KIMES
Technologies International

Creating Your Advantage.

Intermediates and Additive Componentry for Industry.

Globally Local

www.kimestech.com

Technically Proficient

The Kimes product portfolio consists of metallic sulfonates and sulfonic acids derived from various sulfonation methods. Our broad product range includes formulating components for crankcase, grease feeds, rust and corrosion inhibitors, metal working, and hydraulic fracturing. In the calcium sulfonate venue, our capabilities include highly active neutrals to highly overbased (up to 500 TBN) products in a variety of base stocks, including some products with NSF food grade approval.

Our proficiency enables us to make product recommendations that suit your intended application and process capabilities. We can also work with you to develop special products with tailored properties to impart specific functionality.

Additional offerings include other specialties such as overbased calcium and magnesium salicylate, neutral and overbased barium sulfonates, overbased magnesium sulfonate, oil and water soluble sodium sulfonates, and our complete Jalpon™ line of gelled calcium sulfonates.

Kimes Technologies has carved a niche by concentrating on intermediate and component products only. By doing so, we avoid competing with our customers.

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Sulfonic Acids

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SULFON™ 89

Heavy Alkylbenzene Sulfonic Acid

GENERAL DESCRIPTION

Sulfon™ 89 is a highly active sulfonic acid produced from SO_3 sulfonation of a proprietary feedstock. It is recommended as a raw material for the manufacture of oil soluble metallic sulfonates for the automotive, metalworking, coatings and grease industries. The sulfonates produced from Sulfon™ 89 exhibit very good solublility as well as good rust and corrosion inhibiting characteristics. They are generally compatible with a variety of basestocks and impart good detergent and dispersant properties. Sulfon™ 89 is also readily convertible to gelled, crystalline calcium sulfonate.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Sulfon™ 89
Sulfonic Acid, Wt. %	ASTM D3673	92
Total Acid, KOH/g	KTI 01-105	105
Free H_2SO_4, Wt. %	ASTM D974	0.9
Density @ 15˚C, g/ml	ASTM D1298	0.98
Molecular Weight, g/mol	ASTM D3712	485

AVAILABILITY

Sulfon™ 89 is available in Tank Trucks, Totes, and 55-Gallon Drums

8-17-15

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SULFON™ 90

Oleum Sulfonated Alkyl-aryl Sulfonic Acid

GENERAL DESCRIPTION

Sulfon™ 90 is a highly active sulfonic acid produced from oleum sulfonation of heavy alkylate bottoms (HAB). It is recommended as a raw material for the manufacture of oil soluble metallic sulfonates for the automotive, metalworking, coatings and grease industries. The sulfonates produced from Sulfon™ 90 exhibit low odor and good rust and corrosion inhibiting characteristic. They are generally compatible with a variety of basestocks and impart good detergent and dispersant properties. Sulfon™ 90 is also readily convertible to gelled, crystalline calcium sulfonate.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Sulfon™ 90
Sulfonic Acid, Wt. %	ASTM D3673	92
Total Acid, mEq/g	ASTM D974	1.96
Free H_2SO_4, Wt. %	ASTM D974	0.00
Specific Gravity @ 15.6˚C, g/ml	ASTM D1298	0.97
Average Molecular Weight, g/mol	ASTM D3712	470

AVAILABILITY

Sulfon™ 90 is available in Rail Tank Cars, Tank Trucks, Totes, and Drums

8-17-15

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SULFON™ 95

Oleum Sulfonated Alkyl-aryl Sulfonic Acid

GENERAL DESCRIPTION

Sulfon™ 95 is a highly active sulfonic acid produced from oleum sulfonation of heavy alkylate bottoms (HAB). It is recommended as a raw material for the manufacture of oil soluble metallic sulfonates for the automotive, metalworking, coatings and grease industries. The sulfonates produced from Sulfon™ 95 exhibit low odor and good rust and corrosion inhibiting characteristics. They are generally compatible with a variety of basestocks and impart good detergent and dispersant properties. Sulfon™ 95 is also readily convertible to gelled, crystalline calcium sulfonate.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Sulfon™ 95
Sulfonic Acid, Wt. %	ASTM D3673	95
Total Acid, mEq/g	ASTM D974	2.00
Free H_2SO_4, Wt. %	ASTM D974	0.50
Density @ 15˚C, g/ml	ASTM D1298	0.97
Molecular Weight, g/mol	ASTM D3712	470

AVAILABILITY

Sulfon™ 95 is available in Rail Tank Cars, Tank Trucks, and Totes

8-17-15

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SULFON™ 97

Oleum Sulfonated High Molecular Weight Sulfonic Acid

GENERAL DESCRIPTION

Sulfon™ 97 is a highly active sulfonic acid produced from oleum sulfonation of a proprietary alkylate that is essentially LAB-free. Sulfon™ 97 is recommended as a raw material for the manufacture of oil soluble metallic sulfonates where exceptional water displacement is critical. The sulfonates produced from Sulfon™ 97 exhibit low odor and excellent rust and corrosion inhibiting characteristics. They are generally compatible with a variety of basestocks, and impart superior detergent and dispersant properties.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Sulfon™ 97
Sulfonic Acid, Wt. %	ASTM D3673	95
Total Acid, mEq/g	ASTM D974	2.00
Free H_2SO_4, Wt. %	ASTM D974	0.80
Specific Gravity @ 15.6˚C, g/ml	ASTM D1298	0.965
Average Molecular Weight, g/mol	ASTM D3712	490

AVAILABILITY

Sulfon™ 97 is available in Rail Tank Cars, Tank Trucks, and Totes

8-17-15

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SULFON™ 101

SO_3 Sulfonated Linear Alkylbenzene Sulfonic Acid

GENERAL DESCRIPTION

Sulfon™ 101 is a very highly active, biodegradable surfactant intermediate produced by the sulfur trioxide sulfonation of linear alkylbenzene (C_{10} – C_{13}). It is recommended as a raw material for the manufacture of household, institutional, and industrial detergents. It is also an intermediate for use in the manufacturing process of overbased calcium sulfonate grease and in the preparation of emulsifiers and wetting agents. Sulfon™ 101 can be neutralized with a wide range of inorganic bases and organic amines to produce a variety of sulfonates.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Sulfon™ 101
Sulfonic Acid, Wt. %	ASTM D3673	97
Neutralization Number, mgKOH/g	ASTM D664	2.00
Free H_2SO_4, Wt. %	ASTM D974	0.7
Specific Gravity @ 15.6˚C, g/ml	ASTM D1298	0.97
Water, Wt. %	ASTM D4377	0.8
Molecular Weight, g/mol	ASTM D3712	322

AVAILABILITY

Sulfon™ 101 is available in Tank Trucks and Totes

8-17-15

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Calcium Sulfonates

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SYNCAL™ CALCIUM SULFONATE

Neutral Calcium Sulfonates

GENERAL DESCRIPTION

SYNCAL™ N45H, 45LC, and N70H are dispersant type, oil soluble, slightly alkaline calcium sulfonates. These products impart excellent rust and corrosion inhibiting properties due to their high molecular weight and low salt content. All have characteristically low chloride contents due to the nature of manufacture. SYNCAL™ 45LC is especially low with a maximum chloride value of 50 ppm guaranteed.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		N45H	45LC	N70H
Calcium, % wt.	ASTM D4951	2.21	2.60	3.70
Calcium Sulfonate, % wt.	ASTM D3712	45.5	42.5	72.0
Total Base Number, mgKOH/g	ASTM D2896	10	20	25
Specific Gravity @ 15.6˚C, g/ml	ASTM D1298	0.950	0.942	1.002
Density, Pounds/Gallon	ASTM D1250	7.912	7.850	8.340
Flash Point, COC, ˚F(˚C)	ASTM D-92	365 (185)	400 (205)	365 (185)

APPLICATIONS

When used in combinations with other chemicals, SYNCAL™ Calcium Sulfonates have application in a wide variety of industrial oils, greases, rust preventives, metal working fluids, and engine oils.

AVAILABILITY

SYNCAL™ N45H, 45LC, and N70H are available in Rail Tank Cars, Tank Trucks, 55-Gallon Drums

7-23-15

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SYNCAL™ N47HF & N50HF

Neutral Calcium Sulfonates

GENERAL DESCRIPTION

Syncal™ N47HF and Syncal™ N50HF are dispersant type, oil soluble, slightly alkaline calcium sulfonates. These products offer excellent rust and corrosion inhibiting properties. The high polarity of Syncal™ N47HF and Syncal™ N50HF impart excellent water displacing characteristics in formulated products.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		N47HF	N50HF
Calcium, Wt. %	ASTM D4951	2.2	2.10
Calcium Sulfonate, Wt. %	ASTM D3712	42	50.0
Total Base Number, mgKOH/g	ASTM D2896	21	3
Specific Gravity @ 15.6˚C, g/ml	ASTM D1298	0.99	0.96
Density, Pounds/Gallon	ASTM D1298	8.2	8.00
Flash Point, COC, ˚C (˚F)	ASTM D92	365 (185)	365 (185)

APPLICATIONS

When used in combinations with other chemicals, Syncal™ N47HF and Syncal™ N50HF have application in a wide variety of industrial oils, greases, rust preventives, metal working fluids, and engine oils.

