

Multisperse®

Elastomer Bound Chemical Dispersions

June 17, 2023



THINKING OF TOMORROW

omya.com

Multisperse®

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MULTISPERSE® is
the trade name of the
well known range of
elastomer bound
chemical dispersions
produced by Omya.
Also called as **MSP**.



MULTISPERSE

Agenda

- About Multisperse
- Manufacturing Capabilities
- Target Markets
- Product Range
- Why consider Multisperse?



About Multisperse®

- Multisperse is a trademark of Omya's Rubber masterbatch
- Omya has been in this business since 30+ years serving customers' globally
- Business was originally established in Humber, United Kingdom
- In 2019, a second manufacturing plant was built in Qingyang, Chizhou City, Anhui Province, China to provide high quality products at competitive prices
- Qingyang plant's current capacity is 2,000 mt p.a. with plans to scale it up to 6,000 mt p.a.
- Qingyang plant is fully functional, ISO certified, VDA 6.3 audit ready and European REACH compliant



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CNQZ
ISO Certified





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*A Solution to
Dry Rubber Industries*



MULTISPERSE

Multisperse® Products

Masterbatch for Dry Rubber

1 Binder System

2 Active Ingredient

4



BINDER TYPES		
A = Acrylonitrile Butadiene (NBR)	E = Ethylene propylene	K = Chlorinated polyethylene
P = PolyisobutyleneR	R = Polyisoprene	S = Styrene butadiene



E -NDBC-75 P

Level of Active ingredient (%)

3

Product form

The final suffix denotes P = Pellets
Without a suffix denotes slab form

PHYSICAL FORMS		
No letter = Standard slab	R = Roller quality slab	P = Pellet form

Typical Rubber Compound

1. Rubber (Binder System)

- N = Natural Rubber (NR)
- R = Isoprene Rubber (IR)
- A = Nitrile Butadiene Rubber (NBR)
- K = Chlorinated Polyethylene (CPE)
- S = Styrene Butadiene Rubber (SBR)
- P = Butadiene Rubber (BR)
- E = Ethylene Propylene Rubbers (EPDM / EPM)

1

2. Additives (Active Ingredient)

- Curatives
- Accelerators
- Activators
- Flame Retardants
- Blowing Agents
- Processing Aids
- Plasticisers
- Silanes & etc

2

3. Filler

- Inorganic Filler
- Silicate Glass
- Fumed Silica
- Carbon Black
- Clay
- Talc

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Multisperse® Products

1. Focus on Automotive, Tyre and Shoe Sole Market
2. Customize products and Make to Order products are available to offer.



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Why should consider Omya Multisperse® ?

- One of the pioneers in pre-dispersed rubber chemicals
- Serving European tyre & automotive customers' since 20+ years
- Established product range for tyre, automotive and rubber industries
- Batch to batch quality consistency and an established supply chain globally
- Full compliance on Regulatory, Health & Safety - raw mat. to finished products
- Comply with Automotive VDA6.3 process audit, ready to pass strictest audit
- REACH, RoHS compliance and ISO certified
- Flexible process allows customizing products as per your customers' needs



MULTISPERSE

Multisperse® Products

Sulphur

Activator

Accelerator

Customized Specialty Masterbatch



Added Value – Why use Masterbatch?

1. Health & Safety :

- Reduce dust by switching to Masterbatch. Increased cleanliness and ease of handling (weighing out / screw feeding etc).
- Dust can be harmful depending on raw materials. Environment Health and Safety Protection for Workers.
- Reduces hazardous waste packaging

2. Faster and ease of incorporation – improved quality of Dispersion and Distribution as well as reduced Cycle Times in rubber mixes.

