs	1.47
	POLY-DISPERSION SCSD-70	SBR	70	Yellow Slabs	1.46
	Rhenocure IS-90	EPDM/EVA	65	Yellow Slabs	1.50
	Rhenocure IS-60/G	EPDM/EVA	75	Yellow Pellets	1.60
3-(3,4-dichlorophenyl)-1,1-dimethyl urea bound to ACM CAS #330-54-1	Rhenocure Diuron	ACM	80	White-Yellowish Pellets	1.37
Possible Effects	Cross-linking agent for ACM.				
Potential Applications	Oil-resistant seals based on ACM for automotive applications.				
thiadiazole derivative, bound to CM CAS #51988-14-8	Rhenocure TDD	CM	–	Pale Gray Pellets	1.42
Possible Effects	Basic activation of the cross-linking with Rhenofit NC activator if necessary.				
Potential Applications	For the peroxide-free cross-linking of CM and other saturated, halogen-containing elastomers.				
phenolic resin/zinc oxide	■ Rhenocure KE 8675	IIR	–	Off-White Granules	1.1
46.7% SP-1045 resin 23.2% zinc oxide	WBC-41	IIR	70	Off-White Pellets	1.23
65.0% SP-1055 resin	WBC-559	EPR	65	Tan Pellets	1.04
41.9% SP-1055 resin 26.2% zinc oxide	WBC-560	IIR	68	Off-White Pellets	1.29

CROSS - LINKING ACTIVATORS

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
TAC triallyl cyanurate CAS #101-37-1	Rhenogran TAC-50	EPM/EVA	50	Beige Pellets	1.20
	POLY-DISPERSION TAC-50	ACM/CPM	50	Red Slabs/Pellets	1.14
TAIC triallyl isocyanurate CAS #1025-15-6	■ POLY-DISPERSION TAIC-50	CM	50	Blue Slabs	–
TATM triallyl trimellitate CAS #2694-54-4	POLY-DISPERSION TATM-60	ACM	60	Yellow Slabs	1.17
MPBM N,N'-m-phenylenedi-maleimide CAS #3006-93-7	POLY-DISPERSION T(MPBM)D-70	EPDM	70	Yellow to Tan Slabs/	1.22
	■ POLY-DISPERSION T(MPBM)D-70P	EPDM	70	Pellets	1.22
PROPRIETARY CROSS-LINKING COAGENT	POLY-DISPERSION SR-517-50	ACM	50	Brown Slabs/Pellets	1.12

PEROXIDES

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
DCP dicumyl peroxide CAS #80-43-3	POLY-DISPERSION DCP-60P	ACM	60	Blue Pellets	1.08
	POLY-DISPERSION E(DIC)D-40	EPM	40	Gray Slabs	1.16
	POLY-DISPERSION T(DIC)D-40P	EPDM	40	Blue Pellets	1.20
	POLY-DISPERSION DCP-70MG	ACM	70	White Granules	–
NBBPV n-butyl-4,4-bis(t-butyl-peroxy) valerate CAS #995-33-5	POLY-DISPERSION TVP-50	ACM	50	Green Powder	1.06
	POLY-DISPERSION K(PX-17)D-30P	CPM	30	Cream Pellets	1.37
TMC 1,1-di(t-butylperoxy)-3,3,5-trimethylcyclohexane CAS #6731-36-8	POLY-DISPERSION TMC-50	ACM	50	Yellow Powder	1.02
VC a,a-bis(t-butylperoxy) diisopropylbenzene CAS #25155-25-3	POLY-DISPERSION E(VC)D-40	EPM	40	Pink Slabs	1.15
	POLY-DISPERSION T(VC)D-40P	EPDM	40	Pink Pellets	1.16
	POLY-DISPERSION VC-60P	ACM/EPDM	60	Red-Orange Pellets	1.03
	POLY-DISPERSION VC-70MG	ACM	70	White Granules	–

ARAMID FIBER - PULP MASTERBATCHES

■ NEW PRODUCTS

Chemical Composition	Product Name	Binder	Appearance/ Form
70% aramid pulp	FYMIX ® RD-1104	EPDM	Yellowish Crumbs
70% aramid chopped fiber	FYMIX RD-1106	EPDM	Yellowish Crumbs
70% aramid chopped fiber	FYMIX RD-1105	CR	Yellowish Crumbs
50% aramid pulp	■ FYMIX RD-1140	CR	Yellowish Crumbs
50% aramid pulp	■ FYMIX A-A-50	NBR	Yellowish Crumbs
50% aramid pulp	■ FYMIX J-A-50	NR	Yellowish Crumbs
50% aramid pulp	■ FYMIX T-A-50	EPDM	Yellowish Crumbs

POTENTIAL APPLICATIONS These products can be used in applications such as gaskets, brake pads, seals, rubber rollers, hose and cable jackets, belting and wherever the physical properties can be improved with fibers and where dispersion is a problem.

FLAME RETARDANTS

Chemical Description	Product Name	Binder	% Active Ingredient	Color/ Form	Specific Gravity
Sb_2O_3 antimony oxide (trioxide) CAS #1309-64-4	WYFIRE ® E-A-55	EPM	85	White Pellets	3.07
	WYFIRE H-A-85	CM	85	White Slabs	3.53
	WYFIRE H-A-85P	CM	85	White Pellets	3.53
	WYFIRE S-A-51	SBR	80	White Slabs	2.70
	WYFIRE Y-A-53	EPDM	80	White Slabs	2.68
	WYFIRE Y-A-85	EPDM/CM	85	White Slabs	3.25
Dechlorane Plus 25/ CAS #13560-89-9 antimony oxide 57:23	WYFIRE Y-HA-43	EPDM	80	White Slabs	1.75
Oncor 75 RA CAS #1309-64-4	WYFIRE S-O-65	SBR	80	Pale Blue Slabs	2.15
Saytex BT-93 CAS #32588-76-4	WYFIRE Y-B-57	EPDM	80	Light Yellow Slabs	1.90
Saytex BT-93/antimony oxide 60:20	WYFIRE S-BA-88P	SBR	80	Light Yellow Pellets	2.13
Saytex BT-93/antimony oxide 56:23	WYFIRE YP-BA-47P	EPDM	80	Yellow Pellets	2.10
zinc borate CAS #1332-07-6	WYFIRE Y-ZB-80	EPDM	80	Off-White Slabs	1.99

PROCESSING PROMOTERS

PEPTIZING AGENTS

Chemical Composition	Product Name	% Ash Content	Density (g/cm³) (approx.)	Color/Form
Activated mixture of fatty acids, soaps of fatty acids and fatty alcohols CAS #67701-07-9 CAS #68603-17-8	Aktiplas t® 8	12.5	1.10	Brown Pellets
Possible Effects	Highly effective peptizing agent for NR as well as IR, SBR and BR.			
Potential Applications	Used for the accelerated mastication of NR, IR, SBR and BR (including oil-extended types) and of blends of these rubbers.			
2.2'-dibenzamido-diphenyldisulfide with iron complex on organic carrier	Aktiplast 20	18	1.10	Brown Pellets
Possible Effects	Strong Peptizer in NR and SBR. Functions in the presence and absence of carbon black.			
Potential Applications	Tire compounds and compounds based on NR.			

RECLAIMING AGENTS

Chemical Composition	Product Name	% Ash Content	Density (g/cm³) (approx.)	Color/Form
Blend of diaryl disulfides	■ Aktiplast 6	–	1..2	Brown Liquid
Potential Applications	For reclaiming scrap rubber of all types by means of thermal and high-pressure steam reclaiming processes.			

DISPERSANTS and LUBRICANTS

Chemical Composition	Product Name	% Ash Content	Density (g/cm³) (approx.)	Color/Form
Combination of zinc salts of higher molecular weight, mainly unsaturated fatty acids.	Aktiplast T	12-14	1.05	Brown Pellets
Possible Effects	Peptizing effect in NR, and IR; retards scorch, accelerates vulcanization.			
Potential Applications	Molded and extruded goods of all kinds, expanded rubber articles, hard rubber.			
Combination of zinc salts of higher molecular weight, mainly saturated fatty acids.	Aktiplast PP	12-13	1.08	Light Brown Pellets
Possible Effects	Peptizing effect in NR and IR; retards scorch; accelerates vulcanization; helps disperse silica; and facilitates cold feed extrusion.			
Potential Applications	Accelerated mastication of NR, IR, SBR, BR, NBR, IIR, and blends containing these rubbers.			
Combination of zinc salts of unsaturated fatty acids with calcium carbonate.	■ Aktiplast T-60	–	1.17	Yellow-Brown Pellets
Possible Effects	Processing promoter with viscosity-lowering and filler-dispersing effects.			
Potential Applications	For tires, rubber-to-metal bonding, primarily for compounds based on natural rubber and natural rubber blends.			
Combination of zinc salts of both higher and lower molecular weight, mainly saturated fatty acids.	Aktiplast GT	12-13	1.08	Light Brown Pellets
Possible Effects	Peptizing effect in NR, and solution SBR. Facilitates dispersion of silica.			
Potential Applications	NR and solution SBR blends thereof.			

