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## Super Overbased Synthetic Calcium Sulfonate TBN Booster T107 (400TBN)

### ●Product Introduction

With long chain alkylbenzene sulfonic acid as a main raw material, super overbased synthetic calcium sulfonate is produced by neutralization and super high alkalization reaction. The product has excellent alkaline storage property, good oil solubility and strong acid neutralization capability, and it can immediately neutralize organic acid and inorganic acid in oil; meanwhile it also has excellent high temperature detergency and thermal stability. It is a preferred additive for blending overbased marine cylinder oil and to improve TBN value in engine oil.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Red brown transparent viscous liquid	Visual Inspection
Flash Point (COC), °C	200	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	130	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1200	ASTM D4052
Total Base Number, mgKOH/g	408	ASTM D2896
Ca Content, m%	15.0	ASTM D4951
S Content, m%	1.5	ASTM D1552
Water Content, m%	0.03	ASTM D95

### ●Package, Storage and Transportation

Packed in 200 liters iron drum or according to user's requirement. Transportation mode is by container or truck. The maximum storage temperature shall not exceed 45°C. This product is non-flammable, non-explosive, and non-corrosive, and it is same as petroleum products in terms of safety, environmental protection, use and other aspects, thus it needs no special protection. The product is stored with a shelf life of 2 years, and it should avoid contact with strong antioxidant when use. In case of accidental contact with skin, wash it off thoroughly with water and detergent.



## Overbased Synthetic Calcium Sulfonate T106 (300TBN)

### ●Product Introduction

Overbased Synthetic Calcium Sulfonate is one of the sulfonate salt series lubricant additives products. It's mainly made from long-chain alkylbenzene sulfonic acid by means of neutralization and high alkalization reaction. This is a main metal detergent, and boasts excellent acid neutralization capacity, antirust property and high-temperature detergency, so it is widely used for different ICE oil.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Red brown transparent viscous liquid	Visual Inspection
Flash Point (COC), °C	205	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	45	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1110	ASTM D4052
Total Base Number, mgKOH/g	311	ASTM D2896
Ca Content, m%	12.0	ASTM D4951
S Content, m%	1.52	ASTM D1552
Water Content, m%	0.03	ASTM D95

### ●Package, Storage and Transportation

Packed in 200 liters iron drum or according to user's requirement. Transportation mode is by container or truck. The maximum storage temperature shall not exceed 45°C. This product is non-flammable, non-explosive, and non-corrosive, and it is same as petroleum products in terms of safety, environmental protection, use and other aspects, thus it needs no special protection. The product is stored with a shelf life of 2 years, and it should avoid contact with strong antioxidant when use.



## Medium Base Synthetic Calcium Sulfonate T105 (150TBN)

### ●Product Introduction

Medium Base Synthetic Calcium Sulfonate is one of the sulfonate salt series lubricant additives products we produce. It's mainly made from long-chain linear alkylbenzene sulfonic acid by means of neutralization and alkalization reaction. This is a main metal detergent, and boasts excellent acid neutralization capacity, anti-rust property and high-temperature detergency, thus it is widely used for different ICE oils, meanwhile it can be used to blend rust preventing oil.



### ●Product Technical Index

Item	Typical	Test Method
Appearance	Red brown transparent viscous liquid	Visual Inspection
Density (20°C), kg/m <sup>3</sup>	1015	ASTM D4052
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	25	ASTM D445
Flash Point (COC), °C	200	ASTM D92
Total Base Number, mgKOH/g	165	ASTM D2896
Ca Content, m%	6.6	ASTM D4951
S Content, m%	1.9	ASTM D1552
Water Content, m%	0.05	ASTM D95

### ●Package, Storage and Transportation

Packed in 200 liters iron drum or according to user's requirement. Transportation mode is by container or truck. The maximum storage temperature shall not exceed 45°C. This product is non-flammable, non-explosive, and non-corrosive, and it is same as petroleum products in terms of safety, environmental protection, use and other aspects, thus it needs no special protection. The product is stored with a shelf life of 2 years, and it should avoid contact with strong antioxidant when use. In case of accidental contact with skin, wash it off thoroughly with water and detergent.



## Overbased Synthetic Magnesium Sulfonate T107M (400TBN)

### ●Product Introduction

Super Overbased Synthetic Magnesium Sulfonate is one of the series of lubricant additives. It's mainly made from long-chain linear alkylbenzene sulfonic acid by means of neutralization and high alkalization reaction. As a major metal detergent, this product boasts excellent acid neutralization capacity, good antirust property and high temperature detergency, so widely used for different ICE oil.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Red brown transparent viscous liquid	Visual Inspection
Flash Point (COC), °C	180	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	148	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1113	ASTM D4052
Total Base Number, mgKOH/g	404	ASTM D2896
Mg Content, m%	9.0	ASTM D4951
Water Content, m%	0.07	ASTM D95

### ●Package, Storage and Transportation

Packed in 200 liters iron drum or according to user's requirement. Transportation mode is by container or truck. The maximum storage temperature shall not exceed 45°C. This product is non-flammable, non-explosive, and non-corrosive, and it is same as petroleum products in terms of safety, environmental protection, use and other aspects, thus it needs no special protection. The product is stored with a shelf life of 2 years, and it should avoid contact with strong antioxidant when use. In case of accidental contact with skin, wash it off thoroughly with water and detergent.



## Super Overbased Magnesium Sulfonate Vanadium Inhibitor T107MV (600TBN)

### ●Product Introduction

As a kind of Super High-based Magnesium Sulfonate fuel additives, T107MV color is clear brown liquid, completely miscible with fuel, and has the very good stability. The product not only have detergency and dispersion effect, but as the vanadium inhibitor agent added to the fuel oil, can prevent vanadium, sodium, iron and other metal in heavy oil from forming sulfate with low melting point and vanadium pentoxide compounds during the high temperature combustion. The product can be directly added to the fuel oil, and can also be injected fuel pipeline. It can reduce the corrosion in the process of combustion.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Red brown transparent viscous liquid	Visual Inspection
Flash Point (COC), °C	60	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	82	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1200	ASTM D4052
Total Base Number, mgKOH/g	600	ASTM D2896
Mg Content, m%	13.2	ASTM D4951
Water Content, m%	0.07	ASTM D95
Machinery Impurities, m%	0.07	ASTM D473

### ●Package, Storage and Transportation

Packed in 200 liters iron drum or according to user's requirement. Transportation mode is by container or truck. The maximum storage temperature shall not exceed 40°C. This product is non-flammable, non-explosive, and non-corrosive, and it is same as petroleum products in terms of safety, environmental protection, use and other aspects, thus it needs no special protection. The product is stored with a shelf life of 2 years, and it should avoid contact with strong antioxidant when use. In case of accidental contact with skin, wash it off thoroughly with water and detergent.