3. When using an open mill – some customers prefer slab products to avoid loss of pellets.

4. Colour coding of pellets helps identification. Industry typically uses same colours for same products

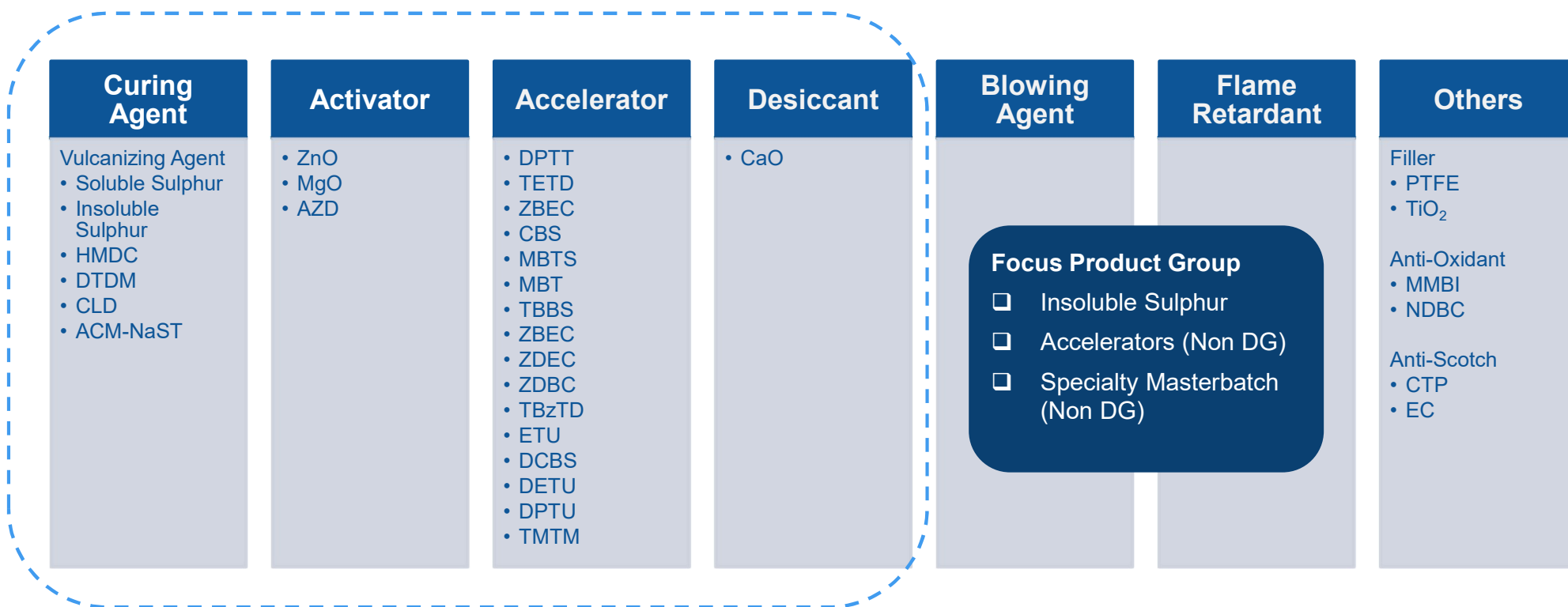
5. Improved yields – less loss of product vs powder.