AVAILABILITY

Syncal™ N47HF and Syncal™ N50HF is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-17-15

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DYNOCAL™ N

Neutral Calcium Dinonylnaphthalene Sulfonate

GENERAL DESCRIPTION

DynoCal™ N is a neutral calcium dinonylnaphthalene sulfonate in a light mineral oil carrier. This non-staining sulfonate is intended to be used as a rust and corrosion inhibitor in a variety of lubricants and RP compounds. DynoCal™ N is a good choice for substituting Neutral Barium Sulfonate when Barium is not desirable. DynoCal™ N provides excellent demulsibility and water separating characteristics.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		DynoCal™ N
Calcium, % wt.	ASTM D4951	2.1
Calcium Sulfonate, % wt.	KTI TM100	49
Total Base Number, mgKOH/g	ASTM D2896	1.0
Specific Gravity @ 15.6˚C	ASTM D4052	1.0
Density, Pounds/Gallon @ 15.6˚C	ASTM D1250	8.3
Flash Point, ˚C/˚F, PMCC	ASTM D93	160/320

AVAILABILITY

DynoCal™ N is available in 55-Gallon Drums

7-28-15

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SYNCAL 50 SULFONATES

Mid-Base Calcium Sulfonates

GENERAL DESCRIPTION

Syncal™ N57C and 57HF are cost efficient mid-base calcium sulfonates that will lend detergent, dispersant, acid neutralizing, and corrosion inhibiting characteristics to a variety of rust preventives and lubricants. The dispersed soluble $CaCO_3$ helps to neutralize acids such as HCl, enhancing rust inhibiting characteristics when used in combination with other EP/AW additives like chlorinated paraffin. All products have characteristically low chloride and sodium contents. DC-L52 provides exceptional demulsibility and dewatering performance and is a good choice when faced with highly humid conditions.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		N57C	57HF	DC-L52
Calcium, wt%	ASTM D4951	2.90	3.0	3.4
Calcium Sulfonate, wt%	KTI TM100	25	28	29
Total Base Number, mgKOH/g	ASTM D2896	57	55	50
Specific Gravity @ 15.6° C, g/ml	ASTM D4052	0.96	0.96	0.98
Density, Pounds/Gallon	ASTM 1250	8.04	8.04	8.20
Flash Point, COC, °C/°F	ASTM D92	200/392	200/392	200/392
Sulfonate Type		Synthetic	Natural	DNN

APPLICATIONS

These mid-base calcium sulfonates should be considered as components for formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings. These products can be effective at relatively low treat rates (0.1 to 5% in the finished product).

AVAILABILITY

Syncal™ Mid-Base calcium sulfonates are available in Bulk Shipments, Totes, and 55-Gallon Drums

11-11-15

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SYNCAL™ OB306

Multifunctional Highly Overbased Calcium Sulfonate

GENERAL DESCRIPTION

Syncal™ OB306 is a specialty overbased calcium sulfonate that will lend detergent/dispersant, acid neutralizing, and rust and corrosion inhibiting characteristics to a variety of lubricating oils and greases, rust preventives and metalworking fluids. This product is compatible with most mineral base oils, white oils, and synthetic base stocks; and is a good choice for passenger car, heavy duty diesel, marine and stationary diesel engine oils where good detergency is needed.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Syncal™ OB306
Calcium, % wt.	ASTM D4951	12.0
Calcium Sulfonate, % wt.	KTI TM100	28.0
Total Base Number, mgKOH/g	ASTM D2896	300.0
Specific Gravity @ 15.6˚C	ASTM D4052	1.114
Density, Pounds/Gallon @ 15.6˚C	ASTM D1250	9.280
Flash Point, ˚C/˚F, PMCC	ASTM D93	160/320

AVAILABILITY

Syncal™ OB306 is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-28-15

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SYNCAL™ OB308

Multifunctional Highly Overbased Calcium Sulfonate

GENERAL DESCRIPTION

Syncal™ OB308 is a specialty overbased calcium sulfonate that will lend detergent/dispersant, acid neutralizing, and rust and corrosion inhibiting characteristics to a variety of lubricating oils and greases, rust preventives and metalworking fluids. This product is compatible with most mineral base oils, white oils, and synthetic base stocks; and is a good choice for passenger car, heavy duty diesel, marine and stationary diesel engine oils when good detergency is needed. Overbased Calcium Sulfonate Greases manufactured from SYNCAL™ OB308 will convert readily and exhibit good gel strength retention properties.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB308
Calcium, % wt.	ASTM D4951	12.0
Calcium Sulfonate, % wt.	KTI TM100	28.0
Total Base Number, mgKOH/g	ASTM D2896	310.0
Specific Gravity @ 15.6˚C	ASTM D4052	1.1
Density, Pounds/Gallon @ 15.6˚C	ASTM D1250	9.280
Flash Point, ˚C, PMCC	ASTM D93	180 min.

AVAILABILITY

Syncal™ OB308 is Available in Bulk Shipments, Totes, and 55-Gallon Drums

7-28-15

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SYNCAL™ CALCIUM SULFONATE OVERBASED

GENERAL DESCRIPTION

Syncal™ OB320, OB400, and OB405-WO are specialty overbased calcium sulfonates that will lend detergent/dispersant, acid neutralizing, and rust and corrosion inhibiting characteristics to a variety of lubricants, greases, industrial and automotive oils, rust preventives, and metalworking fluids. Syncal™ OB400 and 405-WO are excellent feedstocks for the manufacture of overbased calcium sulfonate greases and gelled coatings. Syncal™ OB405-WO is NSF approved for incidental contact category HX-1.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB320	OB400	OB405-WO
Calcium, Wt.%	ASTM D4951	12.1	15.3	15.2
Calcium Sulfonate, Wt.%	KTI TM100	28.0	20.0	20.5
TBN, mgKOH/g	ASTM D2896	300	405	400
Specific Gravity @ 15.6˚C, g/ml	ASTM D4052	1.13	1.20	1.20
Density, Pounds/Gallon	ASTM D1250	9.49	10.0	10.0
Flash, COC, ˚C/F	ASTM D92	195/385	210/410	204/400
Color, dilute	ASTM D1500	5.0 D	5.0 D	4.0 D
NSF HX-1 Approval		No	No	Yes
Kosher Approval		No	No	Yes

AVAILABILITY

Syncal™ is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-27-15

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SYNCAL™ OB403 & SYNCAL™ OB408

Multi-Functional Highly Overbased Calcium Sulfonates

GENERAL DESCRIPTION

Syncal™ OB403 and Syncal™ OB408 are multifunctional specialty overbased calcium sulfonates manufactured from special long chain alkyl benzene sulfonic acids. These products exhibit good oil solubility and excellent high temperature detergency and thermal stability. Not only are these products a very good TBN boosters, they are also excellent feedstocks for manufacturing overbased calcium sulfonate grease. Greases manufactured from either Syncal™ OB403 or Syncal™ OB408 tend to convert readily and have excellent gel strength retention properties.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB403	OB408
Calcium, Wt. %	ASTM D4951	15.5	15.0
Total Base Number, mgKOH/g	ASTM D2896	408	408
Calcium Sulfonate, Wt. %	KTI TM100	22.0	21.0
Specific Gravity, @ 15.6˚C, g/ml	ASTM D4052	1.20	1.20
Density, Pounds/Gallon	ASTM D1250	10.0	10.0
Flash Point, PMCC, ˚F (˚C)	ASTM D93	374(190)	392 (200)

APPLICATIONS

Syncal™ OB403 and Syncal™ OB408 are excellent feedstocks for the manufacture of Overbased Calcium Sulfonate Grease. They are also good choices for marine and cylinder oil and can also be used in a variety of lubricant formulations such as automotive crankcase and industrial oils.

AVAILABILITY

Syncal™ OB403 and Syncal™ OB408 are available in Tank Trucks, Totes, and 55-Gallon Drums

7-23-15

Phone: 724-715-7266 • **Fax:** 724-715-7341 • **www.kimestech.com**

SYNCAL™ OB401 & OB408HS

Premium Highly Active Overbased Calcium Sulfonates

GENERAL DESCRIPTION

Syncal™ OB401 and Syncal™ OB408HS are multifunctional specialty overbased calcium sulfonates manufactured from proprietary long chain alkyl benzene sulfonic acids. These products are designed to have a higher active content than most 400 TBN calcium sulfonates thereby offering improved surface wetting and water displacing properties. Syncal™ OB401 and Syncal™ OB408HS are very good rust inhibitors and should be considered in a variety of applications where RP is needed. The high TBN helps to neutralize any acidic reaction by-products of corrosion. Syncal™ OB401 and Syncal™ OB408HS offer excellent high temperature detergency and thermal stability and may also be used as a TBN booster in additive packages.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB401	OB408HS
Calcium, Wt. %	ASTM D4951	15.5	15.0
Total Base Number, mgKOH/g	ASTM D2896	405	400
Calcium Sulfonate, Wt. %	KTI TM100	23	24 min.
Specific Gravity @ 15.6°C, g/ml	ASTM D4052	1.200	1.19
Denisty, Pounds per Gallon	ASTM D1250	10.0	10.0
Flash Point, PMCC, °F (°C)	ASTM D93	374 (190)	150 min.