DISPERSANTS and LUBRICANTS

Chemical Composition	Product Name	% Ash Content	Density (g/cm^3) (approx.)	Color/Form
Blend of hydrocarbons, zinc soaps and fillers	Aktiplast ST	17	1.10	Light Brown Pellets
Possible Effects	Dispersant and lubricant for highly filled synthetic diene rubber compounds; particularly suitable for compounds containing high activity silica.			
Potential Applications	Tire treads, technical molded goods.			
Fatty acid esters with inorganic carriers	Aflux ® 12	approx. 19	1.20	Off-White Pellets
Possible Effects	Minimum influence on vulcanization and the cross-linking with peroxides; suitable for injection molding; soles.			
Potential Applications	NR and SR types; also for non-black and transparent qualities; molded and extruded goods, rubber footwear.			
Calcium salts of natural fatty acids mixed with an amide ester wax	Aflux 16	6.9	1.03	Beige Granules
Possible Effects	Higher extrusion rates improved dimensional stability and improves slippage at rubber to metal interface.			
Potential Applications	For extrusion and injection molding applications.			
Blend of isoalkanes and fatty acids	Aflux 25	–	0.93	Whitish Pellets
Possible Effects	Improves flow characteristics and facilitates demolding; reduces mold fouling.			
Potential Applications	For extrusion and injection molding applications.			
Blend of fatty acids, fatty acid esters and fatty alcohols	Aflux 42	1.2 max	0.90	Light Brown to Brown Pellets
	■ Aflux 42M	1.2 max	0.90	Light Brown to Brown Pellets
Possible Effects	Suitable for continuous vulcanization (LCM, UHF) as well as for injection molding.			
Potential Applications	For all rubbers, especially EPDM; molded and extruded mechanical goods of all kinds, footwear.			
pentaerythrityltetrastearate	Aflux 54	–	1.00	Yellowish Flakes or Powder
Possible Effects	Decreases the viscosity of rubber compounds, reduces the sticking to the mixing units, promotes the demolding of press-cured articles.			
Potential Applications	HNBR, CO, ECO and FPM; molded and extruded mechanical goods.			
Blend of polymer olefin and polyethylene wax	Aflux PE-11	–	0.94	White Powder
polyethylene wax	Aflux PE-12	–	0.92	White Pellets/Granules
Possible Effects	Significantly improves the dispersion of rubber additives and fillers, particularly carbon blacks. Enhances mold flow and mill release characteristics without sacrifices in cure rate or physical properties.			
Potential Applications	Use in CR, EPDM, FKM molded and extruded articles.			

DISPERSING RESINS

Chemical Composition	Product Name	Ash Content	Density (g/cm³) (approx.)	Color/Form	Softening Point
	Rhenosin ® 145A	2.0 max	1.06	Dark Brown to Black Pellets	approx. 95°C
Possible Effect	Dispersant and homogenizer				
Potential Applications	Due to its color Rhenosin 145 is used in dark compounds. Improves the dispersion of clay and improves gas impermeability.				
Mixture of alkylated naphthalenic/aromatic resins with zinc salts of mainly unsaturated fatty acids	Rhenosin 400	–	1.03	Dark Brown Pellets	approx. 80°C,
Potential Applications	Molded and extruded goods of all kinds, conveyor belts, tire compounds.				
Alkylated naphthalene-formaldehyde resin	Rhenosin 300	–	1.09	Dark Amber Resin	approx. 66°C
Alkylated naphthalene-formaldehyde resin, and synthetic calcium silicate	Rhenosin 300M10	–	1.11	Grayish Beige Granules	approx. 66°C
Potential Applications	Processing promoter and recrystallization retarder for CR.				
Hydrocarbon resin	Rhenosin TT 90; TT 100; and TT 110	0.1max	1.08	Yellow Pastilles	approx. 90° or 100° or 110°C
Possible Effect	Dispersant and tackifier				
Potential Applications	Truck tires, passenger car tires, industrial tires, tire retreads, bicycle tires, conveyor belts, technical articles.				
C_9/C_{10} – hydrocarbon resin	■ Rhenosin TD 90; TD 100; and TD 110	0.1max	1.08	Yellow Pastilles	approx. 90° or 100° or 110°C
Possible Effect	Dispersant and tackifier				
Potential Applications	Truck tires, passenger car tires, industrial tires, tire retreads, bicycle tires, conveyor belts, technical articles.				
Coumarone-indene resin	Rhenosin C 90; C 100; C 110; C 120; and C 150	0.1max	1.13	Yellow Pastilles	approx. 90°, 100°, 110°, 120° or 150°C
Possible Effect	Dispersant and tackifier				
Potential Applications	Truck tires, passenger car tires, industrial tires, tire retreads, bicycle tires, conveyor belts, technical articles.				
Aliphatic modified coumarone-indene resin	■ Rhenosin CR 100	0.1max	1.1	Yellow Pastilles	approx. 100°C
Possible Effect	Dispersant and tackifier				
Potential Applications	Technical Rubber Goods				

PROCESSING PROMOTERS WITH MULTIPLE EFFECTS

■ NEW PRODUCTS

Chemical Composition	Product Name	Ash Content	Density (g/cm³) (approx.)	Color/Form	Softening Point
Activated combination of zinc salts of higher molecular weight, mainly unsaturated fatty acids.	Aktiplast F	12-13	1.08	Brown Pellets	–
Possible Effects	Stronger peptizing effect than Aktiplast T; retards scorch, accelerates vulcanization, counteracts undesired cyclization (as in SBR).				
Potential Applications	Molded and extruded goods of all kinds; hard rubber, conveyor belts, tire compounds.				
Activated combination of zinc salts of higher molecular weight, mainly saturated fatty acids.	Aktiplast M	13	1.10	Greenish Brown Pellets	–
Possible Effects	Stronger peptizing effect than Aktiplast PP.				
Potential Applications	Molded and extruded goods of all kinds, conveyor belts, tire compounds, especially bead fillers.				
Combination of zinc salts of selected, higher molecular fatty acids with a special activator and effect agent	■ Aktiplast MS	15-17	1.1	Dark Brown Pellets	–
Possible Effects	Multifunctional processing promoter for diene rubber, especially NR, IR and blends of NR/IR.				
Potential Applications	Peptizing effect in NR and IR; improves filler incorporation; improves rheological properties of NR, IR and NR blends.				

HOMOGENIZERS

Chemical Composition	Product Name	Density (g/cm³) (approx.)	Color/Form	Softening Point
C_9/C_{10}- aromatic hydrocarbon resin	Rhenosin 260	1.10	Light Brown Pellets	approx. 85°C
Possible Effect	Light colored homogenizing resin			
Potential Applications	Blending of e.g. NR, BR, SBR. Must be added with polymers before fillers to be most effective.			
Modified copolymerizate based on unsaturated, aromatic hydrocarbons	■ Rhenosin TP100	–	Brown Granules	approx. 95°C
Potential Applications	For use in low-polar and moderately polar rubbers.			