6. Avoid Moisture Absorption.

7. Flexibility in operation packed in small box.



Focus Products – Pre-Dispersed Rubber Chemical



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Multisperse® Products

1. Focus on Automotive, Tyre and Shoe Sole Market

2. Customize products and Make to Order products are available as per the request of customer.

3. Refer to Product list for latest updated version

No.	Product Group	Product Description
1	Curing Additive	MSP S-IS-70PP-QZ*F20*OWPLS*1000
2	Curing Additive	MSP S-IS-70P-QZ*F20*OWS*1000
3	Curing Additive	MSP S-IS-65P-QZ*F20*OWPLS*1000
4	Curing Additive	MSP S-SD-80P-QZ*F20*OWS*800
5	Curing Additive	MSP S-SD-80PH-QZ*F20*OWS*800
6	Curing Additive	MSP S-SD-75R-QZ*F25*OWS*1000
7	Curing Additive	MSP E-SD-80P-QZ*F20*OWS*800
8	Curing Additive	MSP N-SD-80P-QZ*F20*OWS*800
9	Curing Additive	MSP A-SD-75R-QZ*F25*OWS*1000
10	Curing Additive	MSP A-SD-75P-QZ*F20*OWS*800
11	Curing Additive	MSP E-CLD-75P-QZ*F20*OWS*720
12	Curing Additive	MSP S-SD-75P-QZ*F20*OWS*800
13	Curing Additive	MSP R-IS-55.6-QZ*F20*OWS*1000
14	Curing Additive	MSP R-SD-70-QZ*F20*OWS*800
15	Curing Additive	MSP R-SD-75-QZ*F20*OWS*800
16	Curing Additive	MSP EA-HMDC-70-QZ*F20*OWS*800
17	Curing Additive	MSP E-DTDM-80P-QZ*F18*OWS*720
18	Activator	MSP E-ZD-85P-QZ*F20*OWS*1000
19	Activator	MSP A-ZD-85P-QZ*F20*OWS*1000
20	Activator	MSP A-ZD-85-QZ*F25*OWS*1000
21	Activator	MSP R-ZD-85P-QZ*F20*OWS*1000
22	Activator	MSP N-ZD-80P-QZ*F20*OWS*1000
23	Activator	MSP S-ZD-85P-QZ*F20*OWS*1000
24	Activator	MSP E-MgO-75P-QZ*F25*OWS*1000
25	Activator	MSP E-MgO-70P-QZ*F25*OWS*1000
26	Activator	MSP ACM-NaST-70P-QZ*F15*OWS*600
27	Activator	MSP E-AZD-70P*F20*OWS*1000

No.	Product Group	Product Description
28	Accelerator	MSP E-CBS-75P-QZ*F15*OWSC*600
29	Accelerator	MSP E-CBS-80P-QZ *F15*OWSC*600
30	Accelerator	MSP N-CBS-80P-QZ *F15*OWSC*600
31	Accelerator	MSP S-CBS-75P-QZ*F16*OWS*640
32	Accelerator	MSP A-CBS-75P-QZ*F16*OWSC*640
33	Accelerator	MSP E-TBBS-80P-QZ*F16*OWS*640
34	Accelerator	MSP E-MBT-75P-QZ*F18*OWS*720
35	Accelerator	MSP E-MBT-80P-QZ*F18*OWS*720
36	Accelerator	MSP S-MBT-75P-QZ*F18*OWS*720
37	Accelerator	MSP S-MBTS-75P-QZ*F600*OWS*600
38	Accelerator	MSP E-MBTS-75P-QZ*F18*OWS*720
39	Accelerator	MSP E-DPTT-75P-QZ*F18*OWS*720
40	Accelerator	MSP E-TBzTD-70P-QZ*F18*OWS*720
41	Accelerator	MSP S-TBzTD-70P-QZ*F18*OWS*720
42	Accelerator	MSP E-TMTM-75P-QZ*F17*OWS*680
43	Accelerator	MSP E-ZBEC-70P-QZ*F15*OWS*600
44	Accelerator	MSP E-ZDBC-75P-QZ*F15*OWS*600
45	Accelerator	MSP E-ZDEC-75P-QZ*F18*OWS*720
46	Accelerator	MSP E-MBT-80-QZ*F18*OWS*720
47	Accelerator	MSP E-TETD-75P-QZ*F18*OWS*720
48	Accelerator	MSP S-DTDM-80P-QZ*F18*OWS*720
49	Drying Agent	MSP E-CAO-80P-QZ*F25*OWS*1000
50	Drying Agent	MSP A-CAO-80P-QZ*F25*OWS*1000
51	Anti-Scorch	MSP S-CTP-80P-QZ*F18*OWS*720
52	Anti-Scorch	MSP E-EC-80P-QZ*F20*OWS*800
53	Filler	MSP A-PTFE-80P-QZ*F25*OWS*1000
54	Filler	MSP A-TI-80P-QZ*F25*OWS*1000



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Multisperse® Product Description