## Medium Base Calcium Alkyl Salicylate T109B (150TBN)

### ●Product Introduction

Medium Base Calcium Alkyl Salicylate is a kind of lubricant additive with a comprehensive performance and wide application. This product has excellent high temperature detergency, hydrolytic stability, and has certain antioxidant, corrosion resistance, it is widely used in the gasoline engine oil, diesel engine oil, and marine oil.



### ●Product Technical Index

Item	Index	Test Method
Appearance	Brown Clear Liquid	Visual Inspection
Flash Point (COC), °C	≥180	GB/T3536, ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	≤50	GB/T265, ASTM D445
Density (20°C), kg/m <sup>3</sup>	900-1100	GB/T2540, ASTM D4052
Total Base Number, mgKOH/g	160-175	SH/T0251, ASTM D2896
Ca Content, m%	5.8-6.4	GB/T17476, SH/T0270, SH/T0297, ASTM D4951
Water Content, m%	≤0.05	GB/T260, ASTM D95
Mechanical Impurities, m%	≤0.1	GB/T511, ASTM D473

### ●Package, Storage and Transportation

The product is packed with iron drums with 200kg, or other packing methods consulting with clients. Suitable for container transport and truck transport. The temperature of storage shall not exceed 45°C. This product is not flammable, explosive, non-corrosive, in the safety, environmental protection, use and other aspects of the general petroleum products, without special protection. Avoid contact with strong oxidant. The shelf life of product is 2 years. Avoid contact with eyes or skin. In case of contact, wash immediately with potable water and detergent.





## High Base Calcium Alkyl Salicylate T109C (250TBN)

### ●Product Introduction

High Base Alkyl Calcium Salicylate is a kind of lubricant additive with a comprehensive performance and wide application. This product has excellent acid neutralization capacity, high temperature detergency, hydrolytic stability, and has good antioxidant, corrosion resistance, also with a light color. It is widely used in the gasoline engine oil, diesel engine oil, and marine oil.



### ●Product Technical Index

Item	Index	Test Method
Appearance	Brown Clear Liquid	Visual Inspection
Flash Point (COC), °C	≥180	GB/T3536, ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	≤50	GB/T265, ASTM D445
Density (20°C), kg/m <sup>3</sup>	900-1100	GB/T2540, ASTM D4052
Total Base Number, mgKOH/g	265-295	SH/T0251, ASTM D2896
Ca Content, m%	9.5-10.5	GB/T17476, SH/T0270, SH/T0297, ASTM D4951
Water Content, m%	≤0.05	GB/T260, ASTM D95
Mechanical Impurities, m%	≤0.1	GB/T511, ASTM D473

### ●Package, Storage and Transportation

The product is packed with iron drums with 200kg, or other packing methods consulting with clients. Suitable for container transport and truck transport. The temperature of storage shall not exceed 45°C. This product is not flammable, explosive, non-corrosive, in the safety, environmental protection, use and other aspects of the general petroleum products, without special protection. Avoid contact with strong oxidant. The shelf life of product is 2 years. Avoid contact with eyes or skin. In case of contact, wash immediately with potable water and detergent.



## Medium Based Sulfurized Calcium Alkyl Phenate T121

### ●Product Introduction

The Medium Based Sulfurized Calcium Alkyl Phenate is made from dodecyl phenol by means of sulfurization, neutralization, and medium alkalization. It has wonderful high temperature detergency, remarkable resistance to oxidation, resistance to corrosion, considerable acid neutralization, demulsibility and oil solubility. It has preferable compatibility with other additives and has active effect in reducing carbon deposition of piston top ring groove, and it is widely used to blend middle and high grade ICE oil.



### ●Product Technical Index

Item	Typical Value	Test Method
Flash Point (COC), °C	190	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	35	ASTM D445
Density (20 °C), kg/m <sup>3</sup>	1000	ASTM D4052
Total Base Number, mg KOH/g	160	ASTM D2896
Ca Content, m%	5.6	ASTM D4951
S Content, m%	2.4	ASTM D1552
Water Content, m%	0.02	ASTM D95

### ●Features

Besides excellent performances, it has advantages of light chroma, low turbidity. Its compound 5w/30SJ grade oil in 7.2% dosage SJ Gasoline oil additive package has passed MS III E, VE, IID, CRCL-38 engine bench assessment test and all lab tests requested by API SJ Gasoline engine oil.

### ●Package, Storage and Transportation

It shall be packed in iron barrel, 200L/barrel or packed according to the customer's requirements. Suitable for container or automobile. For highest storage temperature, it shall not surpass 45°C. This product is non-flammable, non-explosive, and non-corrosive. In terms of safety, environmental protection and use, it is equal to general petroleum products, don't need the special protection. Avoid contact with strong oxidizer when use it, shelf life is 2 years. In case of accidental contact with skin, wash it off thoroughly with water and detergents.



## Overbased Sulfurized Calcium Alkyl Phenate T122

### ●Product Introduction

The Overbased Sulfurized Calcium Alkyl Phenate is made from dodecyl phenol by means of sulfurization, neutralization and high alkalization reaction. This product is a kind of widely used lubricant additive of comprehensive performance, it has extremely good acid neutralization capacity and high-temperature detergency, excellent oxidation resistance and corrosion control as well as good emulsion resistance and oil solubility. It has prominent effect in reducing top-piston ring carbon and is widely used to blend middle and high grade ICE oils.



### ●Product Technical Index

Item	Typical Value	Test Method
Flash Point (COC), °C	200	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	295	ASTM D445
Density (20 °C), kg/m <sup>3</sup>	1088	ASTM D4052
Total Base Number, mg KOH/g	276	ASTM D2896
Ca Content, m%	10.1	ASTM D4951
S Content, m%	3.2	ASTM D1552
Water Content, m%	0.02	ASTM D95

### ●Features

Besides excellent performances, it has the advantage of light chroma; lower corrosion of copper and lead.

### ●Package, Storage and Transportation

In terms of safety, environmental protection and use, it is equal to general petroleum products, don't need the special protection. For highest storage temperature, it shall not surpass 45°C. This product is non-flammable, non-explosive, and non-corrosive.



## Super Overbased Sulfurized Calcium Alkyl Phenate T123

### ●Product Introduction

Super Overbased Sulfurized Calcium Alkyl Phenate T123 is a kind of widely used lubricant additive of comprehensive performance, it has extremely good acid neutralization capacity, better anti-oxidation, abrasion resistance and larger base number than the similar products. It also has excellent detergency and dispersion effects and hydrolysis stability.



### ●Product Technical Index

Item	Typical Value	Test Method
Flash Point (COC), °C	200	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	400	ASTM D445
Density (20 °C), kg/m <sup>3</sup>	1110	ASTM D4052
Total Base Number, mg KOH/g	302	ASTM D2896
Ca Content, m%	11.0	ASTM D4951
S Content, m%	3.0	ASTM D1552
Water Content, m%	0.02	ASTM D95

### ●Features

Besides excellent performances, it has the advantage of light chroma; lower corrosion of copper and lead, it can be used to blend high grade ICE oil.