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TACKIFIERS

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Color/Form	Softening Point
Carbon-derived coumarone-indene polymer based on unsaturated aromatic hydrocarbons	■ Rhenosin C10	–	Viscous Liquid	Liquid
Potential Applications	For processing at low temperatures with elastic compounds.			
Coumarone-indene resins	■ Rhenosin C30	1.08	Yellow Pastilles	approx. 25°C
Possible Effect	Tackifier for green rubber compounds, may partially substitute aromatic plasticizers.			
Potential Applications	Truck tires, passenger car tires, tires for industrial and agricultural applications, tire retreads, conveyor belts, V-belting, bonding solutions for technical articles.			
Liquid hydrocarbon resin	■ Rhenosin TT10	1.03	Brown Liquid	–
Possible Effect	Tackifier for green rubber compounds, may partially substitute aromatic plasticizers.			
Potential Applications	Truck tires, passenger car tires, tires for industrial and agricultural applications, tire retreads, conveyor belts, V- belting, bonding solutions for technical articles.			
Petro-derived hydrocarbon polymerizate based on unsaturated aromatic C_9/C_{10} hydrocarbons	■ Rhenosin TT30	–	Brown Liquid	Liquid
Potential Applications	Dispersing and tackifying resin for solid rubbers and bonding solutions			
Alkyl phenol-Novolak	Rhenosin P 6204 K	–	Gardner: max 10	approx. 140°C
Possible Effect	Very efficient tackifier for uncured rubber even after medium or long term storage.			
Potential Applications	Tire and Technical Rubber Goods where the application mixing temperature meets the necessary melting range of Rhenosin P 6204 K.			
Alkyl phenol-Novolak	■ Rhenosin P 7433 K	–	Gardner: max 10	approx. 98°C
Possible Effect	Phenolic Tackifier for green rubber compounds.			
Potential Applications	Tire and Technical Rubber Goods. Rhenosin P 7433 K has a relatively low melting range.			

REINFORCERS

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Color/Form	Softening Point
Novolak resin	■ Rhenosin P 0790 K 01, 02, 03 & 04	–	–	approx. 115°C, 105°C, 85°C, & 100°C, respect.
Possible Effect	Reinforcing resin for higher shore hardness.			
Potential Applications	For hard and very hard vulcanizates: Apex compounds in radial tires; floor coverings; typewriter and paper rollers; heels; shoe soles; oil-resistant seals; and brake linings.			
Novolak with Hexa	■ Rhenosin P 0791 K	–	–	–
Phenol formaldehyde resin with hardening agent (hexamethylene tetramine)	■ Vulkadu r™ A	1.3	White to Yellow Powder	–
Possible Effect	Reinforcing resin for solid rubbers.			
Potential Applications	For hard and very hard technical compounds, suitable for brake linings, oil-resistant seals, heels, shoe soles, typewriter and paper rollers.			
Phenol formaldehyde resin (Novolak) without hardening agent	■ Vulkadur RB	1.26	Yellowish to Brownish Flakes	90 ± 10°C
Possible Effect	Reinforcing resin for solid rubbers.			
Potential Applications	For hard and very hard vulcanizates such as Apex compounds in radial tires, floor coverings, type-writer and paper rollers, heels, shoe soles, oil-resistant seals, and brake linings.			

CROSS-LINKING AGENTS

Chemical Composition	Product Name	Density (g/cm³) (approx.)	Color/ Form	Softening Point
Butylphenol resol	■ Rhenosin P 6173 K	–	Yellow Lumps	approx 80°C
Heat reactive alkylphenol-formaldehyde resol	■ Rhenosin P 6438 K	–	Yellow Lumps	approx. 88°C
Possible Effect	Curing resin for solid rubbers.			
Potential Applications	Resin cured butyl rubber, because of its versatility and inherent ozone resistance, has been employed in many areas including tire curing bladders, conveyor belts, gaskets, and heat resistant packing.			

factice BROWN GRADES, MINERAL OIL FREE

Chemical Composition	Product Name	Density (g/cm³) (approx.)	Acetone Extract, %	Shore 0 (approx.)	Appearance/ Form
Sulfur vulcanized vegetable oil (pure rapeseed oil)	Rhenopren ® 10	1.00	16±2	35	Brown Crushed Lumps, Medium Hard
Possible Effects	Provides uncured compounds with a high resistance to deformation.				
Potential Application	Hoses, profiles, surgical goods, rubber threads, rolls, hand made goods.				
Sulfur vulcanized vegetable oil (pure rapeseed oil)	Rhenopren 14	1.02	14±2	42	Brown Crushed Lumps, Medium Hard
Possible Effects	Provides uncured compounds with a high resistance to deformation.				
Potential Applications	Hoses, profiles, bicycle valve stems, tubings, roll coverings, rubber threads, hand made goods, uppers for rubber shoes, rubberized fabrics.				
Sulfur vulcanized vegetable oil (pure rapeseed oil)	Rhenopren HF	1.00	40±4	–	Brown, Elastic, Small Lumps, Semi-solid Powdered
Possible Effects	Promotes the formation of a closed surface skin with microcellular rubber compounds.				
Potential Applications	Blended compounds, particularly those with EPDM. Cellular and micro cellular rubber goods based on all elastomers, particularly expanded profiles.				

factice BROWN GRADES, MINERAL OIL EXTENDED

Chemical Composition	Product Name	Density (g/cm³) (approx.)	Acetone Extract, %	Shore 0 (approx.)	Appearance/ Form
Sulfur vulcanized vegetable oil ((pure rapeseed oil)	Rhenopren **A**	1.03	23±2	40	Brown Crushed Lumps, Medium Hard
Potential Applications	Molded, extruded and calendered mechical goods, particularly those based on CR.				
Sulfur and pure rapeseed oil blended with pretreated oils and mineral oil	Rhenopren ZD	1.02	43±3	–	Brown Lumps
Possible Effects	Dispersing effect in all rubber compounds. Improves extrudability and calendering. Improves dimensional stability of uncured compounds at high temperatures.				
Potential Applications	Technical molded and extruded articles, shoe uppers and cable compounds.				

factice YELLOW GRADES

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Acetone Extract, %	Shore 0 (approx.)	Appearance/ Form
Sulfur vulcanized vegetable oil (pre-treated pure rapeseed oil)	Rhenopren C	1.03	16±2	45	Light Yellow, Finely Ground
Possible Effects	Mineral oil free				
Potential Applications	Non-black molded and extruded goods (surgical, household, camping and sports items).				

factice WHITE GRADES

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Acetone Extract, %	Shore 0 (approx.)	Appearance/ Form
Sulfur-free three dimensionally cross-linked oils	Rhenopren EPS	1.00	–	–	Yellowish-White Powder
Possible Effects	Good dimensional stability, excellent processability, improves extrudability, facilitates degassing, provides a velvety surface finish, reduces swelling in oil and benzene, and can be used in both sulfur and peroxide cures.				
Potential Applications	Peroxide-cured extrusions, molded goods, EPDM profiles. Suitable for UHF cure.				
Sulfur chloride vulcanized vegetable oil (pure rapeseed oil with additions of small quantities of inorganic stabilizers)	Rhenopren R	1.05	5±1	–	White Finely Ground
Sulfur chloride vulcanized vegetable oil (pure rapeseed oil blended with mineral oil and inorganic stabilizers)	Rhenopren MB	1.14	24±2	–	White Finely Ground Medium Hard
Possible Effects	For cold curing				
Potential Applications	Eraser compounds (also suitable for hot cure when using basic accelerators). Cold cured goods such as light-colored calendered sheets, rubberized fabrics and elastic threads.				

factice SPECIAL GRADES

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Petroleum Ether Extract, %	Shore 0 (approx.)	Appearance/ Form
Sulfur vulcanized vegetable oil (pure castor oil)	Rhenopren Asolvan	1.06	9±2	45	Brown, Ground, Medium Hard to Tough
Sulfur vulcanized vegetable oil (castor oil blended with special vegetable oils)	Rhenopren Asolvan T	1.06	16±2	45	Brown, Ground, Medium Hard to Tough
Potential Applications	For NBR, CR, CSM and other special rubbers. Goods resistant to gasoline and mineral oil, e.g. rolls, gasoline hoses.				