AVAILABILITY

Syncal™ OB401 and OB408HS are available in Bulk Shipments and 55-Gallon Drums

7-27-15

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SYNCAL™ OB406

Overbased Calcium Sulfonate Lubricant Additive

GENERAL DESCRIPTION

SYNCAL™ OB406 is an economical overbased calcium sulfonate that will lend detergent/dispersant, acid neutralizing, and rust and corrosion inhibiting characteristics to a variety of lubricating oils and greases, rust preventives and metalworking fluids. Nominal dosages would range from 0.5 to 5.0% (wt.) of the finished lubricant. This product is compatible with most mineral base oils, white oils, and synthetic base stocks and is a good choice for crankcase applications.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB406
Calcium, Wt. %	ASTM D4951	15.4
Calcium Sulfonate, Wt. %	KTI TM100	20.0
Total Base Number, mgKOH/g	ASTM D2896	400
Density, Pounds per Gallon @ 60˚C	ASTM D4052/1250	10.0
Color, dilute	ASTM D-1500	5.0

AVAILABILITY

SYNCAL™ OB406 is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-28-15

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SYNCAL™ OB407PAO

Highly Overbased Calcium Sulfonate in Polyalphaolefin Diluent

GENERAL DESCRIPTION

Syncal™ OB407PAO is a specialty overbased calcium sulfonate that is designed for use in applications where the benefits of PAO are desired. The calcium:sulfonate ratio is optimized for good compatibility with other componentry. The product lends itself well to a variety of applications including those where low temperature properties are needed. Syncal™ OB407PAO also converts to crystalline structure readily and is a good choice for Overbased Calcium Sulfonate Grease Feed. The high TBN offers good acid neutralizing and rust and corrosion inhibiting characteristics. This product can be considered as a component in a variety of lubricating oils and greases, coatings, rust preventives and metalworking fluids.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB407 PAO
Calcium, Wt. %	ASTM D4951	15.5
Calcium Sulfonate, Wt. %	KTI TM100	20.5
Total Base Number, mgKOH/g	ASTM D2896	410
Specific Gravity, @ 15.6˚C, g/ml	ASTM D4052	1.177
Color, dilute	ASTM D-1500	4.0
Viscosity, cSt @ 100˚C	ASTM D445	70

AVAILABILITY

Syncal™ OB407PAO is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-28-15

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SYNBAR™ BARIUM SULFONATES

Neutral and Overbased Barium Sulfonates

GENERAL DESCRIPTION

Synbar™ N50 (Neutral) and Synbar™ OB70 (Overbased) are first intent dispersant type, oil soluble barium sulfonates. These products impart excellent water separation as well as rust and corrosion inhibiting properties while maintaining low-staining characteristics due to their high molecular weight, polarity, and low chloride content.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		N50	OB70
Barium, Wt. %	ASTM D4951	7.0	14.0
Active Content, Barium Sulfonate, Wt. %	KTI TM100	50	42
Total Base Number (mg KOH/g)	ASTM D2896	1.0	65
Flash Point, COC, ˚C/˚F	ASTM D92	195/385	195/385
Specific Gravity @ 15˚C	ASTM D4052	1.007	1.094

APPLICATIONS

Synbar™ N50 and Synbar™ OB70 should be considered as components for formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings. These products can be effective at relatively low treat rates (0.1 to 5% in the finished product).

AVAILABILITY

Synbar™ N50 and Synbar™OB70 are available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-25-15

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SYNBAR™ N50HF
Neutral Barium Sulfonate

GENERAL DESCRIPTION
Synbar™ N50HF is a first intent, neutral barium sulfonate designed to provide excellent demulsibility, detergency, and optimum, non-staining rust protection. It is ideal for applications where superior rust and corrosion protection are needed. Synbar™ N50HF exhibits good compatibility with most mineral base oils, white oils, and synthetic base stocks.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		N50HF
Barium Content, Wt. %	ASTM D4951	6.6
Active Content, Barium Sulfonate, Wt. %	KTI TM100	50
Total Base Number, mgKOH/g	ASTM D2896	4.5
Flash Point, COC,˚C	ASTM D92	210
Specific Gravity @ 15.6˚C	ASTM D4052	1.02

APPLICATIONS
Synbar™ N50HF should be considered as a component in formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings. Synbar™ N50HF is effective at relatively low treat rates (0.1 to 5% in the finished product).

AVAILABILITY
Synbar™ N50HF is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-24-15

Phone: 724-715-7266 • **Fax:** 724-715-7341 • **www.kimestech.com**

SYNBAR™ N50P
Neutral Barium Sulfonate

GENERAL DESCRIPTION
Synbar™ N50P is a first intent, neutral barium sulfonate designed to provide excellent demulsibility, detergency, and optimum, non-staining rust protection. It is ideal for applications where superior rust and corrosion protection are needed. Synbar™ N50P exhibits good compatibility with most mineral base oils, white oils, and synthetic base stocks.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Synbar™ N50P
Barium Content, Wt. %	ASTM D4951	6.6
Active Content, Barium Sulfonate, Wt.%	KTI TM100	50
Color (dilute)	ASTM D1500	6.0
Total Base Number	ASTM D2896	4.0
Viscosity, cSt @ 100˚C	ASTM D445	100
Flash Point, COC, ˚C	ASTM D92	210
Specific Gravity @ 15.6ºC	ASTM D4052	1.01

APPLICATIONS
Synbar™ N50P should be considered as a component in formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings. Synbar™ N50P is effective at relatively low treat rates (0.1 to 5% in the finished product).

AVAILABILITY
Synbar™ N50P is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-24-15

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SYNBAR™ OB70HF

Overbased Barium Sulfonate

GENERAL DESCRIPTION

Synbar™ OB70HF is a cost effective overbased barium sulfonate. This product will provide the formulator with excellent demulsibility, detergency, and optimum non-staining rust protection even under acidic conditions. It is ideal for applications where superior rust and corrosion protection are needed. Synbar™ OB70HF exhibits good compatibility with most mineral base oils, white oils, and synthetic base stocks. It should be considered as a component in formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB70HF
Barium Content, Wt. %	ASTM D4951	14.0
Active Content, Barium Sulfonate, Wt. %	KTI TM100	43
Color (dilute)	ASTM D1500	4.0
Total Base Number	ASTM D2896	50
Flash Point, COC, ˚C (˚F)	ASTM D92	191 (375)
Specific Gravity @ 15.6˚C	ASTM D4052	1.08

APPLICATIONS

Synbar™ OB70HF should be considered as a component in formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings. Synbar™ OB70HF is effective at relatively low treat rates (0.1 to 5%) in the finished product.

AVAILABILITY

Synbar™ OB70HF is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-25-15

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SYNBAR™ OB70P

Overbased Barium Sulfonate

GENERAL DESCRIPTION

Synbar™ OB70P is an Overbased barium sulfonate with a high molecular weight. This product will provide the formulator with excellent demulsibility, detergency, and optimum non-staining rust protection even under acidic conditions. It is ideal for applications where superior rust and corrosion protection are needed. Synbar™ OB70P exhibits good compatibility with most mineral base oils and synthetic base stocks.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB70P
Barium Content, Wt. %	ASTM D4951	14.0
Active Content, Barium Sulfonate, Wt. %	KTI TM100	43
Color (dilute)	ASTM D1500	4.0
Total Base Number	ASTM D2896	70
Viscosity, cSt @ 100˚C	ASTM D445	40
Flash Point, COC, ˚C (˚F)	ASTM D92	191 (375)
Specific Gravity @ 15.6˚C	ASTM D4052	1.16

APPLICATIONS

Synbar™ OB70P should be considered as a component in formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings. Synbar™ OB70P is effective at relatively low treat rates (0.1 to 5%) in the finished product.