No.	Product Group	Chemical Ingredient	Product Description	Applications
1	Curing Agent - Sulphur	Insoluble Sulfur	MSP S-IS-70PP-QZ*F20*OWPLS*1000	1. The insoluble sulfur contains modified polysulfide S element which is insoluble in carbon disulfide. 2. Use in Nature rubber and Synthetic rubber as common curing agent. 3. Minimize "blooming phenomena" in rubber mixing.
2	Curing Agent - Sulphur	Insoluble Sulfur	MSP S-IS-70P-QZ*F20*OWS*1000	
3	Curing Agent - Sulphur	Insoluble Sulfur	MSP S-IS-65P-QZ*F20*OWPLS*1000	
4	Curing Agent - Sulphur	Insoluble Sulfur	MSP R-IS-55.6-QZ*F20*OWS*1000	1. Use in rubber (example : NR, SBR, BR) compound. 2. It is a curing agent in rubber compound.
5	Curing Agent - Sulphur	Soluble Sulfur	MSP S-SD-80P-QZ*F20*OWS*800	
6	Curing Agent – Sulphur	Soluble Sulfur	MSP S-SD-80PH-QZ*F20*OWS*800	
7	Curing Agent – Sulphur	Soluble Sulfur	MSP S-SD-80PX-QZ*F20*OWS*800	
8	Curing Agent - Sulphur	Insoluble Sulfur	MSP S-SD-75P-QZ*F20*OWS*800	
9	Curing Agent - Sulphur	Soluble Sulfur	MSP S-SD-75R-QZ*F25*OWS*1000	
10	Curing Agent - Sulphur	Soluble Sulfur	MSP E-SD-80P-QZ*F20*OWS*800	
11	Curing Agent - Sulphur	Soluble Sulfur	MSP N-SD-80P-QZ*F20*OWS*800	
12	Curing Agent - Sulphur	Soluble Sulfur	MSP A-SD-75R-QZ*F25*OWS*1000	
13	Curing Agent - Sulphur	Soluble Sulfur	MSP A-SD-75P-QZ*F20*OWS*800	
14	Curing Agent - Sulphur	Soluble Sulfur	MSP R-SD-70-QZ*F20*OWS*800	
15	Curing Agent - Sulphur	Soluble Sulfur	MSP R-SD-75-QZ*F20*OWS*800	
16	Curing Agent - 4,4'-dimorpholine disulfide	Dicaprolactam disulfide	MSP E-CLD-75P-QZ*F20*OWS*720	1. Environmentally friendly alternative to DTD curing agent without nitrosamine. 2. Can be used for color rubber products (including light colored products).
17	Curing agent- Hexamethylenediamine carbamate	Hexamethylenediamine carbamate	MSP EA-HMDC-70-QZ*F20*OWS*800	1. Use in FKM, AEM (VAMAC), ACM compound as rubber vulcanizing agent. At the same time in NR, SBR as a sulfide active agent.
18	Curing Agent - 4,4'-dimorpholine disulfide	4,4'-dimorpholine disulfide	MSP E-DTDM-80P-QZ*F18*OWS*720	1. DTDM is a sulfur donor that can release elemental sulfur in the vulcanization of rubber
19	Curing Agent - 4,4'-dimorpholine disulfide	4,4'-dimorpholine disulfide	MSP S-DTDM-80P-QZ*F18*OWS*720	
20	Activator - Zinc Oxide	Zinc Oxide	MSP E-ZD-85P-QZ*F20*OWS*1000	1. Compared with ZnO powder, the pre-dispersed masterbatch shows smoother surface in extruded rubber parts. 2. Improved compound tensile property.
21	Activator - Zinc Oxide	Zinc Oxide	MSP S-ZD-85P-QZ*F20*OWS*1000	
22	Activator - Zinc Oxide	Zinc Oxide	MSP A-ZD-85P-QZ*F20*OWS*1000	
23	Activator - Zinc Oxide	Zinc Oxide	MSP A-ZD-85-QZ*F25*OWS*1000	
24	Activator - Zinc Oxide	Zinc Oxide	MSP R-ZD-85P-QZ*F20*OWS*1000	
25	Activator - Zinc Oxide	Zinc Oxide	MSP N-ZD-80P-QZ*F20*OWS*1000	
26	Activator - Zinc Oxide	Active Zinc Oxide	MSP E-AZD-70P*F20*OWS*1000	1. Improve crosslinking density, physical properties, tear strength, and wear resistance.