### ●Package, Storage and Transportation

In terms of safety, environmental protection and use, it is equal to general petroleum products, don't need the special protection. Avoid contact with strong oxidizer when use it, shelf life is 2 years. For highest storage temperature, it shall not surpass 45°C. This product is non-flammable, non-explosive, and non-corrosive.



## ZDDP Zinc Butyl Octyl Primary Alkyl Dithiophosphate T202

### ●Product Introduction

T202 is Zinc Butyl Octyl Primary Alkyl Dithiophosphate (ZDDP). This product features favorable anti-oxidation and anti-corrosion performance and anti-wear and extreme pressure properties. It can effectively protect engine bearings from corrosion, and prevent oil viscosity growth due to oxidation in a high temperature. The product is light in color and nice in oil solubility and additive compatibility. It can be widely adopted in various industrial lubricating oils such as gear oil and hydraulic oil. Combined with detergents and dispersants, the product can be used to produce all grades engine oils. The treat rate is 0.5%-3.0%.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Amber transparent liquid	Visual Inspection
Color Number	0.8	ASTM D1500
Flash Point (COC), °C	195	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	11.6	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1092	ASTM D4052
S Content, m%	15.7	ASTM D1552
P Content, m%	7.6	ASTM D4951
Zn Content, m%	9.0	ASTM D4951
pH Value	5.9	SH/T 0394-1996, Annex A
Water Content, m%	0.01	ASTM D95

### ●Package, Storage and Transportation

The product is packed with iron drum, with a net weight of 200kgs/drum, suitable for all means of transport. For storage and transportation temperature, it shall not surpass 45°C. The product is offered with a guarantee period of two years. In case of accidental contact with skin, wash it off thoroughly with water and detergents.



## ZDDP Zinc Dioctyl Primary Alkyl Dithiophosphate T203

### ●Product Introduction

ZDDP T203 is Zinc Dioctyl Primary Alkyl Dithiophosphate. This product features excellent oxidation resistance, corrosion resistance, and anti-wear and extreme pressure properties, particular high thermal stability, and favorable oil solubility, additive compatibility, and resistance to emulsification. It can be compounded with sulfonate detergents and dispersants to apply in high-grade diesel engine oils, or compounded with other additives to apply in anti-wear hydraulic oils. The dosage is 0.5%-3.0%.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Light yellow to amber transparent liquid	Visual Inspection
Color Number	0.6	ASTM D1500
Flash Point (COC), °C	200	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	25.5	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1113	ASTM D4052
S Content, m%	16.6	ASTM D1552
P Content, m%	7.9	ASTM D4951
Zn Content, m%	9.8	ASTM D4951
pH Value	6.1	SH/T 0394-1996, Annex A
Water Content, m%	0.02	ASTM D95

### ●Package, Storage and Transportation

The product is packed with iron drum, with a net weight of 200kgs/drum suitable for all means of transport. For storage and transportation temperature, it shall not surpass 45°C. The product is offered with a guarantee period of two years. In case of accidental contact with skin, wash it off thoroughly with water and detergents.



## ZDDP Zinc Primary-secondary Alkyl Dithiophosphate T204

### ●Product Introduction

ZDDP T204 is Zinc Primary-secondary Alkyl Dithiophosphate, a kind of antioxidant and anti-corrosion agent. This product features good storage and hydrolysis stability, outstanding anti-wear, favorable anti-oxidation performance, and medium thermal stability. It can be widely adopted in various oils, especially suitable for medium and high grade low-temperature anti-wear hydraulic oil and industrial oil. The normal treat rate is 0.5%-2.5%.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Amber transparent liquid	Visual Inspection
Color Number	1.2	ASTM D1500
Flash Point (COC), °C	195	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	12.3	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1120	ASTM D4052
S Content, m%	16.8	ASTM D1552
P Content, m%	8.2	ASTM D4951
Zn Content, m%	9.4	ASTM D4951
pH Value	5.9	SH/T 0394-1996, Annex A
Water Content, m%	0.02	ASTM D95

### ●Package, Storage and Transportation

The product is packed with iron drum, net weight of 200kgs/drum, suitable for all means of transport. For storage and transportation temperature, it shall not surpass 45°C. The product is offered with a guarantee period of two years. In case of accidental contact with skin, wash it off thoroughly with water and detergent.



## ZDDP Zinc Mixed Isooctanol Secondary Butanol Dithiophosphate T205

### ●Product Introduction

T205 is a Zinc Mixed Primary & Secondary Alkyl Dithiophosphate. When added into oils it can inhibit oils from oxidation, prevent bearing corrosion, as well as reducing the wear. This product is used extensively in engine oil formulations to prevent wear of piston rings, cylinder liners, cam and tappets as well as deploying its antioxidant performance. It has good anti-oxidation and extreme pressure performance, fine hydrolytic and thermal stability. It is used for blending with high quality additives to make a variety of products for industrial and engine oil applications. The treat rate would normally be expected to be in the range of 0.1% to 2.0%.



### ●Product Technical Index

Item	Index	Test Method
Appearance	Light yellow to amber transparent liquid	Visual Inspection
Flash Point (COC), °C	160min	ASTM D-92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	6.0~14.0	ASTM D-445
Density (20°C), kg/m <sup>3</sup>	1080~1180	ASTM D-4052
S Content, m%	14.5~18.1	SH/T0303 or ASTM D-4951
P Content, m%	7.7~8.3	SH/T0296 or ASTM D-4951
Zn Content, m%	8.4~9.4	SH/T0226 or ASTM D-4951

### ●Package, Storage and Transportation

The product is packed with iron drum, with a net weight of 200kgs/drum, suitable for all means of transport. For storage and transportation, the temperature of the product shall not surpass 45°C. The product is offered with a guarantee period of two years. This product is non-flammable, non-explosive, and non-corrosive, thus needs no special protection.





## Ashless Dispersant Mono Polyisobutylene Succinimide T151

### ●Product Introduction

T151 is Mono Polyisobutylene Succinimide Ashless Dispersant made from high active polyisobutylene, with excellent low temperature detergency capability and good solubility of high temperature soot. It can be widely used in modulating high grade internal combustion engine oil. It doesn't contain chlorine, it has preferable compatibility with detergent and antioxidant and corrosion inhibitor.



