



Chemical Masterbatches



SLABS CHEXS PELLETS

WHAT ARE CHEMICAL MASTERBATCHES?

A chemical masterbatch is the high shear blending of a chemical(s) into a polymeric binder system resulting in a homogeneous, single-phase blend. This product is then made available to the customer, in various physical forms, for easy dispersion into a rubber compound.

BENEFITS OF USING CHEMICAL MASTERBATCHES

For Akrochem, the term "Chemical Masterbatch" refers to a wide range of polymer-bound, pre-dispersed products. Benefits of using Akrochem's polymer bound dispersions include:

- Good dispersion and uniform distribution of the active chemical.
- Pre-dispersed chemicals only need to be blended into a compound instead of mixing or shearing.
- Rapid incorporation of the active ingredient(s).
- Greater batch-to-batch uniformity.
- Improves accuracy of additions.
- Improves handling and reduces dust.
- Reduces health and safety concerns by reducing exposure to hazardous chemicals.
- Improves quality.
- Shortens mixing cycles.
- Reduces "fly loss".

BINDER SYSTEMS

CM	Chlorinated Polyethylene (CPE)
ECO	Epichlorohydrin
EPDM	Ethylene-Propylene Terpolymer
EPR	Ethylene-Propylene Copolymer
EVA	Ethylene Vinyl Acetate
IIR	Isobutylene-Isoprene
NBR	Acrylonitrile Rubber
NR/IR	Natural / Polyisoprene
PIB	Polyisobutylene
SBR	Styrene-Butadiene

NOMENCLATURE

Akrochem chemical masterbatch products are identified by the following technical properties:

ACTIVE CHEMICAL, CONCENTRATION, BINDER SYSTEM, PHYSICAL FORM, COLOR

As an example: a 75% MBTS dispersion in EPR would be named **AKROSPERSE MBTS 75/EPR/S**, and would be defined as follows:

MBTS	Active Chemical	"MBTS"
75	Concentration	75% Activity
EPR	Binder System	EPR Rubber (Elastomer)
S	Physical Form	Slabs

Where applicable, a color code would follow the physical form. If the above product was blue in color, the name would read: **AKROSPERSE MBTS-75/EPR/S-B**. The "B" indicates the color "blue".

FORMS

Akrochem's polymer-bound Chemical Masterbatches are available in three convenient forms to meet your specific needs.



AKROSPERSE™
1/4" x 3-1/2" x 12" slabs



AKROCHEX™
1/4" cubes



AKROFORM™
1/4" Cylindrical Pellets

Technical Properties (CHEMICAL MASTERBATCHES)

ACTIVE CHEMICAL	SPECIFIC GRAVITY	DESCRIPTION/ PRODUCT NAME	PERCENT ACTIVE	BINDER SYSTEM	PHYSICAL FORM
DITHIOCARBAMATES					
CDMC CuDD	1.43	copper dimethyldithiocarbamate AKROFORM CUDD-75/EPR/P	75	EPR	Pellets
ZDBC Accelerator BZ	1.13	zinc dibutyldithiocarbamate AKROFORM ZDBC-75/EPR/P	75	EPR	Pellets
	1.14	AKROFORM BZ-75/EPR/P	75	EPR	Pellets
	1.14	AKROSPERSE BZ-75/EPR/S	75	EPR	Slabs
ZDEC Accelerator EZ	1.28	zinc diethyldithiocarbamate AKROFORM ZDEC-75/EPR/P	75	EPR	Pellets
ZDMC Accelerator MZ	1.30	zinc dimethyldithiocarbamate AKROFORM ZDMC-75/EPR/P	75	EPR	Pellets
	1.36	AKROFORM ZDMC-80/EPR/P	80	EPR	Pellets
ZBED Accelerator ZBED	1.21	zinc dibenzylthiocarbamate AKROFORM ZBED-70/EPR/P	70	EPR	Pellets
	1.21	AKROFORM ZBED-70/EPR/P-GN	70	EPR	Pellets (green)
TDEC Accelerator TDEC	1.27	Tellurium diethyldithiocarbamate AKROFORM TDEC-80/EPR/P	80	EPR	Pellets
GUANIDINES					
DOTG	1.10	di-ortho-tolylguanidine AKROCHEX DOTG-75/EPR/C	75	EPR	Cubes
DPG	1.09	diphenylguanidine AKROFORM DPG-80/EPR/P	80	EPR	Pellets
SULFENAMIDES					
CBS Accelerator CBTS	1.17	N-cychlehexyl-2-benzothiazole sulfenamide AKROSPERSE CBS-75/EPR/S	75	EPR	Slab
	1.17	AKROCHEX CBS-75/EPR/C	75	EPR	Cubes
OTOS Otos	1.17	thiocarbamyl sulfenamide AKROCHEX OTOS-70/EPR/C-LB	70	EPR	Cubes (lt. blue)*
MBS Accelerator OBTS	1.25	2-(morpholinothio)Benzothiazole -or- N-oxydiethylene-benzothiazole sulfenamide AKROFORM MBS-80/EPR/P	80	EPR	Pellets
BBTS Accelerator BBTS	1.15	N-tert-butyl-2-benzothiazole sulfenamide AKROSPERSE TBBS-75/EPR/S-B	75	EPR	Slabs (blue)*
	1.15	AKROFORM TBBS-75/EPR/P-B	75	EPR	Pellets (blue)*
	1.15	AKROFORM TBBS-75/EPR/P	75	EPR	Pellets
THIOUREAS					
DETU	1.00	diethyl thiourea AKROFORM DETU-75/EPR/P	75	EPR	Pellets
DPTU Accelerator Thio #1	1.15	n,n-diphenyl thiourea AKROFORM DPTU-75/EPR/P	75	EPR	Pellets
ETU	1.20	ethylene thiourea AKROFORM ETU-75/EPR/P	75	EPR	Pellets
MTT	1.14	3-methylthiazolidine thione AKROFORM MTT-80/EPR/P	80	EPR	Pellets
THIAZOLES					
MBT	1.25	2-mercaptobenzothiazole AKROFORM MBT-75/EPR/P	75	EPR	Pellets
MBTS	1.35	benzothiazole disulfide AKROSPERSE MBTS-75/NBR/S	75	NBR	Slabs
	1.32	AKROFORM MBTS-75/SBR/P	75	SBR	Pellets
	1.32	AKROFORM MBTS-75/NBR/P	75	NBR	Pellets
	1.22	AKROFORM MBTS-75/EPR/P	75	EPR	Pellets
	1.30	AKROCHEX MBTS-75/EPR/C	75	EPR	Cubes
ZMBT	1.40	zinc-2-mercaptobenzothiazole AKROSPERSE ZMBT-75/EPR/S	75	EPR	Slabs