MULTISPERSE

Multisperse® Product Description

No.	Product Group	Chemical Ingredient	Product Description	Applications
27	Activator - Magnesium Oxide	Magnesium Oxide	MSP E-MgO-75P-QZ*F25*OWS*1000	1. It has the function of anti - scorch agent (CR, CSM, CIIR, etc.), vulcanization accelerator, acid absorbent (halogenated butyl rubber will release hydrogen chloride during vulcanization), filling, etc.
28	Activator - Magnesium Oxide	Active Magnesium Oxide	MSP E-MgO-70P-QZ*F25*OWS*1000	1. Use as curing compound accelerator for NR, Synthetic rubber, Latex. Speed up the compound curing speed, increase the crosslink density, 2. As activator, has activation function to each kinds of accelerators like thiuram, thiazole, guanidines, sulfenamide and so on. 3. Improve the thermal conductivity of rubber, support to dissipate heat
29	Activator – NaST	Sodium Stearate	MSP ACM-NaST-70P-QZ*F15*OWS*600	1. It is used with potassium stearate as vulcanizing activator agent in ACM, and the active agent is used as a part of the vulcanization system
30	Accelerator – Sulfonamides	N-cyclohexyl-2-benzothiazole subsulfonamide	MSP E-CBS-75P-QZ*F15*OWSC*600	1. CBS is one of primary accelerator. It has high curing speed (fast reaction), could achieve high modulus compound. 2. It could be used as an accelerator in Nature rubber or Synthetic rubber. Better performance in EPDM compound.
31	Accelerator - Sulfonamides	N-cyclohexyl-2-benzothiazole subsulfonamide	MSP E-CBS-80P-QZ *F15*OWSC*600	
32	Accelerator - Sulfonamides	N-cyclohexyl-2-benzothiazole subsulfonamide	MSP N-CBS-80P-QZ *F15*OWSC*600	
33	Accelerator - Sulfonamides	N-cyclohexyl-2-benzothiazole subsulfonamide	MSP A-CBS-75P-QZ*F16*OWSC*640	
34	Accelerator – Sulfonamides	N-cyclohexyl-2-benzothiazole subsulfonamide	MSP S-CBS-75P-QZ*F16*OWS*640	
35	Accelerator – Sulfonamides	N-tert-butyl-2-benzothiazole subsulfonamide	MSP E-TBBS-80P-QZ*F16*OWS*640	1. TBBS could be used in NR, BR and SBR compound. 2. One of fastest curing speed accelerator and has higher modulus in the cured compound. 3. It could be used in rubber compound recipe as single accelerator or with other accelerators.
36	Accelerator - Thiazoles	2-Mercaptobenzothiazole	MSP E-MBT-75P-QZ*F18*OWS*720	1. MBT is one of the fastest & environmental accelerator uses in NR or Synthetic rubber. 2. Use together with TMTD, TETD or DPG as secondary accelerator, enable low temperature curing. 3. With CBS could be secondary accelerator too.
37	Accelerator - Thiazoles	2-Mercaptobenzothiazole	MSP E-MBT-80P-QZ*F18*OWS*720	
38	Accelerator - Thiazoles	2-Mercaptobenzothiazole	MSP E-MBT-80-QZ*F18*OWS*720	
39	Accelerator - Thiazoles	2-Mercaptobenzothiazole	MSP S-MBT-75P-QZ*F18*OWS*720	
40	Accelerator - Thiazoles	Dibenzothiazole disulfide	MSP S-MBTS-75P-QZ*F600*OWS*600	1. Use in Nature Rubber or Synthetic rubber. 2. Medium curing speed in compound and the curing characteristic in MDR curing curve is flat. 3. The compound scorch property is better than MBT.
41	Accelerator - Thiazoles	Dibenzothiazole disulfide	MSP E-MBTS-75P-QZ*F18*OWS*720	
42	Accelerator - Thiuram	Dipentylmethylthiuram tetrasulfide	MSP E-DPTT-75P-QZ*F18*OWS*720	1. DPTT could be used in NR, IR, SBR, EPDM, CR, IIR and CSM compound as primary or secondary accelerator or S element supply. 2. Improved cured rubber compound to achieve high heat anti-aging property. 3. It could be used in light color rubber part.