### ●Product Technical Index

Item	Typical value	Test method
Appearance	Viscous clear liquid	Visual inspection
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	180	ASTM D445
Total Base Number, mgKOH/g	50	ASTM D2896
N content, m%	2.1	ASTM D3228
Flash Point (COC), °C	200	ASTM D92
Color Number (diluted)	3.0	ASTM D1500

### ●Package, Storage and Transportation

The product is packed with iron drum, net weight of 170kgs/drum, suitable for all means of transport. For short-term storage and transportation, the temperature of the product shall not surpass 75°C; for long-term storage, it shall not surpass 45°C. The shelf life of this product is 24 months. And it shall be stored in dry, cleaning, and ventilated warehouse.



## Ashless Dispersant Polyisobutylene Succinimide T154

### ●Product Introduction

T154 Polyisobutylene Succinimide is an Ashless Dispersant prepared from high reactive polyisobutylene (Mn=1000), with better detergency capability, it can inhibit the carbon deposit and the formation of varnish film. It doesn't contain chlorine, it has preferable compatibility with detergent and antioxidant and corrosion inhibitors.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Transparent viscous liquid	Visual Inspection
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	155	ASTM D445
Total Base Number, mgKOH/g	22	ASTM D2896
N Content, m%	1.3	ASTM D3228
Flash Point (COC), °C	200	ASTM D92
Color Number (diluted)	2.5	ASTM D1500

### ●Package, Storage and Transportation

The product is packed with iron drum, net weight of 170kgs/drum, suitable for all means of transport. For short-term storage and transportation, the temperature of the product shall not surpass 75°C; for long-term storage, it shall not surpass 45°C. The product is offered with a guarantee period of 24 months, store in dry, cleaning, and ventilated warehouse.



## Ashless Dispersant Borated Polyisobutylene Succinimide T154B

### ●Product Introduction

T154B is a borated polyisobutylene succinimide ashless dispersant using a heat addition process and highly reactive polyisobutylene (Mn=1300) as raw material. It has good detergency and dispersibility, which can restrain the formation of carbon and paint film on engine piston. Also has the oxidation resistance and abrasion resistance, it can improve the compatibility of oil and fluororubber seal. The product does not contain chlorine, and has good compatibility with detergent and ZDDP.



### ●Product Technical Index

Item	Index	Test Method
Appearance	Transparent Viscous Liquid	Visual Inspection
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	130-250	GB/T 265, ASTM D445
Total Base Number, mgKOH/g	15-30	SH/T 0251, ASTM D2896
N Content, m%	1.1-1.4	SH/T 0224, ASTM D3228
B Content, m%	≥0.35	GB/T 17476
Flash Point (COC), °C	≥180	GB/T 3536, ASTM D92
Color Number (Diluted)	≤4.0	GB/T 6540, ASTM D1500

### ●Package, Storage and Transportation

The product is packed with iron drum, net weight of 170kgs/drum, suitable for all means of transport. For short-term storage and transportation, the temperature of the product shall not surpass 75°C; for long-term storage, it shall not surpass 45°C. The product is offered with a guarantee period of 24 months, store in dry, cleaning, and ventilated warehouse.



## Ashless Dispersant High Molecular Weight Polyisobutylene Succinimide T161

### ●Product Introduction

T161 is High MW Polyisobutylene Succinimide Ashless Dispersant from high reactive polyisobutylene, with better detergency capability than low molecular weight ashless dispersant and good solubility of high temperature stability. It can inhibit the generation of carbon deposit and film and can be widely used to modulate high grade ICE oil. It doesn't contain chlorine, it has preferable compatibility with various Lubricant Additive Component.



### ●Product Technical Index

Item	Typical value	Test method
Appearance	Viscous clear liquid	Visual inspection
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	370	ASTM D445
Total Base Number, mgKOH/g	22	ASTM D2896
N Content, m%	1.1	ASTM D3228
Flash Point, °C	200	ASTM D92
Color Number (diluted)	3.0	ASTM D1500

### ●Package, Storage and Transportation

The product is packed with iron drum, net weight of 170kgs/drum, suitable for all means of transport. For short term storage and transportation, the temperature of the product shall not surpass 75°C; for long-term storage, it shall not surpass 45°C. The shelf life of this product is 24 months. And it shall be stored in dry, cleaning, and ventilated warehouse.



## High Temperature Antioxidant Ester Phenolic Type T512

### ●Product Introduction

T512 Ester Phenolic Antioxidant is a new high-temperature antioxidant with superior performance, it has good high thermal stability, outstanding anti-oxidation performance in high temperature, high oil solubility, and high compatibility with other additives. It's widely used in high grade ICE oil, heat conducting oil, high temperature chain oil, hydraulic oil, gear oil, turbine oil and other industrial lubricant oil, all kinds of lubricant, grease and fuel oil, the general treat rate is 0.3-0.5%.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Light yellow transparent liquid	Visual Inspection
Flash Point (COC), °C	195	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	7	ASTM D445
Density (20°C), kg/m <sup>3</sup>	961	ASTM D4052
Acid Value, mgKOH/g	0.4	ASTM D974
Water Content, m%	0.02	ASTM D95
Ash Content, m%	0.01	ASTM D482
Effective Content, m%	98.0	GC

### ●Product Features

Light color, low chrominance;

High content of effective constituent;

Good compatibility, more significant effect when compounded with amine type antioxidants.

### ●Package, Storage and Transportation

The product is packed with iron drum, 180kg/barrel or other packing methods consulting with clients. Suitable for truck transport, railway transport and ocean transport. The temperature of storage and transportation shall not surpass 45°C. The shelf life is 2 years.



## High Temperature Antioxidant Butyl Octyl Diphenylamine T534

### ●Product Introduction

T534 Butyl Octyl Diphenylamine is an excellent high-temperature antioxidant, it has good thermal stability, prominent oxidation resistance under high temperature, good oil solubility as well as compatibility to other additives. It can be widely used for high-grade ICE lubricant, heat conducting oil, high temperature chain oil, hydraulic oil, compressor oil, turbine oil and other industrial lubricant oil, all kinds of lubricating grease and fuel oil, the general dosage is 0.3-0.5%.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Light yellow brown clear liquid	Visual Inspection
Flash Point (COC), °C	198	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	10	ASTM D445
Density (20°C), kg/m <sup>3</sup>	971	ASTM D4052
Total Base Number, mgKOH/g	179	ASTM D2896
N Content, m%	4.5	ASTM D3228
Water Content, m%	0.02	ASTM D95

### ●Features

Different alkyl substitution is rationally arranged and controllable;

Lower free amine content, less than 1%;

Good compatibility, more significant effect when compounded used with amine type antioxidants.

### ●Package, Storage and Transportation

The product is packed with iron drum, 180kg/barrel or other packing methods consulting with clients. Suitable for truck transport, railway transport and ocean transport. The temperature of storage and transportation shall not surpass 45°C. The shelf life of product is 2 years.