ANTI-SUN CHECK WAXES and ANTIOZONANTS

Chemical Composition	Product Name	Solidification Point (C)	Density (g/cm^3) (approx.)	Appearance/ Form
Selected paraffins and mirocrystalline waxes with medium-broad molecular weight distribution CAS #63231-60-7	Antilux ® 500	53-57	0.91	White to Yellow Flakes
Possible Effects	Protective effect when used at medium high service temperatures. Meets test specifications at ozone chamber temperatures of about 25° C. The range of protection may be extended by blending with Antilux waxes of higher melting temperatures.			
Possible Applications	Molded and extruded mechanical goods, cellular rubber and cables.			
Selected paraffins and microcrystalline waxes with narrow molecular weight distribution CAS #70913-86-9	Antilux 600	58-62	0.91	Pale Yellow Flakes
Possible Effects	Protective effect when used at medium high service temperatures. Meets test specifications at ozone chamber temperatures of about 25° C.			
Possible Application	Molded and extruded mechanical goods, profiles, cellular rubber, and cable coverings.			
Selected paraffins and microcrystalline waxes with medium broad molecular weight distribution CAS #63231-60-7	Antilux 654	63-67	0.92	White to Pale Yellow Flakes
Possible Effects	Protective effect when used at medium high service temperatures. Meets test specifications at ozone chamber temperatures of about 45°C. The range of protection may be extended by way of blending with Antilux waxes of lower melting temperatures.			
Possible Applications	Tires and conveyor belts, mechanical rubber goods of all kinds.			
Selected paraffins and microcrystalline waxes with broad molecular weight distribution CAS #70913-86-9	Antilux 111	64-68	0.92	Pale Green Flakes
Possible Effects	Protective effect when used at medium high service temperatures. Meets test specifications at ozone chamber temperatures of about 50°C. The range of protection may be extended by way of blending with Antilux waxes of lower melting temperatures.			
Possible Applications	Tires and conveyor belts, mechanical rubber goods of all kinds.			
Selected paraffins and microcrystalline waxes with narrow molecular weight distribution CAS #proprietary	Antilux 660	63-67	0.92	Blue Flakes
Possible Effects	Protective effect when used at medium high service temperatures. Meets test specifications at ozone chamber temperatures of about 45°C. The range of protection may be extended by way of blending with Antilux waxes of lower melting temperatures.			
Possible Applications	Tires and conveyor belts, mechanical rubber goods.			
Selected paraffins and microcrystalline waxes with medium-broad molecular weight distribution CAS #70913-86-9	Antilux 500L	53-57	0.91	White Flakes
Possible Effects	Protective effect when used at moderate temperatures.			
Possible Applications	Rubber toys, surgical and pharmaceutical rubber goods.			

STANDARD ACCELERATORS

Chemical Composition	Product Name	% Ash Content	Density (g/cm^3) (approx.)	Appearance/ Form
o-tolyl biguanide, coated with mineral oil	■ Rhenocur e® 1000/C	max. 0.5	1.2	White Powder
Possible Effects	Accelerator for vulcanization of natural and synthetic rubber; catalyst for reaction between hindered polyisocyanates and amines for PUR coating and joint-sealing materials.			
Potential Applications	Technical rubber articles of all kinds, patching compounds, eraser rubber.			
N,N'-diphenylthiourea	■ Rhenocure CA	–	1.30	White to Yellowish Powder
Possible Effects	Fast vulcanization and high degree of cross-linking when using low sulfur or sulfur donors.			
Potential Applications	Molded and extruded mechanical goods, cable coverings, sheeting.			
3-methyl-thiazolidine-thione-2	■ Rhenocure CRV/LG	max. 0.5	1.39	Beige to Brown Pellets
Possible Effects	Accelerator for chloroprene rubber.			
Potential Applications	Injection molded and extruded technical articles, hose, seals, roller coverings, cable sheathing and insulation, V-belting, rubber boots and windshield wipers based on CR.			
Di-ortho-tolylguanidine	■ Rhenocure DOTG/C	max. 0.3	1.18	White-Gray Low-dusting Powder Oil damped
Possible Effects	Primary or secondary accelerator for the vulcanization of natural and synthetic rubber; sensitizer for lattices.			
Potential Applications	Thick-section rubber articles such as roller coverings; technical rubber articles of all types.			
Cyclohexylethylamine	■ Rhenocure HX	–	0.85	Light Yellow Liquid
Possible Effects	Mainly used as a secondary accelerator in compounds based on NR, IR, BR, SBR and NBR.			
Potential Applications	Dipped goods, fabric proofings, and self-curing solutions or sheetings.			
zinc-N-dimethyl-dithiocarbamate	■ Rhenocure L	–	1.7	White to Yellow Powder
zinc-N-dibutyl-dithiocarbamate	■ Rhenocure LDB/C	–	1.26	White to Yellowish Powder
Possible Effects	Ultra accelerator for the vulcanization of natural and synthetic rubbers.			
Potential Applications	Mechanical goods of all type, footwear, cables, surgical and hygienic articles, goods which come into contact with foodstuffs, pharmaceuticals or cosmetics, fabric proofings, dipped goods and self-vulcanizing compounds and solutions.			
ethylene thiourea	■ Rhenocure NPV/C	–	1.42	White to Yellowish Oil coated Powder
Possible Effects	Fast and tight curing of CR.			
Potential Applications	All kinds of technical articles, wires and coatings.			
tetramethyl monosulphide	■ Rhenocure Thiuram MS/C	max. 0.5	1.39	Ground Powder Coated
	■ Rhenocure Thiuram MS/EG-C			
Potential Applications	Articles that must withstand heat, such as conveyor belting, hoses, seals and sleeves, as well as cable sheathings and insulations.			
Zinc-N-pentamethylene dithiocarbamate (Z5MC)	■ Rhenocure ZP	–	1.6	White to Yellowish Powder
Possible Effects	Ultra accelerator for the vulcanization of natural and synthetic rubbers.			
Potential Applications	Technical goods, footwear and cables, surgical and hygienic articles, goods which come into contact with foodstuffs, pharmaceuticals or cosmetics, fabric proofings, dipped goods, self-curing mixes and solutions, latex goods.			

ANTIOXIDANTS

■ NEW PRODUCTS

Chemical Composition	Product Name	% Ash Content	Density (g/cm³) (approx.)	Appearance/ Form
Diphenylamine derivative	■ Rhenofit ® DDA	–	1.1	Orange to Brown Viscous Liquid
70% Diphenylamine derivative 30% silica filler	■ Rhenofit DDA-70	–	1.28	Yellow to Brown Non-dusting Powder
Possible Effects	Antioxidant for NR and SR, especially for CR.			
Potential Applications	Bicycle tires, inner tubes, sponge rubber, shoe soles (particulary expanded rubber soles). Suitable for heat resistant goods; protection against heat and oxygen in CR.			
50% diphenylamine derivative (Rhenofit DDA) as aqueous emulsion	■ Rhenofit DDA-50 EM	–	1.00	Reddish-Beige Liquid
Possible Effects	Antioxidant for latex compounds.			
Potential Applications	Latex compounds.			
octylated diphenylamine	■ Rhenofit OCD	max, 0.3	1.0	Light Brown Flakes
Possible Effects	Antioxidant for NR and SR, especially for CR.			
Potential Applications	Bicycle tires, inner tubes, sponge rubber, footwear (particulary expanded rubber soles). Suitable for heat resistant goods; protection against heat and oxygen in CR.			
2, 2,4-trimethyl-1,2-dihydroquinoline, polymerized	■ Rhenofit TMQ	–	1.08	Yellowish to Brownish Powder
Possible Effects	Staining antioxidant.			
Potential Applications	All kinds of technical articles, tires, seals, hoses, conveyor belts, profiles and shoe soles,			
phenyl alpha naphthylamine	■ Vulkanox ® PAN	–	1.16	Yellowish to Violet Flakes
Possible Effects	Staining antioxidant.			
Potential Applications	Suitable for all kinds of colored and black technical articles.			

ACTIVATORS AND STABILIZERS (METAL OXIDES)

Chemical Description	Product Name	Binder	Density (g/cm³) (approx.)	Color/ Form	Specific Gravity
MgO fine particle sized magnesium oxide	■ Rhenofit 2060	–	3.57	Light Gray Powder	–
Possible Effects	Curing activator and acid acceptor particularly suitable for polychloroprene rubber (CR) and adhesives.				
Potential Applications	CR, CSM or CM and CIIR compounds of all kinds (e.g. for technical molded and extruded articles, tire side walls and roofing films). Futher applications are adhesives based on CR, compounds with chloroparaffins, sulfur chloride factice (e.g. for erasers, bathing caps, rubberized sheets etc.).				
active magnesium oxide	■ Rhenofit 2120	–	3.57	White Powder	–
Possible Effects	Curing activator and acid acceptor particularly suitable for polychloroprene rubber (CR) and adhesives.				
Potential Applications	CR, CSM or CM, CIIR and FPM compounds of all kinds (e.g. for technical molded and extruded articles, tire side walls and roofing films). Futher applications are adhesives based on CR, compounds with chloroparaffins, sulfur chloride factice (e.g. for erasers, bathing caps, rubberized sheets etc.).				