AVAILABILITY

Synbar™ OB70P is available in bulk and drum shipments

8-25-15

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DYNOZIN™ N

Dinonylnaphthalene Sulfonate

GENERAL DESCRIPTION

Dyno ZIN™ N is a Zinc dinonylnaphthalene sulfonate in a mineral oil carrier. This product is designed for use as a rust inhibitor and demulsifier in a variety of lubricating oils and greases. It is especially compatible with zinc dithiophosphate (ZDDP) and should be considered for use in applications where good water separation is required.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		DZ-N
Zinc, Wt. %	ASTM D4951	9.3
Active Content, Zinc Sulfonate, Wt. %	KTI TM100	42
Specific Gravity @ 15.6˚C	ASTM D4052	0.96
Density, Pounds/Gallon	ASTM 1250	8.0
Flash Point, COC, ˚C/˚F	ASTM D92	160/320
Color, Dilute	ASTM D1500	L.4.5
Viscosity @ 100 ˚C, cSt	ASTM D445	60
Water, Wt. %	ASTM D3712	≤1.8
Chlorine, ppm		≤20

AVAILABILITY

DynoZin N is available in Totes and 55-Gallon Drums

8-25-15

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MAGSUL OB9 AND OB9A™ MAGNESIUM SULFONATES

Overbased Magnesium Sulfonates

GENERAL DESCRIPTION

Magsul™ OB9 and Magsul™ OB9A are cost efficient overbased magnesium sulfonates that will lend detergent/dispersant, acid neutralizing, rust and corrosion inhibiting characteristics to a variety of lubricants. Magsul™ OB9 and Magsul™ OB9A are very good choices for automotive, marine, diesel and stationary diesel lubricants. Nominal dosages ranging from 0.25% to 5.0% (wt.) in the finished lubricant are effective. Magnesium sulfonates contribute lower ash to formulated products than the traditional overbased calcium sulfonate counterparts. These products generally exhibit good compatibility with most mineral base oils, white oils, and synthetic base stocks.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		OB9	OB9A
Magnesium, Wt. %	ASTM D4951	9.3	9.3
Active Content, Magnesium Sulfonate, Wt. %	KTI TM100	27	29
Total Base Number (mg KOH/g)	ASTM D2896	400	400
Specific Gravity @ 15.6˚C	ASTM D4052	1.1	1.1
Density, Pounds/Gallon	ASTM 1250	9.3	9.3
Flash Point, COC, ˚C/˚F	ASTM D92	140/284	175/347
Color, Dilute	ASTM D1500	6.0	5.5
Viscosity @ 100 ˚C, cSt	ASTM D445	175	150
Sulfur, Wt. %	ASTM D3712	1.65	1.50

APPLICATIONS

Magsul™ OB9 and Magsul™ OB9A should be considered as components for formulating industrial lubricating oils, greases, hydraulic fluids, slushing oils, and protective films or coatings. These products can be effective at relatively low treat rates (0.1 to 5% in the finished product).

AVAILABILITY

Synbar™ N50 and Synbar™OB70 are available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-25-15

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SYNSUL™ AOS
Alpha Olefin Sulfonate

GENERAL DESCRIPTION
Synsul™ AOS is an aqueous solution of sodium olefin sulfonates with a molecular weight of approximately 325. This non-ionic surfactant is highly effective as the foaming agent in many different personal care applications as well as fracturing fluids for subterranean formations. It also has utility as a foaming agent in enhanced oil recovery and is an efficient component for the clean-up of gas producing wells. SYNSUL™ Sodium AOS exhibits excellent heat stability and is compatible with a wide variety of other additives; it is especially suited for use in fresh water systems. This product is readily biodegradable.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		SS AOS
Active Matter, wt%	ASTM D3673/6173	37
Average Molecular Weight	ASTM D3673	325
Solids, wt%	ASTM D2369	40
Specific Gravity @ 60˚F	ASTM D1298	1.060
Density, Pounds/Gallon @ 60˚F	ASTM D1250	8.85
Viscosity, cSt @ 100˚C	ASTM D445	70
Water, wt%	ASTM D95	60
Unsulfonated, wt%, max.	ASTM D3673	1.8
Free Alkali as Na_2O, wt%	ASTM D3673	0.3
Appearance	Visual	Yellow Clear Liquid

APPLICATIONS
Synsul™AOS can be used as a foaming agent for water based fracturing fluids. The recommended treat rates range from 0.10% to 2.0% by volume in such systems as slurried polymer foam systems. Synsul™AOS, as a nonionic surfactant, is also widely used in Agricultural Products, Construction, Concrete Ad-Mixtures, Household, Industrial & Institutional Cleaning, Laundry, and Personal Care Products.

AVAILABILITY
Synsul™AOS Sodium Sulfonate is available in Bulk, Totes, and 55-Gallon Drums

12-15-15

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SYNSUL™ SODIUM SULFONATES

Oleum Sulfonated Synthetic Sodium Sulfonates

GENERAL DESCRIPTION

Synsul™ SS415, SS450, and SS500 are oil soluble, oleum sulfonated synthetic sodium sulfonates. Synsul™ 415 and 450 have good affinity for water making them excellent components in emulsifier packages. Synsul™ 500 displaces water, thus making it a good rust and corrosion inhibitor component.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		SS415	SS450	SS500
Sodium Sulfonate, Wt. %	ASTM D3712	63	63	63
Average Molecular Weight	ASTM D3712	415	450	500
Specific Gravity @ 60˚F	ASTM D1298	1.00	0.98	0.96
Density, Pounds/Gallon @ 60˚F	ASTM D1250	8.34	8.20	8.00
Viscosity, cSt @ 100˚C	ASTM D445	70	60	60
Inorganic Salts, Wt. %	ASTM D3712	0.6	0.6	0.6
Water, Wt. %	ASTM D3712/D95	0.75	0.75	0.75
Emulsibilty		excellent	very good	good
Corrosion Inhibition		fair	good	excellent

APPLICATIONS

Major functions performed by oil soluble sodium sulfonates include emulsification and dispersion of liquids, inhibition of rust and corrosion, and wetting dispersion of liquid solid systems. Sodium sulfonates are major components used in soluble cutting oils, textile oils, cleaning compounds, drawing compounds, emulsions, fat splitting, ore flotation, printing inks, paint manufacture, pigment manufacture, spray oil emulsifiers, and many others.

The advantages of these products over the natural sulfonates include lower viscosity for ease of handling, lighter color, and greater batch to batch consistency.

AVAILABILITY

Synsul™ Sodium Sulfonates are available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-23-15

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SYNSUL™ NA

Synthetic Sodium Sulfonates

GENERAL DESCRIPTION

Synsul™ NA is a series of synthetic sodium sulfonates of various desirable molecular weights. These products are carefully and selectively manufactured to ensure consistent quality with little variation from batch to batch. The lower molecular weight products, Synsul™ NA 420 and Synsul™ NA 450, have good affinity for water making them excellent components in emulsifier packages. The higher molecular weight products, Synsul™ NA 480, and Synsul™ NA 535 have less affinity for water thereby imparting very good rust and corrosion inhibiting characteristics. The advantages of these products over the natural sulfonates include lower viscosity for ease of handling, lighter color, and greater batch to batch consistency.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		SSNA 420	SSNA 450	SSNA 480	SSNA 535
Sodium Sulfonate, Wt. %	ASTM D3712	61.5	61	61	61
Average Molecular Weight	ASTM D3712	420	450	480	535
Inorganic Salts,Wt. %	ASTM D3712	0.30	0.30	0.10	0.20
Water, Wt. %	ASTM D95	4.0	4.0	1.5	2.5
Color, Dilute	ASTM D1500	5	5	4	5
Oil Content, Wt. %	ASTM D3712	35	35	35	35
Flash Point, °C, min.	ASTM D93	100	100	140	100
Specific Gravity @ 60°F	ASTM D4052	1.02	1.02	1.00	0.985
Pounds per Gallon @ 60°F	Calculated	8.5	8.5	8.3	8.2

APPLICATIONS

Major functions performed by oil soluble sodium sulfonates include: emulsification, inhibition of rust and corrosion, wetting and dispersion of liquid/solid systems. Sodium sulfonates are major components used in oil soluble and emulsifiable cutting oils, textile oils, cleaning compounds, drawing compounds, fat splitting, ore flotation, printing inks, paint manufacture, pigment manufacture, spray oil emulsifiers, and many other applications.

AVAILABILITY

Synsul™ NA is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-23-15

KIMES Technologies International

Globally Local

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NATSUL PURE™ 450, 500, 550

Natural Sodium Sulfonates

GENERAL DESCRIPTION

Natsul Pure™ 450, 500, and 550 are oil soluble "natural" sodium sulfonates derived from the sulfonation of specific Solvent Neutral Base Oils. These products do not contain any aromatic polynuclear hydrocarbons, carboxylates, asphaltenes or chlorinated derivatives. All Natsul Pure™ products offer the formulator excellent solubility and emulsification properties and good anti-corrosive characteristics. The advantages of these products over some synthetic sulfonates include improved rust characteristics and a wider range of solubility and emulsification properties.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		NSP 450	NSP 500	NSP 550
Sodium Sulfonate, Wt.%.	ASTM D3712	62	62	62
Average Molecular Weight	ASTM D3712	450	500	550
Sulfated Ash, Wt.%	ASTM D3712	10.5	9.5	9.0
Inorganic Salts, Wt.%	ASTM D3712	0.50	0.70	0.70
Water, Wt.%	ASTM D95	4	4	4
Color, Dilute	ASTM D1500	5	5	5
Mineral Oil Content, Wt.%	ASTM D3712	33	33	33

APPLICATIONS

Major functions performed by oil soluble sodium sulfonates include: emulsification, inhibition of rust and corrosion, wetting and dispersion of liquid/solid systems. Sodium sulfonates are major components used in soluble cutting oils, textile oils, cleaning compounds, drawing compounds, emulsions, fat splitting, ore flotation, printing inks, paint manufacture, pigment manufacture, spray oil emulsifiers, and many other applications.