## High Temperature Antioxidant p-p' Dinonyl Diphenylamine T536

### ●Product Introduction

T536 is an excellent high-temp. amine antioxidant. It has good thermal stability, prominent oxidation resistance under high temperature, good oil solubility as well as compatibility to other additives. It's widely used in high grade ICE lubricant, heat conducting oil, high-temp. chain oil, hydraulic oil, compressor oil, turbine oil and other industrial lubricant oil, all kinds of lubricating grease and fuel oil, treat rate is 0.3-0.5%.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Yellow or red-brown to brown clear liquid	Visual Inspection
Density (20°C), kg/m <sup>3</sup>	945	ASTM D4052
N Content, m%	3.5	ASTM D3228
Water Content, m%	0.03	ASTM D95
Kinematic Viscosity (40°C), mm <sup>2</sup> /s	455	ASTM D445
Flash Point (PMCC), °C	155	ASTM D93

### ●Features

Excellent high temperature thermal stability;  
 Different alkyl substitution is rationally arranged and controllable, lower free amine content;  
 Good high temperature oxidation resistance, especially outstanding antioxidant durability, significant effect on inhibiting the late oxidation of oil;  
 Good compatibility, and has synergistic effect when compounded with other antioxidants, especially combined used with ester phenolic antioxidants.

### ●Package, Storage and Transportation

The product is packed with iron drum, 180kg/barrel or other packing methods consulting with clients. Suitable for truck transport, railway transport and ocean transport. The temperature of storage and transportation shall not surpass 45°C. The shelf life of product is 2 years.



### Antiwear EP Additive Sulfurized Isobutylene T321

#### ●Product Introduction

T321 sulfurized isobutylene is a kind of additive component containing active sulfur, which is produced by sulfur or sulfur monochloride and isobutylene. It is a main antiwear and extreme pressure lubricant additive, widely used to blend gear oil and other industrial oil.



#### ●Features

Excellent antiwear and extreme pressure performance.

Good oil soluble performance.

#### Applications:

Used to blend various middle and high level Gear Oil Additive Package and gear oil.

Used to blend antiwear Hydraulic Oil Additive Package and hydraulic oil.

Used to blend cutting oil such as Water Soluble Semi Synthetic Cutting Fluid.

Used to blend grease.

Treat rate is 1.5-5.0wt%.

#### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Light Yellow transparent liquid	Visual Inspection
Density (20°C), kg/m <sup>3</sup>	1020	GB/T 13377
Flash Point (open cup), °C	110	GB/T 3536
Kinematic Viscosity, 100°C, mm <sup>2</sup> /s	1.80	GB/T 265
Sulfur content, wt%	44.80	SH/T 0303
Copper corrosion (121°C, 3h)	3b	GB/T 5096

#### ●Package, Storage and Transportation

The product is packed with iron drum, 200kgs/drum or other packing methods consulting with clients. Suitable for truck transport, railway transport and ocean transport. The temperature of storage and transportation shall not surpass 45°C. The shelf life of product is 2 years.





## Ashless Antiwear EP Additive Amidocyanogen Thioester T323

### ●Product Introduction

T323 is a kind of multipurpose ashless antiwear and EP additive. It not only boasts outstanding anti-oxidation performance, but also has great abrasion resistance and extreme pressure properties. Meanwhile, it has excellent compatibility with other additives. This product can be used in steam turbine oil, hydraulic oil, gear oil, internal combustion engine oil and other variety of oils to improve their anti-oxidation and abrasion resistance. It's also an effective extreme pressure additive for grease.



### ●Product Technical Index

Item	Typical Value	Test Method
Appearance	Light yellow green /Light brown transparent liquid	Visual Inspection
Flash Point (COC), °C	200	ASTM D92
Kinematic Viscosity (100°C), mm <sup>2</sup> /s	15.80	ASTM D445
Density (20°C), kg/m <sup>3</sup>	1058	ASTM D4052
N Content, m%	6.50	ASTM D3228
S Content, m%	29.60	ASTM D1552

### ●Package, Storage and Transportation

The product is packed with iron drum, 200kgs/drum or other packing methods consulting with clients. Suitable for truck transport, railway transport and ocean transport. The temperature of storage and transportation shall not surpass 45°C. The shelf life of product is 2 years.



## Ethylene Propylene Copolymer OCP Polymer J0010

### ●Product Introduction

J0010 OCP Polymer is a kind of Ethylene Propylene Copolymer, it is in the shape of white transparent block, widely used as an ideal viscosity index improver, to provide good shear stability and thermal stability.



### ●Features

Excellent thickening capacity.

Good oil solubility.

Good thermal-stability.

Excellent shear stability.

### ●Product Technical Index

Item	Index
Appearance	Clear transparent Polymer Solid
Ash Content, wt%, max	0.04
Ethylene Content, wt%	50.5-53.5
Vanadium Content, mg/kg, max	2
Mooney Viscosity ML (1+4), 100°C	8-11
Kinematic Viscosity, 100°C, mm <sup>2</sup> /s	75
Shear Stability (SSI), max	23

### ●Package

The product is packed in 25kgs/bag, 42bags/box.



## Polymethacrylate PMA Viscosity Index Improver VII T602HB

### ■Product Introduction

T602HB is a PMA viscosity index improver with good shear capacity and viscosity index improving performance. At the same time, it has excellent pour-point depressing effect, suitable for low-viscosity engine oil, long-span gear oil, low temperature hydraulic oil and other lubricating oil, which can effectively increase the viscosity index and improve the low temperature performance of oil.



### ■Product Technical Index

Item	Typical Value	Test Method
Appearance	Transparent viscous liquid	Visual inspection
100°C Kinematic Viscosity, mm <sup>2</sup> /s	3000	GB/T 265
Color scale and number	0.5	GB/T 6540
Density (20°C), kg/m <sup>3</sup>	920	SH/T 0604
Flash point (open), °C	160	GB/T 3536
Thickening ability	16	SH/T0622 Appendix

### ■Performance Test - Thickening

T602HB thickening performance in base oils of different viscosities (100°C kinematic viscosity)

T602HB Treat Rate	60N	150N	350N
0	2.62	5.01	8.86
1%	3.29	6.07	10.75
2%	3.9	6.95	12.11

### ■Product Characteristics

- Good shear stability • Increase viscosity index effectively
- Improve low temperature performance of oils • Assist in pour-point depressing

### ■Recommended Treat Rate

The recommended dosage for 602HB is 0.5-8wt%, depending on the application. Please consult our additive application engineer for details.

### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water.

Packing: 200L standard galvanized iron drum, 170kgs/drum net weight.



## Polymethacrylate PMA Viscosity Index Improver VII T602HC

### ■Product Introduction

T602HC is a PMA viscosity index improver, suitable for the formulating of hydraulic oil (especially low temperature hydraulic oil), gear oil, air compressor oil, shock absorber oil, etc. It has excellent shear stability, can effectively increase the viscosity index of oil and improve the low temperature performance of oil. It can formulate various lubricant when blended with different Additive Package.