ACTIVATORS AND STABILIZERS (METAL OXIDES)

Chemical Description		Product Name	Binder	Density (g/cm³) (approx.)	Color/ Form	Specific Gravity
MgO active magnesium oxide	■	Rhenofit 2150	–	3.57	White Powder	–
Possible Effects		Curing activator and acid acceptor particularly suitable for polychloroprene rubber (CR) and adhesives.				
Potential Applications		CR, CSM or CM, CIIR and FPM compounds of all kinds (e.g. for technical molded and extruded articles, tire side walls and roofing films). Further applications are adhesives based on CR, compounds with chloroparaffins, sulfur chloride factice (e.g. for erasers, bathing caps, rubberized sheets etc.).				
highly reactive magnesium oxide	■	Rhenofit D/A	–	3.6	White Powder	–
Possible Effects		Vulcanization activator and acid acceptor particularly for polychloroprene rubber (CR) and adhesives.				
Potential Applications		CR, CSM, CM, CIIR and FPM compounds of all kinds (e.g. for technical moldings and injection moldings, rubber curing bags for tires, roofing sheets, etc.). Other applications include CR-based adhesives, compounds with chlorinated paraffins, sulfur chloride factice, (e.g. for erasers, swimming caps, rubberized sheets, etc.).				
Approx. 73% Activated Magnesia Approx. 27% Organic Binder		Scorchguard 'O' ®	MINERAL OIL	–	Buff Gray Bars	1.90
90% zinc oxide medium particle size 10% organic binder		Zic-Stick '85' ®	MINERAL OIL	–	White Bars	3.66
90% zinc oxide very fine particle size 10% organic binder		Zic-Stick ® SG	MINERAL OIL	–	White Bars	3.66
95% calcium oxide 5% special dispersing agents	■	Rhenofit C	–	2.8	Gray Non-dusting Powder	–
Possible Effects		Desiccant for rubber compounds of all kinds to prevent porosity.				
Potential Applications		Extruded articles (e.g. profiles, seals), belts, straps, conveyor belts, rollers, cable coverings, rubber flooring.				
iron (III) oxide	■	Bayferrox® 720 (red)	–	4.90	Fine Red Powder	–
iron (III) oxide	■	Bayferrox 920 (yellow)	–	4.10	Fine Yellow Powder	–
Possible Effects		Pigments specially suited for rubber due to very low Cu and Mn content.				
Potential Applications		Inorganic colors and active fillers for all kinds of rubber articles, e.g. roofing and spark plug covers.				

Customer Service
Phone 1-800 BUY CHEM
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FILLER AND BLOWING ACTIVATORS

Chemical Composition	Product Name	% Ash Content	Density (g/cm³) (approx.)	Appearance/ Form
Combination of activating substances based on urea and surface active agents, bound to high-activity silica	Rhenofit 1987	31	1.50	White Fine Powder
Possible Effects	Medium strong activation of vulcanization.			
Potential Applications	Rubber compounds of all kinds containing light-colored reinforcing filler, e.g. molded soles, rubber mats, floor coverings, household and bathing goods, cellular and microcellular rubber compounds.			
Combination of activating substances based on amines, bound to high-activity silica	Rhenofit 3555	37	1.40	White Powder
Possible Effects	Strong activation of vulcanization.			
Potential Applications	Particularly suitable in all those cases where a very rapid vulcanization is required, e.g. with injection molding and with LCM and UHF vulcanization, in fast curing molded goods such as soles, heels, tiles, floor coverings.			
secondary amine	■ Rhenofit B	–	0.91	Colorless to slight Yellowish Green
Possible Effects	Vulcanization and filler activator.			
Potential Applications	Colored rubber articles based on natural and synthetic rubbers, e.g. soles, heels, bicycle tires, cable coverings, technical rubber articles.			
hydrated zinc dibenzene	■ Rhenofit 9093	–	–	White to Yellowish Powder
Possible Effects	Activation of the decomposition of ADC based blowing agents.			
Potential Applications	Cellular rubber and plastic articles of all kinds.			
finely ground blend of dicyanato zinc, silicon dioxide and dispersing agents	■ Rhenofit ® Geniplex ® (GE1555)	–	1.5	White Non-dusting Powder
Possible Effects	Activator for sulfur curing of EPDM and diene rubber, and providing activation for blowing agents.			
Potential Applications	Technical articles of all kinds.			

SPECIAL ACCELERATORS – DITHIOATES

Chemical Composition	Product Name	Density (g/cm³) (approx.)	Appearance/ Form
zinc dithioate bound to silica	Rhenocure TP/S	1.30	White, Crumbling Free Flowing Powder
Possible Effects	Scorch resistant, medium-fast vulcanization, good degree of cross-linking.		
Potential Applications	EPDM and other diene rubbers; molded and extruded mechanical goods of all kinds, e.g. profiles, hoses, sheeting, coatings.		
70% zinc dithioate (selected molecular structure) bound to 30% high-activity silica	■ Rhenocure ZDT/S	1.3	White Powder
Possible Effects	Non-staining specialty accelerators for rapid vulcanization of EPDM and other diene rubbers not containing any secondary amines which can form N-nitrosamines.		
Potential Applications	Rhenocure ZDT/S is used in injection-molding and extruded technical articles of all types including profiles, hose, sheeting and tank linings.		

CURING AGENTS

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Appearance/ Form
Phosphoryl-polysulfide bound to 30% high-activity silica	■ Rhenocure SDT/S	1.23	White Powder
Possible Effects	Non-staining sulfur donor for the vulcanization of natural and synthetic rubbers.		
Potential Applications	Improved reversion resistance of NR articles, e.g. tire carcasses; engine mounts, etc. It can also be used to improve the aging properties of compounds based on SBR, NBR and EPDM.		
4,4-dithiodimorpholine	■ Rhenocure M	1.30	White Non-dusting Powder
Possible Effects	Fast vulcanization with good scorch resistance.		
Potential Applications	Reversion resistant goods based on NR, such as tire carcasses and aging resistant goods based on SBR, NBR and EPDM, e.g. mechanical rubber goods of all kinds.		
min. 78% total sulfur min. 70% insoluble sulfur max. 22% oil	■ Rhenocure IS 90-20	1.6	Yellow Non-dusting Powder
67% total sulfur (min. 60% CS_2 insoluble sulfur) 33% oil	■ Rhenocure IS 90-33	1.5	Yellow Non-dusting Powder
Possible Effects	Vulcanizing agent for natural and synthetic rubbers.		
Potential Applications	All types of tires, conveyor belts, retreading material, assembled hoses, etc.		
60% insoluble sulfur 40% soluble sulfur	■ Rhenocure IS 60	2.0	Yellow Powder
95% Rhenocure IS 60 (60% insoluble sulfur and 40% soluble sulfur) 5% antidust agent	Rhenocure IS 60-5	1.8	Yellow Non-dusting Powder
Possible Effects	Vulcanizing agent for natural and synthetic rubber compounds.		
Potential Applications	All types of tires, conveyor belts, retreading material, assembled hoses, technical articles e.g. seals, rollers, etc.		

CROSS-LINKING ACTIVATORS

Chemical Composition	Product Name	% Ash Content	Density (g/cm^3) (approx.)	Appearance/ Form
Fatty acid amide-amine	Rhenofit NC	0	1.09	Yellowish Pellets
Possible Effects	Activating accelerator for the cross-linking of CM by Rhenocure TDD vulcanizing agent.			
Potential Applications	CM (CPE)			
Special treated, very finely divided calcium hydroxide	Rhenofit CF	75	2.20	White Powder
Possible Effects	Cross-linking activator for fluoroelastomers.			
Potential Applications	FPM; mechanical rubber goods of all kinds which meet the most severe temperature requirements.			
80% Sodium Stearate 20% Inorganic Dispersing Agents	Rhenofit Na-Stearate-80	–	1.17	White Powder
Possible Effects	Cross-linking activator for acrylate rubber.			
Potential Applications	Oil resistant seals based on ACM for use in vehicles and engineering.			