ACTIVE CHEMICAL	SPECIFIC GRAVITY	DESCRIPTION/ PRODUCT NAME	PERCENT ACTIVE	BINDER SYSTEM	PHYSICAL FORM
THIURAMS					
DPTT	1.11	dipentamethylene polysulfide (tetra/hexa)	70	EPR	Slabs (green)
	1.23	AKROPERSE DPTT-70/EPR/S-GR AKROFORM DPTT-70/EPR/P	70	EPR	Pellets
TBZTD	1.03	tetrabenzylthiuram disulfide AKROFORM TBZTD-70/EPR/P-Pk	70	EPR	Pellets (pink)
TETD	1.15	tetraethylthiuram disulfide AKROFORM TETD-75/EPR/P	75	EPR	Pellets
TMTD	1.23	tetramethylthiuram disulfide AKROPERSE TMTD-75/EPR/S-OR	75	EPR	Slabs (orange)*
	1.20	AKROFORM TMTD-75/EPR/P-OR	75	EPR	Pellets (orange)*
	1.20	AKROFORM TMTD-75/EPR/P	75	EPR	Pellets
TMTM	1.24	tetramethylthiuram monosulfide AKROPERSE TMTM-75/EPR/S	75	EPR	Slabs
	1.24	AKROFORM TMTM-80/EPR/P	80	EPR	Pellets
AMINES					
HMT HEXA	1.20	hexamethylenetetramine AKROFORM HMT-80/EPR/P	80	EPR	Pellets
THIOPHOSPHATES					
ZBDTP Accelerator VS	1.28	zinc dibutyl dithiophosphate AKROFORM VS-50/EPR/P	50	EPR	Pellets
ZATP	1.30	AKROFORM ZATP-70/EPR/P	70	EPR	Pellets
PEROXIDES					
DC	1.10	dicumyl peroxide AKROFORM DC-40/EPR/P	40	EPR	Pellets
	1.07	AKROFORM DC-60/EPR/P	60	EPR	Pellets
VC	1.03	a,a bis (t-butylperoxy) diisopropylbenzene AKROFORM VC-40/EPR/P	40	EPR	Pellets
MISCELLANEOUS					
CLD	1.20	1,1 -dithiobis hexahydro-2H-azepin-2-one AKROFORM CLD-80/EPR/P	80	EPR	Pellets
DTDM Accelerator R	1.18	4,4 -dithiodimorpholine AKROFORM DTDM-80/EPR/P	80	EPR	Pellets
	1.21	AKROPERSE DTDM-75/NAT/S	75	NAT	Slabs
Sulfur Rubbermakers	1.62	(S - 8) rhombic AKROPERSE S-80/EPR/S	80	EPR	Slabs
	1.52	AKROFORM S-80/EPR/P	80	EPR	Pellets
	1.62	AKROPERSE S-75/NBR/S	75	NBR	Slabs
	1.58	AKROCHEX S-75/EPR/C	75	EPR	Cubes
	1.53	AKROPERSE S-70/SBR/S	70	SBR	Slabs
	1.62	AKROCHEX S-75/NBR/C	75	NBR	Cubes
	1.27	AKROPERSE E-29370 50MC-98	50	NR	Slabs
SULFUR Insoluable	1.45	AKROFORM IS-70/SBR/P	70	SBR	Pellets
RETARDERS					
CTP Retarder CTP	1.21	N-cyclohexylthiophthalimide AKROFORM CTP-75/EPR/P	75	EPR	Pellets
PX Retarder PX	1.29	modified Phthalic anhydride AKROFORM PX-75/EPR/P-O	75	EPR	Pellets (orange)*
	1.32	AKROFORM PX-75/EVA/P	75	EVA	Pellets
SAFE Retarder Safe	1.42	Aromatic Sulfonamide AKROFORM RETARD SAFE-80/EPR/P	80	EPR	Pellets
OZONE INHIBITORS					
NBC/NDBC NiBud	1.12	nickel dibutyldithiocarbamate AKROFORM NDBC-75/EPR/P	75	EPR	Pellets
BONDING AGENTS					
Resorcinol	1.11	AKROFORM Resorcinol 80/EPR/P	80	EPR	Pellet