### ■Product Technical Index

Item		Typical Value	Test Method
Appearance		Transparent viscous liquid	Visual inspection
100° C kinematic viscosity, mm <sup>2</sup> /s		1000	GB/T 265
Color scale and number		0.5	GB/T 6540
Density (20°C), kg/m <sup>3</sup>		920	SH/T 0604
Flash point (open), °C		160	GB/T 3536
PSSI	KRL 20h	45	CEC L-45-A-99
	Diesel nozzle 250 cycles	8	SH/T 0103
	Diesel nozzle 30 cycles	4	SH/T 0103

### ■Product Characteristics

- Excellent shear stability
- Increase viscosity index effectively.
- Assist in pour-point depressing.
- A universal product with wide range of application.

### ■Recommended Dosage

The recommended dosage for T602HC is 1%-10%wt, depending on the application. Please consult our additive application engineer for details.

### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water.

Packing: 200L standard galvanized iron drum, 170 kgs/drum net weight.



## Polymethacrylate PMA Viscosity Index Improver VII T602HD

### ■Product Introduction

T602HD is a PMA pour-point depressing viscosity index improver. It is synthesized by advanced polymerization technology, which can effectively control the molecular weight of the polymerization product and ensure its good low temperature performance. It is recommended to be used for the formulating of high-grade gear oil and ATF automatic transmission fluid with high shear requirements. With high viscosity and temperature retention performance, it satisfies low temperature Brookfield viscosity requirements.



### ■Product Technical Index

Item	Typical Value	Test Method
Appearance	Transparent viscous liquid	Visual inspection
100°C Kinematic Viscosity, mm <sup>2</sup> /s	300	GB/T 265
Color scale and number	0.5	GB/T 6540
Density (20°C), kg/m <sup>3</sup>	920	SH/T 0604
Flash point (open), °C	160	GB/T 3536
PSSI (KRL 20h)	20	NB-SH-T 0845

### ■Performance Test - Thickening

T602HD thickening performance in base oils of different viscosities (100°C kinematic viscosity)

T602HD Treat Rate	60N	150N	350N
0	2.62	5.01	8.86
10%	6.8	10.73	17.76
20%	12.23	18.13	28.37

### ■Product Characteristics

- Excellent shear stability • Increase viscosity index effectively
- Ultra-narrow molecular weight distribution • Good low temperature performance

### ■Recommended Dosage

The recommended dosage for 602HD is 10-20wt%, depending on the application. Please consult our additive application engineer for details.

### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water.

Packing: 200L standard galvanized iron drum, 170 kgs/drum net weight.



## PMA Polymethacrylate Pour Point Depressant PPD T602

### ■Product Introduction

T602 is a PMA pour point depressant with excellent pour-point depressing effect and shear stability, suitable for engine oil, gear oil, hydraulic oil and other lubricating oils. It is a universal pour point depressant, especially suitable for the formulation of base oils and group II and III hydrogenated oils with medium and low viscosity.



■Product Technical Index			■Performance Test – Pour Point Depressing				
Item	Typical Values	Test Method	Pour point depressing effect of T602 in different base oils:				
Appearance	Transparent viscous liquid	Visual inspection	Base Oil	Additive Free /°C	0.5% T602/°C	Pour Point Depressing Degree/°C	
100°C Kinematic Viscosity, mm <sup>2</sup> /s	350	GB/T 265	Group I	Dalian 150SN	-12	-30	18
Color scale and number	0.5	GB/T 6540		Dalian 400SN	-12	-22	10
Density (20°C), kg/m <sup>3</sup>	900	SH/T 0604	Group II	Sangyong 60N	-36	-51	15
Flash point (open), °C	160	GB/T 3536		Sangyong 70N	-24	-45	21
■Product Characteristics	<ul style="list-style-type: none"> <li>• Excellent pour-point depressing effect</li> <li>• Excellent shear stability</li> <li>• Narrower molecular weight distribution</li> <li>• Lower viscosity, easy to blend</li> <li>• A universal product with wide range application</li> </ul>			Formosa 150N	-22	-43	21
				Jilian 150N	-17	-28	11
				Huizhou 150N	-19	-41	22
				Daqing P6	-15	-30	15
				Beili 6#	-21	-42	21
				Maoming 6#	-18	-42	24
■Recommended Dosage	The recommended dosage for T602 is 0.1 %-1.0wt%, depending on the application. Please consult our additive application engineer for details.		Group III	Sangyong 500N	-15	-27	12
				Yubase 4	-15	-39	24
				Yubase 6	-18	-39	21
■Packing & Storage	The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water. Packing: 200L standard galvanized iron drum, 180 kgs/drum net weight.			Daqing VHV18	-15	-27	12

### ■Recommended Dosage

The recommended dosage for T602 is 0.1 %-1.0wt%, depending on the application. Please consult our additive application engineer for details.

### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water. Packing: 200L standard galvanized iron drum, 180 kgs/drum net weight.



### Polymethacrylate PMA Pour Point Depressant PPD T603

#### ■Product Introduction

T603 is a PMA pour point depressant with excellent pour-point depressing and shear stability. Suitable for engine oil, gear oil, hydraulic oil and other lubricating oils, it is a universal pour point depressant. It is especially suitable for group I base oil with medium and high viscosity, and has good pour-point depressing effect for group II and III hydrogenated oil.



■Product Technical Index			■Performance Test – Pour Point Depressing				
Item	Typical Value	Test Method	Pour point depressing effect of T603 in different base oils:				
Appearance	Transparent viscous liquid	Visual inspection	Base Oil	Blank	0.5% T603/°C	Pour Point Depressing Degree /°C	
100° C Kinematic Viscosity, mm <sup>2</sup> /s	Less than 400	GB/T265					
Color scale and number	0.5	GB/T6540	Group I	Dalian 400SN	-12	-23	11
Density (20°C), kg/m <sup>3</sup>	900	SH/T 0604	Group I Large Viscosity	Dalian 650SN	-10	-19	9
Flash point (open), °C	160	GB/T3536		Formosa 150N	-22	-42	20
<b>■Product Characteristics</b> <ul style="list-style-type: none"> <li>• Excellent pour-point depressing effect</li> <li>• Excellent shear stability</li> <li>• Narrower molecular weight distribution</li> <li>• Lower viscosity, easy to blend</li> <li>• A universal product with wide range of application</li> </ul>				Huizhou 150N	-19	-40	21
			Group II	Beili 6#	-21	-42	21
				Sangyong 500N	-21	-35	14
			Group III	Petronas Etro4	-22	-39	17
				Daqing VHVI6	-21	-36	15
	Youbase 6	-15	-36	21			

#### ■Recommended Dosage

The recommended dosage for T603 is 0.1 %-1.0%wt, depending on the application. Please consult our additive application engineer for details.

#### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water.