CROSS-LINKING ACTIVATORS

Chemical Composition	Product Name	% Ash Content	Density (g/cm³) (approx.)	Appearance/ Form
Combination of activating substances based on urea derivatives bound to high-activity silica	Rhenofit 2642	26	1.50	Fine, White Crumbling Powder
Possible Effects	Medium strong activation of vulcanization, hygroscopic.			
Potential Applications	Rubber compounds of all kinds containing light-colored reinforcing filler, e.g. molded soles, rubber mats, floor coverings, household and bathing goods, cellular and microcellular rubber compounds.			
Specially treated, finely divided calcium oxide	Rhenofit F	96	3.00	White Powder
Possible Effects	Regulates the cross-linking of fluoroelastomers; reduces shrinkage and improves the compression set in fluoroelastomers.			
Potential Applications	Seals, molded goods and hoses based on fluoroelastomers.			
70% Triallylcyanurate 30% Silica	Rhenofit TAC/S	27	1.25	Fine, White
Possible Effects	Increases the degree of cross-linking in peroxide vulcanization.			
Potential Applications	Molded and extruded mechanical goods based on EPDM, EPM, NBR, CM and others, e.g. seals, cables, profiles, etc.			
70% l,4-Butanedioldimethacrylate 30% Silica	Rhenofit BDMA/S	27	1.20	White Non-dusting Powder
70% Ethyleneglycoldimethacrylate 30% Silica	Rhenofit EDMA/S	27	1.25	White Non-dusting Powder
Possible Effects	Increases the degree of cross-linking in peroxide vulcanization.			
Potential Applications	Molded and extruded mechanical goods based on EPDM, EPM, NBR, CM and others, e.g. seals, cables, profiles etc.			
70% Trimethylolpropane-trimethacrylate 30% Silica	Rhenofit TRIM/S	27	1.27	White Non-dusting Powder
Possible Effects	Increases the degree of cross-linking in peroxide vulcanization.			
Potential Applications	Molded and extruded mechanical goods based on EPDM, EPM, NBR, CM and others, e.g. seals, cables, profiles, etc.			
Combination of urea derivatives and dispersing agents in aqueous paste form	Rhenofit 1600	<0.1	1.25	Light-Colored Paste
Possible Effects	Blow promoter; increases the plasticity of the uncured compound, accelerates vulcanization.			
Potential Applications	Cellular and microcellular rubber compounds.			

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COMPOUND RELEASE AGENTS, dry powders

Chemical Composition	Product Name	Appearance/Form
Combination of silicates Inorganic fillers, soluble soaps and surface active substances	Rhenodi v™ S302	Yellowish Powder
	■ Rhenodiv D7665-2	Gray Powder
Potential Applications	Slab dip compound release agents used to prevent the adhesion to uncured rubber and milled sheets.	
Aqueous solution of a blend of fatty acid salts with water soluble high molecular substances	■ Rhenodiv LL	White to Yellow Viscous Liquid
	■ Rhenodiv L L/ 30P	Brownish Viscous Liquid
Potential Applications	Compound release agents that prevent the sticking together of raw rubber or uncured rubber compounds, blanks and profiles.	

INSIDE TIRE LUBE

Chemical Composition	Product Name	Application	Appearance/Form
Synergistic, aqueous suspension of release agents based on pigments, surfactants and polydimethyl siloxanes	Rhenodiv 9093/1	Filled ISP	Gray-Black Viscous Liquid
	■ Rhenodiv 9092W	Filled ISP	White Viscous Liquid
	■ Rhenodiv 9094W	Reduced silicone & fillers	Gray-Black Viscous Liquid
	■ Rhenodiv 9095	No silicone fluid or fillers	White Viscous Liquid
Potential Applications	Inside green tire paint. Good release properties and excellent lubricant properties. Good air venting.		

BLADDER COATINGS

Chemical Composition	Product Name	Application	Appearance/Form
Silicone resin dissolved in hydrocarbons	Rhenodiv 638-1	Permanent coating	Cloudy Dispersion
Potential Applications	Permanent bladder coating in tire vulcanization prolongs life of curing bladders. Used in combination with Rhenodiv aqueous release agents.		
Reactive silicone polymers	■ Rhenodiv 700/2	Semi-permanent coating	White Medium Viscosity Emulsion
Potential Applications	Semi-permanent bladder coating. Improves lubrication of bladder. Designed for multiple release systems.		

TIRE OUTSIDE PAINT

Chemical Composition	Product Name	Application	Appearance/Form
Aqueous suspension of fillers and surfactants	■ Rhenodiv 9206	High Adhesion	Black Medium Viscosity Liquid
	■ Rhenodiv 9207	High Adhesion	Gray-Black Medium Viscosity Liquid
Potential Applications	Outside tire paints. Good venting and excellent appearance. Separation at joints (overlaps) is avoided and short drying times.		

MOLD RELEASE AGENTS

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Appearance/Form
Aqueous solution of special detergents	Rhenodiv 20	1.05	Clear Transparent Liquid
Potential Applications	Molded articles soiling slabs, car mats, articles that are to be bonded together.		
Alkali salt of a fatty acid derivative	Rhenodiv 30/1	1.00	Thixotropic Whitish Dispersion
Potential Applications	Molded goods, tires, ebonite, shoe soles; goods that are to be bonded together. Will not interfere with the subsequent lacquering, welding or cementing together of the vulcanizates.		

HOSE RELEASE AGENTS

Chemical Composition	Product Name	Density (g/cm^3) (approx.)	Appearance/Form
Mixture consisting of polyfunctional alcohols and surface active agents	■ Rhenodiv D 687-5	1.03	Yellowish Liquid
Potential Applications	Can be applied either by brush on the mandrels or on the green hoses or tubes by dipping.		
Mixture of non-ionic surfactants	■ Rhenodiv D 7641	1.05	Yellowish - Colorless Liquid
Potential Applications	Used in NBR, CM and EPDM rubber compounds.		

Customer Service
Phone 1-800 BUY CHEM
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POLYMERS

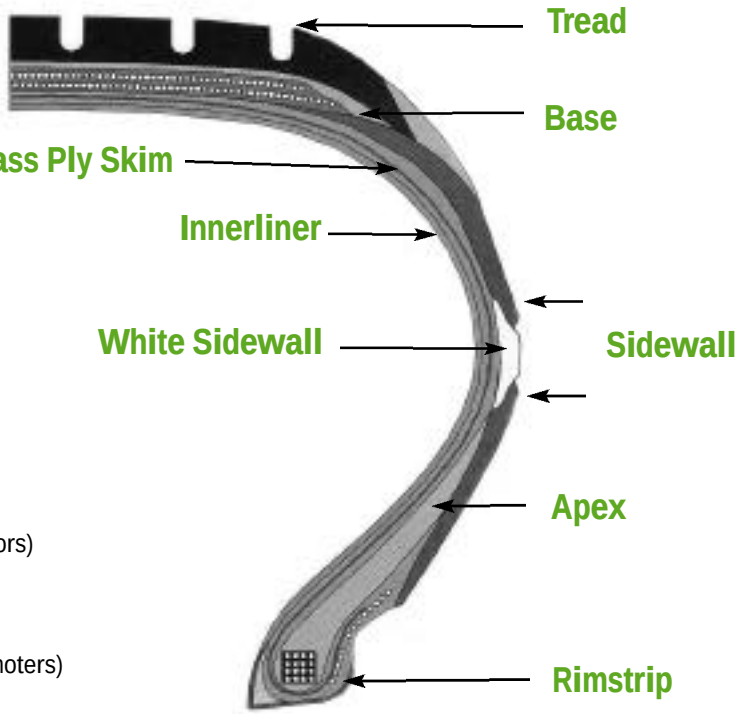
Chemical Composition	Product Name	Density (g/cm³) (approx.)	Mooney Viscosity ML (5+4) 100°C	Color/Form
Ester/MDI millable urethane	Urepan ™ 0332G	1.2	Approx. 45	Brown-Yellow Granules
Potential Applications	Peroxide curable only; good resistance to high temperatures; very good abrasion resistance, high elasticity and good building tack.			
Ester/MDI millable urethane	Urepan 640G	1.2	Approx. 45	Light Brown- Beige Granules
Potential Applications	Peroxide curable only; excellent chemical resistance and very low gas permeation, molded articles can be manufactured by compression, transfer and injection molding processes.			
Ester/MDI millable urethane	Urepan 64 1G	1.2	Approx. 45	Light Brown- Beige Granules
Potential Applications	Peroxide curable only; extremely high resistance to hydrolysis compared with other ester polyurethanes; lowest brittleness point of all polyesters.			
Ester/TDI millable urethane	Urepan 600	1.2	Approx. 26	Light Brown- Beige Blocks/Slices
Potential Applications	Isocyanate cross-linking only; for the manufacture of vulcanizates in the upper hardness range with high mechanical strength and very good chemical resistance with moderate resistance to heat and hydrolysis.			
Ether/MDI millable urethane	Urepan 50ELO6 G	1.05	Approx. 35	Yellow - Brown Granules
Potential Applications	Peroxide or sulfur curable; has uniform Mooney viscosity for easy processing; good hydrolytic stability; good low temperature flexibility, compression set and abrasion resistance.			
Polyaddition product made from tolylene diisocyanate and polyester; small quanties of a polymeric carbodiimide	Urepan 0359 G	1.2	Approx. 30	Brown-Yellow Granules
Potential Applications	Polyurethane rubber for sulfur cross-linking with resistance to hydrolysis for use in the manufacture of rubber goods with good elasticity and resistance to wear, swelling and ozone.			