AVAILABILITY

Natsul Pure™ Sulfonates are available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-20-2015

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SYNSUL HQ™ SODIUM SULFONATES

High Quality Hybrid Sodium Sulfonates

GENERAL DESCRIPTION

Synsul™ HQ450 and HQ485 are hybrid quality oil soluble sodium sulfonates derived from oleum sulfonation. Synsul™ HQ450 exhibits the greatest affinity for water making it an excellent emulsifier for both paraffinic and naphthenic oils. Synsul™ HQ485 can also be readily emulsified but, in addition, it will efficiently displace water making it a good choice for dual purpose emulsification and rust inhibition.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		HQ450	HQ485
Sodium Sulfonate, Wt. %	ASTM D3712	60	60
Average Molecular Weight	ASTM D3712	440-460	460-490
Specific Gravity @ 60°F	ASTM D1298	0.98	0.96
Density, Pounds/Gallon @ 60°F		8.20	8.00
Viscosity, cSt @ 100°C	ASTM D445	60	60
Inorganic Salts, Wt. %	ASTM D3712	0.6	0.6
Water, Wt. %	ASTM D3712/D95	0.75	0.75
Emulsibility		Excellent	Good
Corrosion Inhibition		Good	Excellent

APPLICATIONS

Major functions performed by oil soluble sodium sulfonates include emulsification and dispersion of liquids, inhibition of rust and corrosion, and wetting dispersion of liquid solid systems. Sodium sulfonates are major components used in soluble cutting oils, textile oils, cleaning compounds, drawing compounds, emulsions, fat splitting, ore flotation, printing inks, paint manufacture, pigment manufacture, spray oil emulsifiers, and many other applications.

These carefully balanced Hybrid Quality products offer the distinct advantages of both synthetic and natural sulfonates. This combination affords superior performance, good handling viscosities and color, and batch consistency.

AVAILABILITY

Synsul™ HQ Sulfonates are available in Rail Tank Cars, Tank Trucks, 55-Gallon Drums

7-23-15

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Globally Local

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SYNSUL™ ES

Oil-Free Sodium Sulfonates

GENERAL DESCRIPTION

Synsul™ ES440 and Synsul™ ES490 are oil soluble synthetic sulfonates in an ester diluent. These unique, mineral oil-free products offer excellent lubricity, dispersancy and corrosion inhibition in a variety of metalworking fluids.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		Synsul ES 440	Synsul ES 490
Sodium Sulfonate, Wt. %	ASTM D3712	61	61
Average Molecular Weight	ASTM D3712	440	490
Inorganic Salts, Wt. %	ASTM D3712	0.20	0.20
Water, Wt. %	ASTM D95	4	4
Color, Dilute	ASTM D1500	4	3
Ester Diluent, Wt. %	ASTM D3712	35	35
Flash Point, ˚C, min.	ASTM D93	100	100
Specific Gravity @ 60˚F	ASTM D4052	1.00	0.98
Pounds per Gallon @ 60˚F	Calculated	8.3	8.2

APPLICATIONS

Major functions performed by oil soluble sodium sulfonates include: emulsification, inhibition of rust and corrosion, and wetting and dispersion of liquid/solid systems. Sodium sulfonates are major components used in soluble cutting oils, textile oils, cleaning compounds, drawing compounds, emulsions, fat splitting, ore flotation, printing inks, paint manufacture, pigment manufacture, spray oil emulsifiers, and many other applications.

AVAILABILITY

Synsul™ ES Oil Free Sulfonates are available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

7-23-15

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Globally Local

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SOLUBLE BASE 5400

Emulsifier Base for Naphthenic Oils

GENERAL DESCRIPTION

Soluble Base 5400 is a well formulated soluble oil emulsifier packaged specifically designed to emulsify naphthenic oils with aniline points of 150°F to 175°F. Good hard water stability and good rust inhibiting characteristics make this product an excellent choice for formulating soluble oils and semi-synthetic fluids used in machining, grinding, and forming operations. The emulsion stability of Soluble Base 5400 is excellent.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		SB5400
Appearance	Visual	Clear Brown Liquid
Specific Gravity @ 15.6˚C	ASTM D4052	1.02
Density, Pounds/Gallon	ASTM D1250	8.5
Viscosity, cSt @ 40˚C	ASTM D445	425
Water, Wt. %	ASTM D1744	7.0
Total Acid Number, mg KOH/g	ASTM D974	<8
pH (1% Dilution)	ASTM E70	9.4

APPLICATIONS

Soluble Base 5400 is a formulated sodium sulfonate emulsifier package. Concentrations from 10 to 20% in the base oil are generally used to readily emulsify base oils with aniline points in the 150˚F to 175˚F range. Additionally, this soluble base package provides good rust and corrosion inhibiting characteristics while the polarity of the sulfonate aids in wetting of the metal. Soluble Base 5400 is a versatile product that is compatible with most extreme pressure additives such as chlorinated paraffins, sulfurized products, and esters for formulating heavy duty soluble oils.

This product contains no chlorine, free sulfur, nitrites, phenols, or heavy metals.

AVAILABILITY

Soluble Base 5400 is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-28-15

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SOLUBLE BASE 5600
Emulsifier Base

GENERAL DESCRIPTION
Soluble Base 5600 is a highly formulated soluble oil emulsifier package, specifically designed to emulsify either Naphthenic or Paraffinic oils with aniline points of 170°F to 215°F. Good hard water stability (up to 800 ppm) and good rust and corrosion inhibiting characteristics make this product an excellent choice for formulating soluble oils and semi-synthetic fluids used in machining and grinding operations of cast iron and mild steels. Soluble Base 5600 is suitable for both ferrous and non-ferrous metals.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		SB 5600
Appearance	Visual	Clear Brown Liquid
Specific Gravity @ 15.6ºC	ASTM D4052	1.00
Density, Pounds/Gallon	Calculated	8.33
Water, Wt. %	ASTM D1744	12.0
Total Acid Number, mg KOH/g	ASTM D974	35
pH (5% Dilution)	ASTM E70	8.0

APPLICATIONS
Soluble Base 5600 is a formulated sodium sulfonate emulsifier package. Concentrations from 16 to 20% in the Naphthenic/Paraffinic base oil are generally used to readily emulsify the base oils. Soluble Base 5600 is a versatile product that is compatible with most extreme pressure additives such as chlorinated paraffin, sulfurized products, and esters for formulating heavy duty soluble oils.

This product contains no chlorine, free sulfur, nitrites, phenols, or heavy metals.

AVAILABILITY
Soluble Base 5600 is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-28-15

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SOLUBLE BASE 5700

Sulfonate & PIBSA Emulsifier Base for Paraffinic and Naphthenic Oils

GENERAL DESCRIPTION

Soluble Base 5700 is a versatile sulfonate and PIBSA derived soluble oil emulsifier package designed to emulsify paraffinic and naphthenic oils, as well as the more difficult re-refined oils that are primarily paraffinic in composition. Soluble Base 5700 offers good hard water stability and good rust inhibiting characteristics. In addition, the PIBSA technology provides exceptional system cleanliness by preventing buildup of soap and sludge in the sumps. In turn, this proactive approach limits microbial growth and thereby enhances corrosion protection and extends fluid life.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		SB 5700
Appearance	Visual	Clear Amber Liquid
Specific Gravity @ 15.6 ºC	ASTM D4052	1.00
Density, Pounds/Gallon	Calculated	8.3
Viscosity, cSt @ 40 ºC	ASTM D445	475
Total Acid Number, mg KOH/g	ASTM D974	46
pH (5% in DI)	ASTM E70	8.5

APPLICATIONS

Soluble Base 5700 is recommended for use in soluble oils at concentrations of 13 to 18% depending on the base oil used and the desired characteristics of the finished fluid. Additionally, semi-synthetics fluids can be formulated using Soluble Base 5700 along with K-Amide™ and a water dispersible ester. Soluble Base 5700 is compatible with most chlorinated paraffin products.

This product contains no chlorine, free sulfur, nitrites, phenols, or heavy metals.

AVAILABILITY

Soluble Base 5700 is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

9-16-15

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K-AMIDE™ X-1011

Rust and Corrosion Inhibitor

GENERAL DESCRIPTION

K-Amide™ X-1011 is a versatile, low-foaming rust and corrosion inhibitor for use in metalworking fluids, alkaline cleaners, and water-based quenching fluids. K-Amide™ X-1011 exhibits good compatability with sulfonates, PIBSA's and other products as part of metalworking formulary. The non-tacky films of K-Amide™ X-1011 are easily removed with alkaline cleaners. K-Amide™ X-1011 is non-staining to yellow metals and can be used as a component of soluble oils as well as synthetic and semi-synthetic fluids. K-Amide™ X-1011 offers excellent cast iron chip test results at low concentrations.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		X-1011
Appearance	Visual	Clear Amber Liquid
Specific Gravity @ 25˚C	ASTM D4052	1.13
Pounds per Gallon @ 25˚C	Calculated	9.4
Active Content, Wt. %	KTI TM 100	>80%
pH as received	ASTM E70	8.3
Corrosion Inhibition		excellent

APPLICATIONS

Rust and corrosion inhibitor for ferrous and non-ferrous metals. K-Amide™ X-1011 is particularly effective as an in-process corrosion inhibitor at concentrations of 0.5% in fluids with a pH of 9.0 or higher. For optimal rust protection in formulated fluids, a final pH of approximately 8.5 or greater is recommended; this may require additional pH contributors such as alkanolamine. 30 day indoor storage protection is achieved with solutions containing 2% to 3% of K-Amide™ X-1011.