ACTIVE CHEMICAL	SPECIFIC GRAVITY	DESCRIPTION/ PRODUCT NAME	PERCENT ACTIVE	BINDER SYSTEM	PHYSICAL FORM
INORGANIC ACTIVATORS AND STABILIZERS					
ZnO		zinc oxide			
French Process	3.16	AKROSPERSE ZNO-85/EPR/S	85	EPR	Slabs
(supersack)	3.16	AKROFORM ZNO-85/EPR/P	85	EPR	Pellets
	3.23	AKROSPERSE ZNO-85/NBR/S	85	NBR	Slabs
	3.23	AKROFORM ZNO-85/NBR/P	85	NBR	Pellets
ZnO/CN	2.90	AKROSPERSE ZNO-CN-80/NBR/S-E168	80	NBR	Slabs
Treated ZnO for XNBR	2.88	AKROSPERSE ZNO-CN-80/NBR/S	80	NBR	Slabs
FOAM PROMOTERS					
Urea	1.11	AKROFORM TK-75/EPR/P	75	EPR	Pellets
	1.18	AKROSPERSE Urea-75/EPR/S	75	EPR	Slabs
DNPT	1.27	AKROFORM DNPT-75EPR/P	75	EPR	Pellets
CO-AGENTS					
PDM	1.21	AKROFORM PDM-75/EPR/P	75	EPR	Pellets
ZDA	1.24	AKROSPERSE ZDA-70/EPR/S	70	EPR	Slabs
TAC	0.97	AKROFORM TAC-50EPR/P	50	EPR	Pellets
ANTIOXIDANTS					
Sb ₂ O ₃	3.10	AKROSPERSE SB203-85/EPR/S	85	ERP	Slabs
AO58	1.23	AKROFORM AO58-70/EPR/P	70	ERP	Pellets

PACKAGING?

Akrochem chemical masterbatch products are packaged in standard 50 pound or 55 pound, corrugated boxes or 55 pound multi-walled bags; which are available with 900 pounds per pallet.

STORAGE?

It is recommended that all chemical masterbatches be stored in a temperature controlled environment and away from heat, moisture and direct sunlight.

SHELF-LIFE?

It is recommended that a chemical masterbatch be used within eighteen (18) months from the date of manufacture. Chemical masterbatches can be re-qualified if they are past their date of expiration by submitting them for testing to determine the quality of their function in a rubber compound. As a convenience, Akrochem will gladly test any of our chemical masterbatches that have expired.

COMMITMENT TO QUALITY – BEFORE AND AFTER THE SALE?

Akrochem is committed to providing consistent, high-quality polymer bound chemical masterbatches made from high-quality raw materials to meet the individual needs of our customers.

Please feel free to contact your Akrochem Technical Sales Representative or Technical Service personnel to discuss your specific needs.

QUALITY ASSURANCE?

Dependable products are vital to your operation. To insure the integrity of our Chemical Masterbatches, we maintain the following safeguards.

- Incoming **raw material testing**, including FTIR.
- Total **quality control** (including Rheometer testing and Mooney Viscosity control of MB) to ensure:
 - Uniformity of dispersion.
 - Consistent activity (rheometer testing).
 - Ease of incorporation (Mooney Viscosity control of MB).
- Full **traceability** of all raw materials





Warehouse Locations

- Akron, OH
- Atlanta, GA
- Baytown, TX
- Chino, CA
- Lincoln, NE
- St. Louis, MO
- Stow, OH



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