ADDITIVES

Chemical Composition	Product Name	Density (g/cm³) (approx.)	Mooney Viscosity ML (5+4) 100°C	Color/Form
dimeric toluene-2.4-diisocyanate	■ Desmodur ® TT	1.48	Approx. 24	White-Bright Yellow Powder
Potential Effects	Bonding agent to improve the adhesion of fabrics (polyester, polyamide, aramid) to plasticized PVC or rubber and for the manufacture of 1 K-PUR micro-encapsulated adhesive-sealant systems.			
zinc chloride dibenzothiazyl disulfide compound	■ Rhenocure AUR	1.8	–	Yellowish Powder
Potential Effects	Curing agent for sulfur cross-linkable polyurethane rubbers.			
Potential Applications	Polyurethane rubber which can be sulfur cross-linked.			
Hydroquinone di-(ß-hydroxyethyl) ether (HQEE)	■ Cross-Linker 30/10	1.14	–	Grayish-White Flakes
Potential Effects	Cross-linking agent for the production of thermoplastic polyurethanes (TPU)			
organic lead salt	■ Desmorapid ® DA	1.99	–	Gray-Beige Powder
Potential Effects	Vulcanization accelerator for compounds based on isocyanate cross-linkable polyurethane rubbers.			
70% triallyl cyanurate 30% silica	■ Rhenofit TAC/S	1.25	–	White, Fine Crumbling Powder
Potential Effects	Cross-linking activator for peroxide vulcanization.			
Potential Applications	Technical molded and extruded articles based on EPDM, EPM, CM and others, e.g. profiles, seals, cable coverings and bushings.			

PRODUCTS FOR THE TIRE INDUSTRY

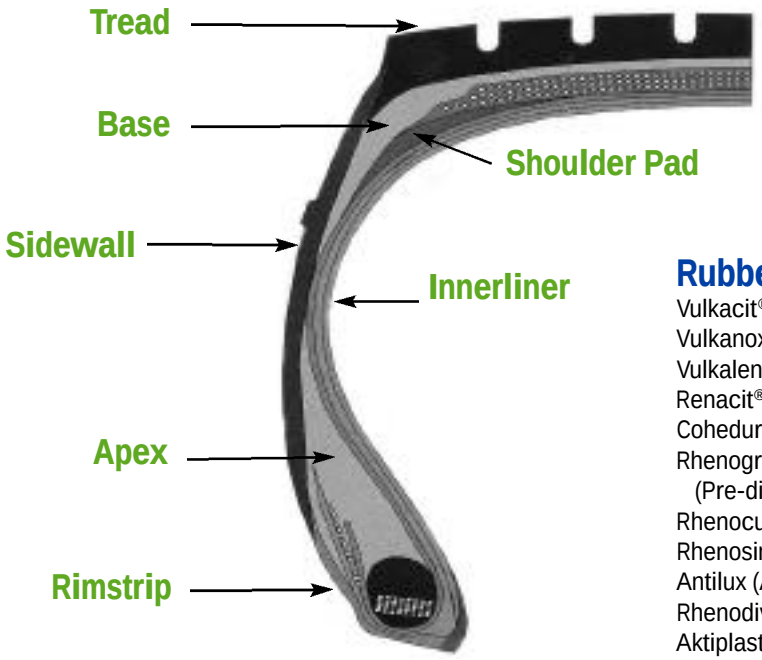
PASSENGER TIRE



Rubber Chemicals

Vulkacit® (Accelerators)
Vulkanox (Antidegradants)
Vulkalent® (Retarders)
Renacit® (Peptizers)
Cohedur® (Bonding Agents)
Rhenogran, Poly-Dispersion
(Pre-dispersed Chemicals)
Rhenocure (S-donors, Accelerators)
Rhenosin, Vulkadur (Resins)
Antilux (Anti-sun Check Waxes)
Rhenodiv (Release Agents)
Aktiplast, Aflux (Processing Promoters)

TRUCK TIRE



Rubber Chemicals

Vulkacit® (Accelerators)
Vulkanox (Antidegradants)
Vulkalent® (Retarders)
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Cohedur® (Bonding Agents)
Rhenogran, Poly-Dispersion
(Pre-dispersed Chemicals)
Rhenocure (S-donors, Accelerators)
Rhenosin, Vulkadur (Resins)
Antilux (Anti-sun Check Waxes)
Rhenodiv (Release Agents)
Aktiplast, Aflux (Processing Promoters)

STANDARD PACKAGING

PREDISPERSED RUBBER CHEMICALS

Rhenogran ® Rhenoslab ® Rhenomag ® POLY-DISPERSION ®	**Cartons** Weight: standard 55 lbs. (25 kg) low gravity 44 lbs. (20 kg) **Skid** Stretch-wrapped 40 cartons / skid Weight: standard 2,200 lbs. (1,000 kg) low gravity 1,760 lbs. (800 kg) **Gaylord** Selected Products Stretch-wrapped Weight: varies: 2,750 lbs. (1,250 kg) maximum
DCP-60 P, VC-60 P	cartons: 22 lbs. (10 kg) skid: 880 lbs. (400 kg)
VC-70MG	cartons: 44 lbs. (20 kg)
FYMIX ®	Loosely packed in cartons or Gaylords
WYFIRE ®	55 lbs. (25 kg) cartons **Skid** Stretch-wrapped 40 cartons / skid Weight: standard 2,200 lbs. (1,000 kg)
Rhenogran ® (Alternate Packaging)	Multiwall bags 55 lbs. (25 kg) Skids of 2,200 lbs. (1,000 kg) stretch-wrapped.
Rhenoslab OBSH-75	55 lbs. cartons 1760 lbs. per skid
WBC-41	50 lbs. carton
WBC-559	50 lbs. carton
WBC-560	50 lbs. carton

Products in other binder systems

BAR FORM ™	
SCORCHGUARD '0' ®	12 x 3 lbs. bars in 36 lbs. net weight cartons skid: 2,160 lbs.
ZIC -STICK '85' ®	12 x 4 lbs. bars in 48 lbs. net weight cartons skid: 1,920 lbs.

PREDISPERSED RUBBER CHEMICALS Continued

Rhenocur e®	
Rhenocure ADT/G	Bag, 33 lbs. (15 kg)
Rhenocure CUT/G	Carton, 44 lbs. (20 kg) skid, 1,056 lbs. (480 kg)
Rhenocure TP/G	Carton, 55 lbs. (25 kg) skid, 2,200 lbs. (1,000 kg)
Rhenocure TP/S	Carton with PE-liner, 55 lbs. (25 kg) skid, 1,320 lbs. (600 kg)
Rhenocure ZADT/G	Carton with PE-liner, 44 lbs. (20 kg) skid, 2,112lbs. (960 kg)
Rhenocure EPC	Paper bag with PE-liner, 55 lbs. (25 kg) stretch-wrapped skid, 2,200 lbs. (1,000 kg)
Rhenocure CMT	Carton 44 lbs. (20 kg); stretch-wrapped skid, 1,056 lbs. (480 kg)
Rhenocure CA	Paper bag, 33 lbs. (15 kg) skid, 990 lbs. (450 kg)
Rhenocure TDD Rhenocure Diuron Rhenocure S/G Rhenocure M	Paper bag with PE-liner, 55 lbs. (25 kg) stretch-wrapped skid, 2,200 lbs. (1,000 kg)
Rhenocure M/G	Carton, 55 lbs. (25 kg)
Rhenocure IS-60-5	Plastic bag, 44 lbs. (20 kg) stretch-wrapped skid 2,200 lbs. (1,000 kg)
Rhenocure SDT/S	Paper bag, 55 lbs. (25 kg)
Rhenocure IS-60/G	Carton, 55 lbs. (25 kg) stretch-wrapped skid 2,640 lbs. (1,200 kg)
Rhenocure IS-90	Carton, 55 lbs. (25 kg) stretch-wrapped skid 2,640 lbs. (1,200 kg)
Rhenocure ZP	Bag, 44 lbs. (20 kg)
Rhenocure AP	Multiwall bag, 55 lbs. (25 kg)
Rhenofit ®	
Rhenofit 1987 Rhenofit 2009 Rhenofit 2642 Rhenofit 3555	Carton with PE-liner 55 lbs. (25 kg); skid, 1,320 lbs. (600 kg)
Rhenofit 1600	Plastic drum 110 lbs. (50 kg)
Rhenofit TAC/S	Carton with PE-liner 55 lbs. (25 kg); skid, 1,920 lbs.