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Multisperse® Product Description

No.	Product Group	Chemical Ingredient	Product Description	Applications
43	Accelerator – Thiuram	Tetraethyl thiuram disulfide	MSP E-TETD-75P-QZ*F18*OWS*720	1. The TETD function is similar to TMTD with good scorching property (longer TS2 or T5). 2. The melting point is lower, so it could be used in the low ML rubber compound. 3. It also could be used as plasticizer in CR rubber compound.
44	Accelerator – Thiuram	Tetrakis dithiocarbamate	MSP E-TBzTD-70P-QZ*F18*OWS*720	1. As a substitute for TMTD, thiuram accelerator is a non carcinogen with better processing safety and longer scorching time than TMTD, which can also be called vulcanization reductant.
45	Accelerator – Thiuram	Tetrakis dithiocarbamate	MSP S-TBzTD-70P-QZ*F18*OWS*720	
46	Accelerator – Thiuram	Tetramethylthiuram monosulfide	MSP E-TMTM-75P-QZ*F17*OWS*680	1. It has good processing safety. It mainly uses the second accelerator or sub accelerator combined with the main accelerator to obtain better vulcanization speed.
47	Accelerator – Dithiocarbamates	Zinc dithiocarbamate	MSP E-ZBEC-70P-QZ*F15*OWS*600	1. ZBEC could be used in NR, SBR, EPDM, IIR compound and some synthetic rubber latex as curing accelerator. 2. It has excellent anti-scorch property. 3. Environmental protection accelerator, Nitrosamine Free
48	Accelerator – Dithiocarbamates	Zinc dibutyl dithiocarbamate	MSP E-ZDBC-75P-QZ*F15*OWS*600	1. ZDBC could be used in NR, SBR, EPDM, IIR compound as Primary or secondary accelerator and in some synthetic rubber latex also as curing accelerator with the faster speed than ZDEC and ZDMC. 2. It has high anti-scorch property. 3. To use as anti-oxidant in curing compound application.
49	Accelerator – Dithiocarbamates	Zinc Diethyldithiocarbamate	MSP E-ZDEC-75P-QZ*F18*OWS*720	1. ZDEC could be used in NR, SBR, EPDM and IIR compound as main or secondary accelerator and in some synthetic rubber latex. 2. To use as anti-oxidant in curing compound application.
50	Drying Agent – CaO	Calcium Oxide	MSP E-CAO-80P-QZ*F25*OWS*1000	1.Desiccant masterbatch. The CaO could react with H2O to form Ca(OH)2. 2.Normally uses in continuous rubber product production.
51	Drying Agent – CaO	Calcium Oxide	MSP A-CAO-80P-QZ*F25*OWS*1000	
52	Anti Scorch Agent – Dimethimide	N-cyclohexyl thiophthalimide	MSP S-CTP-80P-QZ*F18*OWS*720	1.When CTP is used in conventional rubber, it is usually used to prevent early vulcanization and scorching. It has great activity. At present, it is the most widely used anti scorching agent.
53	Anti Scorch Agent - Benzene sulfonamide derivatives	Benzenesulfonamide derivatives	MSP E-EC-80P-QZ*F20*OWS*800	1. Environmental protection anti scorch agent for natural and synthetic rubber. 2. Improve compound physical properties of rubber and compression set.
54	Filler - PTFE	Polytetrafluoroethylene	MSP A-PTFE-80P-QZ*F25*OWS*1000	1. As a filler mixed with high temperature resistant rubber to improve high temperature resistance, corrosion resistance, acid and alkali resistance, wear resistance and oil resistance. Reinforcing of rubber compound. 2. Can be used in timing belt coating and rubber roller industry.
55	Filler - TiO2	Titanium dioxide	MSP A-TI-80P-QZ*F25*OWSC*1000	1.Titanium dioxide can be used as a colorant and also has a filling and reinforcing effect in the rubber compound. 2. Add titanium dioxide in light color rubber products, the finished products have no cracking, no fading, high elongation and acid and alkali resistance. 3. When used in the production of automobile tires, a certain amount of rutile type products are often added to enhance its anti-ozone and anti-ultraviolet ability.