Packing: 200L standard galvanized iron drum, 180kgs/drum net weight.



### Fumarate Type Pour Point Depressant PPD T806A

#### ■Product Introduction

T806A is a fumarate pour point depressant with excellent pour point depressing and shear stability, suitable for group I and II base oils with medium and low viscosity.



#### ■Product Technical Index

Item	Index	Test Method
Appearance	Light yellow color liquid	Visual inspection
Flash point (open) °C no less than	Actual measurement	GB/T3536
Viscosity (100°C) mm <sup>2</sup> /s	Actual measurement	GB/T265
Mechanical impurity % no greater than	0.03	GB/T511
Moisture %	None	GB/T260
Pour-point depressing degree no less than	16	GB/T510

#### ■Product Performance

Pour point depressing effect of 806A in different base oil:

	Base Oil	Additive	0.5% T806A/°C	Pour Point Depressing Degree /°C
		Free /°C		
Group I	Dalian 150SN	-16	-31	15
	Dalian 400SN	-13	-21	8
	Jingu 150SN	-30	-43	13
	Jingu 250SN	-18	39	21
Group II	Feitian 150N	-32	-45	13
	Feitian 350N	-18	-30	12
	Formosa 150N	-22	-40	18
	Formosa 500N	-24	-33	9
	Huizhou 150N	-19	-41	22
	Beili 100N	-22	-49	27
	Beili 150N	-21	-41	21

#### ■Recommended Dosage

The recommended dosage for T806A is 0.3%-0.8wt%, depending on the application.

Please consult our additive application engineer for details.





## Fumarate Type Pour Point Depressant PPD T806B



### ■Product Introduction

T806B is a fumarate pour point depressant with excellent pour-point depressing and shear stability, suitable for alkyl and renewable base oils.

### ■Product Technical Index

Item	Index	Test Method
Appearance	Light yellow color liquid	Visual inspection
Flash point (open) °C no less than	Actual measurement	GB/T3536
Viscosity (100°C) mm <sup>2</sup> /s	Actual measurement	GB/T265
Mechanical impurity % less than	0.03	GB/T511
Moisture %	None	GB/T260

### ■Product Performance

Pour-point depressing effect of T806B in different base oil:

Base Oil		Additive Free/°C	0.5% T806B/°C	Pour Point Depressing Degree/°C
	Chengrun 15#	-36	-49	13
Group I	Chengrun 32 #	-18	-28	10
	Chengrun 46#	-19	-31	12
	Chengrun 68 #	-13	-23	10
	Chengrun 200#	-9	-15	6
Group II	Binzhouerxian	-6	-26	20
	Binzhousanxian	-1	-20	19
	Zaisheng 150SN	-12	-35	13
	Zaisheng 350N	-7	-30	23

### ■Recommended Dosage

The recommended dosage for T806B is 0.3%-0.8wt%, depending on the application. Please consult our additive application engineer for details.

### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water. Packing: 200L standard galvanized iron drum, 180kgs/drum net weight.



## Fumarate Type Pour Point Depressant PPD T806C



### ■Product Introduction

T806C is a fumarate pour point depressant with excellent pour-point depressing and shear stability, suitable for group I and group II base oils with high viscosity.

### ■Product Technical Index

Item	Index	Test Method
Appearance	Light yellow color liquid	Visual inspection
Flash point (open) °C no less than	Actual measurement	GB/T3536
Viscosity (100°C) mm <sup>2</sup> /s	Actual measurement	GB/T265
Mechanical impurity % less than	0.03	GB/T511
Moisture %	None	GB/T260
Pour-point depressing degree more than	16	GB/T510

### ■Product Performance

Pour-point depressing effect of T806C in different base oil:

Base oil		Additive Free /°C	0.5%T806C/°C	Pour Point Depressing Degree/°C
Group I	Beijing Gas 350SN	-17	-24	7
	Dalian 400SN	-13	-39	26
Group II	Sangyong 250N	-15	-35	20
	Hengderun 350N	-20	-37	17
	Qingyuan 500N	-16	-31	15
	Korea GS600	-16	-37	21

### ■Recommended Dosage

The recommended dosage for T806C is 0.3%-0.8wt%, depending on the application.

Please consult our additive application engineer for details.

### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water.

Packing: 200L standard galvanized iron drum, 180 kg/drum net weight.



## Fumarate Type Pour Point Depressant PPD T806D



### ■Product Introduction

T806D is a fumarate pour point depressant with excellent pour point depressing and shear stability, suitable for group I and group II base oil with low viscosity.

### ■Product Typical Values

Item	Index	Test Method
Appearance	Light yellow color liquid	Visual inspection
Flash point (open) °C no less than	Actual measurement	GB/T3536
Viscosity (100°C) mm <sup>2</sup> /s	Actual measurement	GB/T265
Mechanical impurity % less than	0.03	GB/T511
Moisture %	None	GB/T260
Pour point depressing degree more than	18	GB/T510

### ■Product Performance Pour-point depressing effect of T806D in different base oils:

Base Oil		Additive Free/°C	0.5% T806D/°C	Pour Point Depressing Degree/°C
Group I	Jingu 150SN	-30	-47	17
Group II	Indonesia 100N	-18	-41	23
	Handi 150N	-24	-45	21
	Taizhou 350N	-14	-27	13

### ■Recommended Dosage

The recommended dosage for T806D is 0.3%-0.8wt%, depending on the application.

Please consult our additive application engineer for details.

### ■Packing & Storage

The highest temperature of this product shall not exceed 75°C during storage, handling and oil blending. If stored for a long time, the highest temperature shall not exceed 45°C. It shall be kept away from water. This product is non-flammable, non-explosive and non-corrosive. In terms of safety, environmental protection and use, it is the same as general petroleum products without special protection. For skin contact, wash thoroughly with detergent, soap and water.

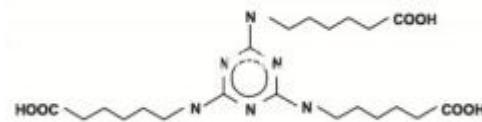
Packing: 200L standard galvanized iron drum, 180 kg/drum net weight.



## Water Soluble Antirust Additive Tribasic Polycarboxylic Acid T730/736/T738

### 1. Production description

T730/736/738 is a tribasic organic polycarboxylic acid, and is an ashless Antirust Additive & Corrosion Inhibitor in variety of water based liquid.



### 2. Molecular Structure

3. Molecular weight 468.6 g/mol

### 4. Physical & Chemical Properties

Product	Appearance	Composition
T730	White wet solid	Approximately 50% free acid, 50% water
T736	White free flowing granules	Approximately 65% free acid, 35% water
T738	White free flowing granules	Approximately 85% free acid, 15% water

### 5. Packaging (or made to order)

Product	Bag (kgs)	Pallet (kgs)	20' FCL (kgs)
T730	25	750	15000
T736	25	750	15000
T738	20	600	12000

### 6. Application

Neutralized with alkali/alkanolamine performs as very effective Antirust Additive & Corrosion Inhibitor which is applied in all types of water based systems Metalworking fluids (Semi-synthetic and synthetic fluids), High water based hydraulic fluids (HFC), Engine and other cooling systems.