PREDISPERSED RUBBER CHEMICALS Continued

Rhenofit TRIM/S	Carton 44 lbs. (20 kg) skid, 2,112 lbs. (960 kg)
Rhenofit EDMA/S Rhenofit BDMA/S	Carton 55 lbs. (25 kg) skid, 1,320 lbs. (600 kg)
Rhenofit CF	Carton 35.2 lbs. Bags, 44 lbs. skid, 1,760 lbs.
Rhenofit NC	Paper bag, 44 lbs. (20 kg) skid, 2,200 lbs. (1,000 kg)
Rhenofit GE1136	Carton 55 lbs. (25 kg)
Rhenofit Na-Stearate-80	Carton 44 Lbs. (20kg)
Rhenofit F	Carton with 30 @ 1 kg PE bags

PROCESSING PROMOTERS

Aktiplast ®	
Aktiplast F Aktiplast T Aktiplast 8 Aktiplast M Aktiplast GT Aktiplast ST Aktiplast PP Aktiplast MS	Paper bags, 44 lbs. (20 kg); stretch-wrapped skid, 2,200 lbs. (1,000 kg)
Aktiplast 20	Paper bags, 55 lbs. (25 kg)
Aflux ®	
Aflux 12 Aflux 16 Aflux 25 Aflux 42 Aflux 54	Paper bags, 44 lbs. (20 kg); stretch-wrapped skid, 2,200 lbs. (1,000 kg)
Aflux PE11 Aflux PE12	Paper bags, 55 lbs. (25 kg)
Rhenosin ®	
Rhenosin 145A Rhenosin 260 Rhenosin 400	Plastic bags, 55 lbs. (25 kg); stretch-wrapped skid, 2,200 lbs. (1,000 kg)
Rhenosin 300	Fiber Drums, 300 lbs. and 50 lbs.
Rhenosin 300 M10	Carton, 44 lbs. (20 kg)
Rhenosin TD90 Rhenosin TD100 Rhenosin P6204K	Paper bags, 55 lbs. (25 kg)
Rhenosin C90 Rhenosin C100	Paper bags, 55 lbs. (25 kg)
Rhenosin P7433K Rhenosin P0790K	Paper bags, 55 lbs.
Rhenosin P0791K	Paper bags, 44 lbs.

PROCESSING PROMOTERS Continued

Rhenosin ® continued	
Rhenosin C30 Rhenosin CR100 Rhenosin TT10 Rhenosin TT90, 100 & 110	200kg Beaded drums Paper bags, 55 lbs. (25 kg) 200kg Beaded drums Paper bags, 55 lbs. (25 kg)
Rhenopren ®	
Rhenopren 10 Rhenopren 14 Rhenopren ZD Rhenopren HF	Paper bags, 55 lbs. (25 kg); stretch-wrapped skid, 2,200 lbs. (1,000 kg)
Rhenopren C Rhenopren R Rhenopren MB Rhenopren Asolvan Rhenopren Asolvan T	Paper bags, 44 lbs. (20 kg); stretch-wrapped skid, 1,760 lbs. (800 kg)
Rhenopren EPS	Paper bags, 44 lbs. (20 kg)
Rhenodiv 634-2 Rhenodiv 638-1	Metal cans, (10 kg) Metal cans, (20 kg)

SUN-CHECKING, ANTI-WEATHERING and OZONE PROTECTION WAXES

Antilux ®	
Antilux 111	Paper bag, 55 lbs. (25 kg); skid, 2,200 lbs. (1,000 kg)
Antilux 500 Antilux 600 Antilux 654 Antilux 660	Paper bag, 55 lbs. (25 kg); skid, 2,200 lbs. (1,000 kg) or paper bag, 44 lbs. (20 kg) skid, 1,716 lbs. (780 kg)
Antilux 500L	Paper bag, 44 lbs. (20 kg); skid, 2,200 lbs. (1,000 kg)

SPECIALITY POYLMERS

Urepan ®	
Urepan 0332G Urepan 640G Urepan 641G Urepan 600	EVA/PE Lined carton, 55 lbs. (25 kg)
Urepan 50EL06G	Skid, 2,200 lbs. (1,000 kg)

PRODUCT BROCHURES and TECHNICAL REPORTS ARE AVAILABLE THROUGH CUSTOMER SERVICE

PRODUCT BROCHURES

Rhenosin® Resins
Tackifying, dispersing, homogenizing, reinforcing and cross-linking resins for the Rubber Industry

Rhenosin® and Vulkadur® Resins
Tackifying, dispersing, homogenizing and reinforcing resins for the Rubber Industry

Rhenopren® EPS
General purpose processing promoter for the Rubber Industry

Rhenocure® AP range
New Additive Packages for the Rubber Industry: ingredients with no harmful nitrosamine formation

Peroxide Poly-Dispersion®
A guide to successful compound development with Peroxide Predispersions

Scorchguard 'O'®
Magnesium oxide in BARFORM

Zic-Stick®
Zinc oxide in BAR FORM

Urepan™
Specialty Elastomers with a Wide Range of applications for the Rubber Industry

Wyfire® Dispersions
Flame Retardants for the Rubber Industry

TECHNICAL REPORTS

No. 41 ELASTOMER-BOUND RUBBER CHEMICALS – IT DEPENDS ON THE BINDER!

No. 48 SELECTION OF COAGENTS FOR THE PEROXIDE CROSS-LINKAGE OF ELASTOMERS

No. 51 NITROSAMINE-FREE VULCANIZATION
Re-evaluation of Dithiophosphates as Accelerators which do not form N-Nitrosamines

No. 52 VULCANIZATION SYSTEMS
Accelerator systems for Injection Molding Compounds - Dependence on Economical Process Design

No. 54 CURING RESINS/PROCESSING PROMOTERS
More Uniform Bladder Life with Dispersions

No. 55 PEROXIDES
Peroxide Vulcanization of Elastomers

No. 56 PROCESSING PROMOTERS
Processing Agents in Black and Non-black Compounds

No. 58 PROCESSING PROMOTERS
Rhenosin® C/T in Passenger Tire Tread based on E-SBR

No. 59 VULCANIZATION SYSTEMS
Discussion on the Resistance to Reversion of Natural Rubber with the help of Thiophosphate Cure Systems

No. 60 PROCESSING PROMOTERS
Processing Promoters in Silica Tread Compounds

No. 61 RESINS IN PASSENGER CAR TIRE COMPOUNDS

No. 62 VULCANIZATION SYSTEMS
Improved Reversion Resistance by Using Dithioate Vulcanization Systems in Thick-Section Molded Parts Based on NR

No. 63 FASTER AND EASIER PROCESSING OF TIRE TREAD COMPOUNDS WITH PROCESSING PROMOTERS

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Products For The **Rubber** Industry

Rhein Chemie Corporation

Since 1889 we have been dedicated to the Rubber Industry with product quality, innovation, research and technical service.

Today we are unequaled in the industry with the broadest rubber chemical product portfolio. Our people have worldwide experience in technical service and application development. Rhein Chemie's customer service is focused on satisfying your needs and solving your problems before they develop.

What makes Rhein Chemie truly unique is our ability to provide product solutions to **solve** your rubber **processing problems**. Our technical team can recommend standard products, or design entirely new product solutions to satisfy your specific processing needs.

Rhein Chemie provides you with unsurpassed **Rubber Processing Power,** RP **2...**

PRE-WEIGH CURE PACKAGES

Predispersed Chemicals in pellet, granule or pastille form are NOW AVAILABLE in pre-weighed single component or multi-component combinations in low melt or polyethylene bags.

RheinChemie

A Bayer Company

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