AVAILABILITY

K-Amide™ X-1011 is available in Bulk, Totes, and 55-Gallon Drums

8-28-15

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K-AMIDE™ X-1040

Multi-functional Metalworking Amide-Type Additive

GENERAL DESCRIPTION

K-Amide™ X-1040 is a special lard oil and DIPA based amide that is oil and/or water dispersible. K-Amide™ X-1040 is designed to offer lubricity, rust & corrosion protection, and reserve alkalinity in a variety of metalworking formulations. K-Amide™ X-1040 is low foaming and can be used as a secondary emulsifier. K-Amide™ X-1040 also improves the viscosity of water based solutions.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		X-1040
Appearance	Visual	Clear Brown Viscous Liquid
Viscosity @ 100°F, SUS	ASTM D445	1900
pH (1% solution)	ASTM E70	10.5
Acid Number, mgKOH/g	ASTM D974	3
Total Amine Value	KTI TM 110	140
Specific Gravity @ 25°C	ASTM D4052	0.97

APPLICATIONS

Additions of K-Amide™ X-1040 at 5% to 8% by weight in Soluble Oils, Synthetic, and Semi-Synthetic Metalworking Fluid formulations will improve lubricity, rust and corrosion protection, and viscosity in a variety of machining and forming fluids. Additions of K-Amide™ X-1040 at 5% to 8% by weight will also aid in emulsification of oil and water systems.

AVAILABILITY

K-Amide™ X-1040 is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-2-2015

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Gelled Sulfonates

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JALPON™ 1200

Gelled Calcium Sulfonate in Petroleum Oil

GENERAL DESCRIPTION

Jalpon™ 1200 is a solvent free, gelled calcium sulfonate in a petroleum oil diluent. It is designed to allow for the easy formulation of solvent-free rust preventives, lubricants, and coatings. Jalpon™ 1200 deposits an oily film. It is also easily emulsified for use in water borne rust preventives and coatings.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1200
Non Volatile, Wt. %	ASTM D2369	96% minimum*
Viscosity, Brookfield #7 @ 10 rpm	ASTM D2196	80-130,000 cps
Flash Point, minimum	ASTM D92	>340°F / 170°C
Density @ 25°C; pounds/gallon	ASTM D1475	8.5 - 9.6

** JALPON™ 1200 is solvent free, but tests at somewhat less than 100% due to the volatility of the diluent oil in the standard test procedure*

APPLICATIONS

Jalpon™ 1200 is a formulating base for oil based and emulsified rust preventives, lubricants, and coatings. Jalpon™ 1200 can be emulsified with fatty acid/amine type emulsifiers or nonionics. This versatile product can be used “as is” for the protection and lubrication of moving and sliding mechanical parts such as fifth wheels, hinges, or gears. When Jalpon™ 1200 is formulated in conjunction with sulfurized olefins, it will impart good EP and antiwear properties. Jalpon™ 1200 is a good base for marine ballast tank coatings when blended with oil and drying oils or resins. It is an excellent base for extrudable hot melt sealants, hot melt dips, and spray applied coatings when blended with waxes and poylmers. Other applications include automobile frames and truck and trailer components, wire rope lubricants and preservatives, nuclear power plant cable casing filler and preservative for hoists in fuel storage areas.

AVAILABILITY

JALPON™ 1200 is available in open head drums.

8/27/2015

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JALPON™ 1200A

Gelled Calcium Sulfonate in Petroleum Oil

GENERAL DESCRIPTION

Jalpon™ 1200A is a solvent free, gelled calcium sulfonate compound in low viscosity petroleum oil. It is designed to allow the easy formulation of solvent-free rust preventives, lubricants, and coatings. Jalpon™ 1200A will deposit an oily film. Jalpon™ 1200A contains a wax component for improved film integrity and resistance to water in thin film applications. Jalpon™ 1200A is easily emulsified for use in water borne rust preventives and coatings.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1200A
Non Volatile, Wt. %	ASTM D2369	96% minimum*
Viscosity, Brookfield #7 @ 10 rpm	ASTM D2196	80-130,000 cps
Flash Point (minimum)	ASTM D92	>340°F/162°C
Density @ 25°C, #/g	ASTM D1475	8.5 - 9.6

**JALPON™ 1200A is solvent free, but tests at somewhat less than 100% due to the volatility of the diluent oil in the standard test procedure*

APPLICATIONS

Jalpon™ 1200A is a formulating base for oil based and emulsified rust preventives, lubricants, and coatings. Jalpon™ 1200A can be emulsified with fatty acid/amine type emulsifiers or nonionics. This versatile product can be used “as is” for the protection and lubrication of moving and sliding mechanical parts such as fifth wheels, hinges, or gears. When Jalpon™ 1200A is formulated in conjunction with sulfurized olefins, it will impart good EP and antiwear properties. Jalpon™ 1200A is a good base for marine ballast tank coatings when blended with oil and drying oils or resins. It is an excellent base for extrudible hot melt sealants, hot melt dips, and spray applied coatings when blended with waxes and polymers. Other applications include automobile frames and truck and trailer components, wire rope lubricants and preservatives, nuclear power plant cable casing filler and preservative for hoists in fuel storage areas.

AVAILABILITY

JALPON™ 1200A is available in open head drums.

8-27-2015

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JALPON™ 1250

Modified Calcium Sulfonate

GENERAL DESCRIPTION

Jalpon™ 1250 is a semi-thixotropic overbased calcium sulfonate designed for use as an additive in oils for metal removal and forming operations including metal stamping and drawing, as well as in other machining oils such as neat and soluble oils.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1250
Viscosity, Brookfield #6 @ 20 rpm	ASTM 445	17,000 to 26,000 cps
Flash Point, °C	ASTM D92	170°C
Density @ 25°C	ASTM D1475	9.3 to 9.7
TBN	ASTM D974	330 to 370

APPLICATIONS

Jalpon™ 1250 is a solvent free, gelled sulfonate compound in low viscosity petroleum oil. Jalpon™ 1250 offers lubricating and rust protective characteristics and can be used as an additive to grease and other extreme pressure lubricants. Jalpon™ 1250 can also be used “as is” for the protection and lubrication of moving and sliding mechanical assemblies such as fifth wheels, hinges, and gears. Jalpon™ 1250 exhibits great synergy with sulfurized olefins and can provide better weld points and wear indices compared to the performance of sulfurized olefin or chlorinated paraffins alone thereby making it a viable replacement for chlorinated paraffins in metalworking formulations.

AVAILABILITY

JALPON™ 1250 is available in open head drums.

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JALPON™ HMB

Gelled Calcium Sulfonate in High Flash Petroleum Oil

GENERAL DESCRIPTION

Jalpon™ HMB is a solvent free, gelled sulfonate in a high viscosity petroleum oil carrier. It is designed for use where corrosion prevention, resistance to flow at elevated temperatures, low volatility, high flash and fire resistance are required.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		HMB
Non Volatile, Wt. %	ASTM D2369	96% minimum*
Viscosity, Brookfield, #7 @ 10 rpm	ASTM D2196	100,000 -160,000 cps
Flash Point, minimum	ASTM D92	500°F / 260°C
Density @ 25°C (lbs/gal)	ASTM D1475	9

** Jalpon™ HMB is solvent free but tests at somewhat less than 100% due to the volatility of the diluent oil in the standard test procedure.*

APPLICATIONS

Jalpon™ HMB is an excellent choice for coating formulations as a rheology control and/or pigment dispersing agent. It can be used to formulate hot melt sealants and coatings where high build and resistance to sag at high temperatures are needed. Jalpon™ HMB can also function as a calcium sulfonate grease or an additive to grease and other extreme pressure lubrication products. Jalpon™ HMB may be used “as is” for the protection and lubrication of moving and sliding mechanical assemblies.

AVAILABILITY

JALPON™ HMB is available in open head drums.

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JALPON™ 1300A

Gelled Calcium Sulfonate Blend in Aliphatic Solvent

GENERAL DESCRIPTION

Jalpon™ 1300A is a thixotropic gelled overbased calcium sulfonate in mineral spirits that has been partially formulated with waxes and other proprietary ingredients. It is designed to allow the easy formulation of solvent borne industrial coatings by compounding with a variety of raw materials such as resins, waxes, asphalts, oils and/or other ingredients. Specialty coatings can be formulated to impart superior corrosion protection, flow control, high build, and sag resistance.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1300A
Non-volatile, Wt. %	ASTM D2369	58-62%
Viscosity, Brookfield, #6 @ 10 rpm	ASTM D2196	40,000-65,000 cps
Flash Point (minimum)	ASTM D93	104°F/40°C
Density @ 25°C (lbs/gal)	ASTM D1475	7.65-8.25

APPLICATIONS

Jalpon™ 1300A is an excellent formulating base compound. It can also be used “as is” for a soft, waxy automotive undercoating to prevent rust and corrosion. For heavier duty undercoats, Jalpon™ 1300A can be blended with waxes, oils, asphalts. When used in combination with Jalpon™ 1800, a very good truck chassis coating compound can be made.

AVAILABILITY

Jalpon™ 1300A is available in open head drums.