MULTISPERSE

Multisperse® New Development Products

1. Focus on Automotive, Tyre and Shoe Sole Market
2. Customize products and Make to Order products are available as per the request of customer.

No.	Product Group	Product Description
1	Activator	MSP ACM-NaST-70P-QZ*F15*OWS*600
2	Activator	MSP E-ZnCO3-75P-QZ*F18*OWS*720
3	Activator	MSP E-ZDA-80P-QZ*F20*OWS*1000
4	Accelerator	MSP E-DCBS-80P-QZ *F15*OWS*600
5	Accelerator	MSP A-MPTD-70-QZ*F18*OWS*720
6	Accelerator	MSP E-TDEC-75PF-QZ*F18*OWS*720
7	Accelerator	MSP E-DPTU-80P-QZ*F16*OWS*640
8	Accelerator	MSP E-DETU-80P-QZ*F13*OWS*520
9	Accelerator	MSP E-MBT-80P-QZ*F18*OWS*720
10	Anti-Oxidant	MSP E-MMBI-70P-QZ*F15*OWS*600
11	Anti-Oxidant	MSP E-NDBC-75P-QZ*F15*OWSC*600
12	Activator	MSP S-ZD-85P-QZ*F20*OWS*1000
13	Filler	MSP E-TI-80P-QZ*F25*OWS*1000



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Multisperse® New Development Product Description

No.	Product Group	Chemical Ingredient	Product Description	Applications
1	Activator - NaST	Sodium Stearate	MSP ACM-NaST-70P-QZ*F15*OWS*600	1.It is used with potassium stearate as vulcanizing activator agent in ACM, and the active agent is used as a part of the vulcanization system
2	Activator - ZnCO3	Zinc Carbonate	MSP E-ZnCO3-75P-QZ*F18*OWS*720	1. Speed up vulcanization 2. The transparency is better than zinc oxide and there is no whitening phenomenon. It is generally used to produce sulfur vulcanized translucent rubber products. 3. The hardness will increase apparently.
3	Accelerator - Zinc Acrylic	Zinc Acrylic	MSP E-ZDA-80P-QZ*F20*OWS*1000	1. Zinc Acrylic use as coupling agent together with peroxide to improve crosslinking density. 2. Increase compound adhesion on metal surface, improve the heat anti - aging tensile property.
4	Accelerator - Sufenamides	N-N' -Dicyclohexyl-2-benzothiazole subsulfonamide	MSP E-DCBS-80P-QZ *F15*OWS*600	1.Compared with CBS & TBBS, compound need longer curing time and the cured compound has lower modules.
5	Accelerator - Thiuram	Diphenylthiuram	MSP A-MPTD-70-QZ*F18*OWS*720	1. It is a delay accelerator, which is suitable for synthetic rubber to improve processing safety. 2. It is usually used as a side accelerator in SBR, BR, IR, NBR and other synthetic adhesives, and can be used together with TMTM or dithiocarbamate accelerators
6	Accelerator - Dithiocarbamates	Tellurium diethyldithiocarbamate	MSP E-TDEC-75PF-QZ*F18*OWS*720	1. TDEC could be used in NR, SBR, NBR, EPDM and IIR compound as main or secondary accelerator and in some synthetic rubber compound 2.Usually used with azo promoters together in the compound
7	Accelerator - Thiourea	N. N ' - Diphenylthiourea	MSP E-DPTU-80P-QZ*F16*OWS*640	1.Generally, it is a rapid curing agent, and early vulcanization in the compound can be avoided. It is generally used as a 2nd accelerator in CR and EPDM, when there is vulcanization donor given in compound
8	Accelerator - Thiourea	Diethylthiourea	MSP E-DETU-80P-QZ*F13*OWS*520	1. Under special circumstances, such as sulfurization of sulfur donor such as thiuram sulfide, this product has the function of active agent. 2. For the application of neoprene, neoprene vulcanizates with good tensile strength, hardness, compression set and other properties can be obtained. 3. Compared with ETU, this product has fast scorch and vulcanization. Easy to disperse without blooming. When the dosage is large, it can be vulcanized at high temperature and high speed.
9	Accelerator - Thiazoles	2-Mercaptobenzothiazole	MSP E-MBT-80P-QZ*F18*OWS*720	1. MBT is one of the fastest & environmental accelerator uses in NR or Synthetic rubber. 2. Use together with TMTD, TETD or DPG as secondary accelerator, enable low temperature curing. 3. With CBS could be secondary accelerator too.
10	Anti - Oxidant	2-Mercaptomethyl benzoimidazole	MSP E-MMBI-70P-QZ*F15*OWS*600	1. It is usually used in combination with the main antioxidant to achieve synergistic effect, which is better than using one antioxidant alone.
11	Anti - Oxidant	N,N-Nickel di-n-butyl dithiocarbamate	MSP E-NDBC-75P-QZ*F15*OWSC*600	1.It is used for SBR, CR, CSM and other synthetic rubber, and has certain effect on heat protection, ozone and sunlight aging.
12	Activator - Zinc Oxide	Zinc Oxide	MSP S-ZD-85P-QZ*F20*OWS*1000	1. Compared with ZnO powder, the pre-dispersed masterbatch shows smoother surface in extruded rubber parts. 2. Improved compound tensile property.
13	Filler - TiO2	Titanium dioxide	MSP E-TI-80P-QZ*F25*OWSC*1000	1.Titanium dioxide can be used as a colorant and also has a filling and reinforcing effect in the rubber compound. 2. Add titanium dioxide in light color rubber products, the finished products have no cracking, no fading, high elongation and acid and alkali resistance. 3. When used in the production of automobile tires, a certain amount of rutile type products are often added to enhance its anti-ozone and anti-ultraviolet ability.