### 7. Very effective Antirust Additive & Corrosion Inhibitor

- Does not form resinous films or gums on metals
- Low foaming and excellent air release
- No aluminum staining (depending on amine used)
- Compatible with hard water up to 2000 ppm
- Can be used for corrosion inhibition of multi-metal systems
- No tendency to form Nitrite amine

### 8. Shelf life: 1 year (under airtight, dry and cool conditions)

9. Transportation: This product is non-burning and non-burst, low toxicity, non-dangerous chemical goods

10. Typical treat rate: T730(0.25-1.1%); T736(0.19-0.85%); T738(0.15-0.65%)



## Automotive Energy Saving Automotive Gasoline Detergent T1200

### ●Product Introduction

T1200 is the new type of Gasoline Detergent produced by innovative technology. Its good thermal stability can effectively clear the deposits of nozzle and inlet valve. And it can be decomposed immediately, thus inhibiting the generation of combustors' deposit. Its technical index of rust protection, demulsification and antioxidant all meets the requirements of GB19592-2004 motor Gasoline Detergent national standard.



### ●Recommended Treat Rate

The dosage is 1000ppm, suitable for all type of (including air inlet jet and direct injection) gasoline engine.

### ●Product Technical Index

Items	Technical index	Test method
Flash Point (COC), °C	≥50	ASTM D93
Corrosion rate/%	≤5	GB/T19230.1
Flow point/°C	≤-15	ASTM D97
Simulation Inlet Valve Sediment Decrease Rate/%	Report	GA B1 p9 p5 en 9d 2i-x 20 B 04
Fuel Nozzle Cleanliness, Loss of Flow/%	≤5	GB/T19230.3
Demulsification /Grade Interface Separation	≤1b ≤2	GB/T19230.2
Inlet Valve Sediment Weight Method 1%	≤25	GB/T19230.5
Method 2%	≤80	GB/T19230.6
Total Combustion Deposit Increase Method 1% Or Method 2%	≤40	GB/T19230.5 GB/T19230.6

### ●Package, Storage and Transportation

The shelf life of product is 2 years. The temperature of storage shall not surpass 45°C. It is conducted in reference with SH/T0164.



## Automotive Energy Saving Gasoline Detergent T1202

### ●Product Introduction

T1202 Gasoline Detergent additive is the Mannich base type of detergent products. The product can effectively inhibit the sediment generation of gasoline engine fuel nozzles, valves, and other key parts, Keep the engine fuel system and fuel system cleaner and engine life longer as well as improve the fuel economy. The general additive dosage is 200ppm and 400ppm. And in the national quality supervision and test center for testing of petroleum products, our product meets the GB19592 Motor Gasoline Detergent Standards Requirements. This product can also modulate variety of engine oil circuit and lubricate system exempt opens detergent.



### ●Product Technical Index

Item	Typical Value	Test method
Appearance	Light clear liquid	Visual inspection
Kinematic Viscosity (40°C), mm <sup>2</sup> /s	150	ASTM D445
Flash Point (PMCC), °C	69	ASTM D93
Density (20°C), kg/m <sup>3</sup>	926	ASTM D4052
N Content, m%	1.5	ASTM D3228
Mechanical Impurities, m%	0.02	ASTM D473
Water Content, m%	0.02	ASTM D95

### ●Package, Storage and Transportation

The product is packed with iron drum, with a net weight of 200kgs/drum. It is suitable for container transport and truck transport. The temperature of storage shall not surpass 45°C. To avoid contact with strong oxidants when used. The shelf life of product is 2 years. In case of contact with skin accidentally, wash it off thoroughly with water and detergent.



## Automotive Energy Saving Gasoline Detergent T1205

### ●Product Introduction

T1205 Gasoline Detergent additive is the Mannich base type of detergent products. The product can effectively inhibit the sediment generation of gasoline engine fuel nozzles, valves, and other key parts, Keep the engine fuel system and fuel system cleaner and engine life longer as well as improve the fuel economy. This product can also modulate variety of engine oil circuit and lubricate system exempt opens detergent.



### ●Ingredients and Usage

The main ingredients are Mannich base, demulsifier for oils, carrier oils, dilution and rustproof agent. It can be used after directly diluted with the ratio of 1:1. The suggested dosage is 1000ppm.

### ●Product Technical Index

Item	Typical value	Test method
Appearance	Light clear liquid	Visual inspection
Kinematic Viscosity (40°C), mm <sup>2</sup> /s	10.5	ASTM D445
Flash Point (PMCC), °C	70	ASTM D93
Density (20°C), kg/m <sup>3</sup>	942	ASTM D4052
N Content, m%	0.42	ASTM D3228
Mechanical Impurities, m%	0.02	ASTM D473
Water Content, m%	0.02	ASTM D95

### ●Package, Storage and Transportation

The product is packed with iron drum, with a net weight of 200kgs/drum. It is suitable for container transport and truck transport. The temperature of storage shall not surpass 45°C. To avoid contact with strong oxidants when used. The shelf life of product is 2 years. In case of contact with skin accidentally, wash it off thoroughly with water and detergents.



## Automotive Energy Saving Gasoline Detergent T1206

### ●Product Introduction

T1206 Gasoline Detergent is produced on the base of Mannich base detergent technology and further compounded other gasoline additives. In comparison of T1205, this product can not only inhibit the sediment generation of gasoline engine fuel nozzles, valves and other vital parts, but also inhibit the growth of sediment of combustor, keep the motor fuel and fuel intake system cleaning, and improve the fuel economy functions. In addition, this product has a good dispersion of rust, antioxidant properties and other incomparable advantages.



### ●Ingredients and Usage

It can be used after directly diluted with the ratio of 1.2:1. The suggested dosage is 1000ppm.

### ●Product Technical Index

Item	Typical value	Test method
Appearance	Light clear liquid	Visual inspection
Kinematic Viscosity (40°C), mm <sup>2</sup> /s	7.7	ASTM D445
Flash Point (PMCC), °C	70	ASTM D93
Density (20°C), kg/m <sup>3</sup>	944	ASTM D4052
N Content, m%	0.33	ASTM D3228
Mechanical Impurities, m%	0.02	ASTM D473
Water Content, m%	0.02	ASTM D95

### ●Package, Storage and Transportation

The product is packed with iron drum, with a net weight of 200kgs/drum. It is suitable for container transport and truck transport. The temperature of storage shall not surpass 45°C. To avoid contact with strong oxidants when used. The shelf life of product is 2 years.