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JALPON™ 1400, 1400A, 1400EX

Gelled Calcium Sulfonate Emulsions

GENERAL DESCRIPTION

The Jalpon™ 1400 series are stable emulsions of gelled calcium sulfonate in water featuring low VOC and low odor. The products in this emulsion series are compatible with a wide range of water-borne and water dispersible resin systems. Jalpon™ 1400A contains an extra component for barrier protection while Jalpon™ 1400EX contains significantly more active calcium sulfonate for increased surface wetting in more demanding applications.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1400	J1400A	J1400EX
Non-Volatile, wt%,	ASTM D2369	46	46	46
Viscosity, Brookfield #4 @ 10 rpm	ASTM D2196	7,000	7,000	7,000
Weight per Gallon @ 25°C	ASTM D1475	8.2	8.2	8.2
VOC, Pounds per Gallon, EPA Method 24		0.11	0.11	0.11

APPLICATIONS

When used “as-is”, the Jalpon 1400 series will leave an oily film (after evaporation of the water) and can be used as a temporary in-process rust preventive compound. They can also be formulated to be very hard and dry quickly thereby making them a good choice for small parts protection by “dip and spin”. This Jalpon™ 1400 Series of products can be added to waterborne resin systems to make primers for direct to metal coatings, ballast tank coatings, and coatings for engine blocks.

AVAILABILITY

Jalpon™ 1400 Series are available in Tank Trucks and 55-Gallon Drums.

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JALPON™ 1450

Waterborne Gelled Calcium Sulfonate Corrosion Preventive Coating

GENERAL DESCRIPTION

Jalpon™ 1450 is a formulated water based coating comprised of a highly thixotropic gelled sulfonate, SBR resin, and other film forming and drying ingredients. Jalpon™ 1450 is an excellent water borne automotive anticorrosion coating for OEM and aftermarket applications. Jalpon™ 1450 should also be considered for any industrial application where solvent is not desirable. The SBR content adds pliability and chip resistance to the coating.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1450
Non-volatile, Wt. %	ASTM D2369	45%
Viscosity, Brookfield, #4 @ 10 rpm	ASTM D2196	3,500-9,000 cps
Flash Point (minimum)	ASTM D93	n/a
Density @ 25°C, #/g	ASTM D1475	7.8-8.2

APPLICATIONS

The recommended dry film thickness for application of Jalpon™ 1450 is 3 to 6 mils. The product becomes impervious to water in about two hours after application. Outdoor paint like coatings can be formulated with Jalpon™ 1450 using additional resins and pigments.

AVAILABILITY

Jalpon™ 1450 is available in bulk tank trucks and open head drums.

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JALPON™ 1470

Waterborn Gelled Calcium Sulfonate Corrosion Preventive Coating

GENERAL DESCRIPTION

Jalpon™ 1470 is a water based coating formulated with a carefully selected blend of inhibitors, emulsifiers, surfactants, and other film forming and drying ingredients. When dry, Jalpon™ 1470 leaves a pale amber waxy film that offers a minimum of 500 hours in the Salt Spray cabinet (5%) and over 2000 hours in the Humidity Cabinet. Jalpon™ 1470 is an excellent water borne automotive anticorrosion coating for OEM and aftermarket applications. It is intended for use as a final preservative coating for equipment and production parts prior to shipment or storage. Jalpon™ 1470 should be considered for any industrial application where solvent is not desirable.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1470
Non-volatile, Wt. %	ASTM D2369	58-62%
Viscosity, Brookfield, #6 @ 10 rpm	ASTM D2196	40,000-65,000 cps
Flash Point (minimum)	ASTM D93	104°F/40°C
Density @ 25°C (lbs/gal)	ASTM D1475	7.65-8.25

APPLICATIONS

Maximum protection is achieved with Jalpon™ 1470 when surfaces to be protected are clean and dry. This product is designed to be used as-is and should not be further diluted. A dry film thickness of 1 to 1.5 mils is effective. Jalpon™ 1470 is removable using petroleum solvent or industrial alkaline cleaners at 170-200°F. Jalpon™ 1470 is not freeze/thaw stable. It is recommended that this product be shipped and stored above freezing temperatures. Application of this product should take place when temperature is above 50 F (10 C).

AVAILABILITY

Jalpon™ 1470 is available in open head drums.

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JALPON™ 1500

Gelled Calcium Sulfonate Blend in Aliphatic Solvent

GENERAL DESCRIPTION

Jalpon™ 1500 is a rust preventive base compound that is comprised primarily of gelled calcium sulfonate and a proprietary wax blend. The combination of high non-volatiles and moderately high viscosity will produce firm and waxy films that perform very well in salt spray tests. This product can be used as is, further diluted, or further formulated using a variety of compatible coating products.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1500
Non-volatile, Wt. %	ASTM D2369	58-62%
Viscosity, Brookfield, #6 @ 10 rpm	ASTM D2196	40,000-65,000 cps
Flash Point (minimum)	ASTM D93	104°F/40°C
Density @ 25°C (lbs/gal)	ASTM D1475	7.65-8.25

APPLICATIONS

Intended uses for Jalpon™ 1500 include protection of outdoor storage of goods such as railroad engine parts, oilfield parts, tubular goods, aftermarket automotive rustproofing and fleet rustproofing, etc. Jalpon™ 1500A may be pigmented for longer term protection. Jalpon™ 1500A is suitable for application temperatures up to 400ºF.

AVAILABILITY

Jalpon™ 1300A is available in open head drums.

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JALPON™ 1700HF

Gelled Calcium Sulfonate in Aliphatic Solvent

GENERAL DESCRIPTION

Jalpon™ 1700HF is a concentrated, highly thixotropic gelled sulfonate in mineral spirits. It is designed to allow the easy formulation of solvent borne industrial coatings with a wide variety of raw materials. Jalpon™ 1700HF will offer superior corrosion protection and resistance to dripping, sag, and unwanted flow in finished coatings. Jalpon™ 1700HF is highly concentrated and should be formulated by blending with a variety of film formers such as oil, wax, resins, and/or petrolatum products. Jalpon™ 1700HF is multifunctional and in addition to corrosion protection, it imparts good rheology characteristics to paints, rust preventives, and coatings. Jalpon™ 1700HF also aids in the dispersion of pigments in highly formulated coatings.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1700
Non-volatile, Wt. %	ASTM D2369	48-52%
Viscosity, Brookfield, #6 @ 10 rpm	ASTM D2196	48,000 - 85,000 cps
Flash Point (minimum)	ASTM D93	140°F/60°C
Density @ 25°C (lbs/gal)	ASTM D1475	8.2 – 8.6

APPLICATIONS

Jalpon™ 1700HF is a base product that is intended to be further formulated with waxes, petrolatums, oxidized pretrolatums, salts of oxidates, resins, asphalts, and virtually any other raw material with good aliphatic compatibility. The high viscosity of this product requires powerful mixing equipment and heat. Jalpon™ 1700HF can also be as a rheology modifier in compatible paints and coatings in low concentrations of 2 to 8%.

AVAILABILITY

Jalpon™ 1700HF is available in open head drums.

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JALPON™ 1760 LF and HF

Gelled Calcium Sulfonate in Aliphatic Solvent

GENERAL DESCRIPTION

Jalpon™ 1760LF and 1760HF are concentrated, thixotropic gelled sulfonates in mineral spirit carriers. They high solids content allows for easy formulation of reduced VOC solvent borne industrial coatings. Jalpon™ 1760LF and 1760HF are compatible with a wide variety of raw materials and will offer superior corrosion protection and resistance to dripping and flow in finished coatings. JALPON™ 1760LF and 1760HF are highly concentrated and should be formulated by blending with other film formers such as oil, wax or petrolatum to insure a continuous film and optimum performance. JALPON™ 1760LF and 1760HF are multifunctional. In addition to corrosion protection, they impart good rheology characteristics to paints, rust preventives, and coatings. JALPON™ 1760LF and 1760HF can also be of value in the dispersion of pigments in highly formulated coatings.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		1760LF	1760HF
Non Volatile, Wt. %	ASTM D2369	60 – 64	60 – 64
Viscosity, Brookfield, #6 @ 10 rpm	ASTM D2196	50,000-90,000 cps	50,000-80,000 cps
Flash Point, minimum	ASTM D93	105ºF / 40ºC	140ºF / 60ºC
Density @ 25ºC (lbs/gal)	ASTM D1475	8.8 – 9.3	8.6 – 9.0

APPLICATIONS

Jalpon™ 1760LF and 1760HF are base products intended to be further formulated with waxes, petrolatums, oxidized pretrolatums, salts of oxidates, resins, asphalts, and virtually any other raw material with good aliphatic compatibility. The high viscosity of this product requires powerful mixing equipment and heat. Jalpon™ 1760LF and 1760HF can also be used as for rheology modification in compatible paints, rust preventives, and coatings in low concentrations of 2 to 8%.

AVAILABILITY

Jalpon™ 1760LF and 1760HF are available in open head drums.