MULTISPERSE

Multisperse® Product Description

Multisperse Product



CNQZ Plant



Wood Pallet



MSP A-ZD-85P-QZ*F20*OWS*1000



Box Weight (KG)



Pallet Weight (KG)



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Multisperse® Product Format

Products in Pellet & Slab Form

Pellet : 5 or 8mm Diameter is standard
other are possible – special request



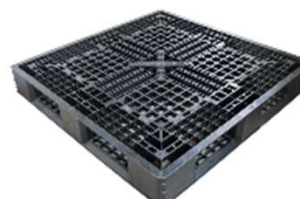
Slab



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Product Packaging

Packing Material Name	Overall Dimensions	Remarks
MS3 BOX	495*205*280	White corrugated box
MS2 BOX	495*200*155	White corrugated box
MS BROWN	390*305*225	Brown corrugated box
Wood pallet	1200*1000*120	Treated wood pallet
Plastic pallet	1200*1000*150	Black plastic pallet
Big carton box	1240*1050*1140	Heavy duty corrugated box



GHS / CLP Label



MULTISPERSE

Manufacturing Capabilities – Quality Assurance & Product Dev.

CNQZ China



OTCS Singapore

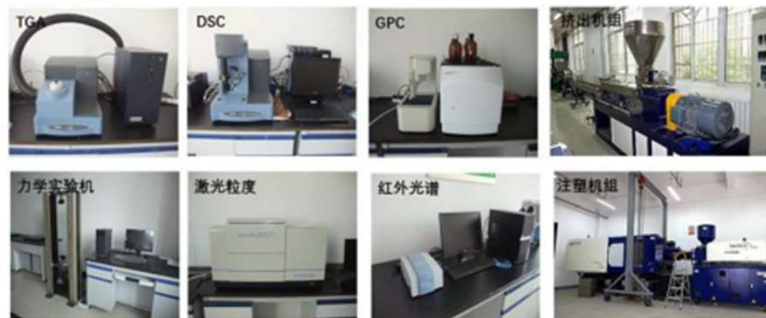


3rd party lab –
JiangSu Province, China

徐州工程学院
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徐州工业职业技术学院
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实践建设



Thank You