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Jalpon 1800, 1801, 1802

Low VOC, Very Long-Term Corrosion Preventive Compounds

GENERAL DESCRIPTION

The Jalpon™ 1800 series of products were developed for the maintenance of steel structures, notably bridges. However the unique firm film, excellent weather resistance, and surface tolerance of the 1800 series of products suggest many other uses for this exceptional group of products. Jalpon™ 1802 was designed for use as a corrosion preventive penetrant for joints, bolts, and crevices of steel structures such as bridges and utility towers where pack rust is prevalent and where disassembly of joint areas is not practical. Jalpon™ 1800 is a high solids modified overbased calcium sulfonate/long oil alkyd compound that offers very long term corrosion protection. It was specifically designed for use as a top coat when pigmented with color and anti-corrosive pigments and used in conjunction with Jalpon™ 1802. The Jalpon™ series products are unique in that minimal surface preparation is required prior to application.

Jalpon™ 1801 is a very high solids formulating base compound similar to Jalpon™ 1800, however, it does not contain alkyd resin.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J1800	J1801	J1802
Non Volatile, Wt. %	ASTM D2369	68 - 74	72 - 78	78 - 82
Viscosity, Brookfield #5@10 rpm	ASTM D2196	5,000-13,000 cps	10,000-20,000 cps	7,000-12,000 cps
Flash Point, ºF/ºC	ASTM D93	105/41	105/41	105/41
Density	ASTM D1475	8.0 - 8.3	8.3 - 8.35	8.0 – 8.2

APPLICATIONS

All products in the Jalpon 1800 series can be formulated with ingredients such as driers, oil modified polyurethanes and epoxy-esters for many low VOC applications such as, maintenance compounds including transportation coatings, plant equipment, architectural coatings and structural steel applications. Field trials of formulated coatings proved that minimal surface preparation is required while providing protection for well over 20 years.

AVAILABILITY

Jalpon™ 1800, 1801 and 1802 are available in bulk or 55 gallon open head drums.

9-16-15

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JALPON™ 5300 and 5300 Fast Dry

High Solids, Firmer Film Rust Preventive Compound

GENERAL DESCRIPTION

Jalpon™ 5300 and 5300FD (fast dry) are high solids, lower VOC moderately formulated rust preventive compounds comprised of gelled calcium sulfonate and other components that yield a relatively tack-free coating. The high non-volatiles and lower viscosities of these products makes for easier handling over the other very high viscosity Jalpon™products.

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TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J5300	J5300FD
Non Volatile, Wt. %	ASTM D2369	68 - 73	68 - 73
Viscosity, Brookfield, #6 @ 10 rpm	ASTM D2196	10,000 - 25,000 cps	5,000 - 20,000 cps
Flash Point, minimum	ASTM D93	105ºF / 40ºC	>100ºF / 37.7ºC
Density @ 25ºC (lbs/gal)	ASTM D1475	8.0	8.0

APPLICATIONS

Jalpon™ 5300 and 5300FD are extremely good rust preventive compounds as demonstrated by their extremely long salt fog resistance (>8000 hours). They can be used as ballast tank coatings, truck chassis coatings, long-term storage of parts, aircraft OEM and maintenance coatings. Jalpon™ 5300 and 5300FD can also be used to coat farm implements and can be applied by spraying or brushing. Jalpon™ 5300 and 5300FD is effective and will hold rust in check even when applied over existing rust (as long as it is not flaking). When used on mower decks, Jalpon™ 5300 and 5300FD helps prevent grass build up on the deck in addition to keeping it free of rust.

AVAILABILITY

Jalpon™ 5300 and 5300FD are available in bulk tank trucks and open head drums.

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JALPON™ 5312

High Solids, Anti-Drip, Sag Resistant Rust Preventive Compound

GENERAL DESCRIPTION

Jalpon™ 5312 is a high solids, lower VOC rust preventive compound comprised of gelled calcium sulfonate, oxidate, waxes and other ingredients to yield a relatively dripless, long term waxy rust preventive coating.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		J5312
Non Volatile, Wt. %	ASTM D2369	65 - 75
Viscosity, Brookfield, #6 @ 10 rpm	ASTM D2196	30,000 - 50,000 cps
Flash Point, minimum	ASTM D93	145ºF / 62.7ºC
Density @ 25ºC (lbs/gal)	ASTM D1475	8.1

APPLICATIONS

Jalpon™ 5312 may be used as a component in other coating formulations or it may be used as is and/or diluted with mineral spirits. Jalpon™ 5312 provides extremely good rust preventive characteristics and will provide relative long salt fog resistance. It can be used in aerosol rust preventive formulations, tank coatings, truck chassis coatings, long-term storage of parts, aircraft OEM, architectural and maintenance coatings. Jalpon™ 5312 can also be used to coat farm implements and can be applied by spraying or brushing. Jalpon™ 5312 will hold rust in check even when applied over existing rust (as long as it is not flaking).

AVAILABILITY

Jalpon™ 5312 is available in open head drums.

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PIBSI/PIBSA

Intermediates
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PIBSA

Ashless Dispersant Intermediates

GENERAL DESCRIPTION

PIBSA 1070 and 1100 are polyisobutylene succinic anhydrides manufactured via thermal process from a 1000 molecular weight polyisobutylene. PIBSA 1100 is a 100% active product that allows the user great flexibility. PIBSA 1100 can be made to be either a water soluble or oil soluble product depending on the selected reaction component. To ease handling, PIBSA 1070 has been pre-diluted to a 70% active concentration with either a paraffinic (P) or naphthenic (N) base oil. When reacted with the appropriate amine, ashless dispersants for lubricating oils can be derived from PIBSA 1070P while specialty emulsifiers for metalworking applications are made with PIBSA 1070N.

Both PIBSA 1070 and 1100 have no residual chlorine and exhibit good solubility in paraffinic and naphthenic oils.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		PIBSA 1070P (N)	PIBSA 1100
Appearance	Visual	Amber Liquid	Amber Liquid
Density (Specific Gravity) @ 25°C	ASTM D1298	0.91	0.93
Density, Pounds per Gallon	ASTM D1250	7.58	7.75
Flash Point, COC, °C	ASTM D92	164	245
% Active		70	100
Viscosity @ 100°C, cSt	ASTM D445	80	450
Acid Value (mg KOH/g)	ASTM D974	35	50
Free Maleic Anhydride (%)		< 1	< 1

AVAILABILITY

PIBSA 1070 and 1100 are available in Tank Trucks and 55-Gallon Drums

9-10-15

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PIBSI 1060A

Ashless Dispersant

GENERAL DESCRIPTION

PIBSI 1060A is a polyisobutylene succinicimide produced from polyisobutylene anhydride and a high molecular weight amine. This quality product is manufactured by thermal process to render a chlorine-free PIBSI. PIBSI 1060A is designed for use as an ashless dispersant in engine oils, gear oils, and industrial oils. PIBSI 1060A also serves as a deposit control additive is diesel fuel to help prevent build-up of deposits in the fuel injection system.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		PIBSI 1060A
Appearance	Visual	Dark Amber Liquid
Density (Specific Gravity) @ 25˚C	ASTM D1298	0.91
Density, Pounds per Gallon	ASTM D1250	7.58
Flash point, COC, ˚C	ASTM D92	168
% Actives		60
Viscosity @ 100˚C, cSt	ASTM D445	180
Acid Value (mg KOH/g)	ASTM D974	< 5
Total Base Number (mg KOH/g)	ASTM D2896	57
Nitrogen Content (%)	Calculated	2.3
Free Maleic Anhydride (%)		< 1

AVAILABILITY

PIBSI 1060A is available in Tank Trucks and 55-Gallon Drums.

9-10-15

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PIBSI 70PAO

Ashless Dispersant

GENERAL DESCRIPTION

PIBSI 70PAO is a polyisobutylene succinicimide produced from polyisobutylene anhydride and a high molecular weight amine. This quality product is manufactured by thermal process to render a chlorine-free product. PIBSI 70PAO is designed for use as an ashless dispersant in polyalphaolefin (PAO) based engine oils, gear oils, industrial oils, and fuel additive packages. PIBSI 70PAO also serves as a deposit control additive to help prevent build-up of deposits in fuel injection systems.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		PIBSI 70PAO
Appearance	Visual	Dark Amber Liquid
Density (Specific Gravity) @ 25˚C	ASTM D1298	0.91
Density, Pounds per Gallon	ASTM D1250	7.50
Flash point, COC, ˚C	ASTM D92	206
% Actives		70
Viscosity @ 100˚C, cSt	ASTM D445	115
Acid Value (mg KOH/g)	ASTM D974	< 5
Total Base Number (mg KOH/g)	ASTM D2896	67
Nitrogen Content (%)	Calculated	2.7
Free Maleic Anhydride (%)		< 1

AVAILABILITY

PIBSI 70PAO is available in Tank Trucks and 55-Gallon Drums.

9-10-15

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K-OX™ P600/45

Oxidized Hydrocarbon Intermediate

GENERAL DESCRIPTION

K-Ox™ P600/45 is a synthetic fatty acid made from petroleum hydrocarbons. K-Ox™ P600/45 may be used as a total or partial replacement for natural fats, oils, or fatty acid in the formulation of cutting, drawing, spinning, and rolling oils. It is not subject to bacterial degradation as are the natural fats. K-Ox™ P600/45 is a rust preventive intermediate which is readily converted to a variety of metallic soaps.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		P600/45
Acid Number, mgKOH/g	ASTM D947	45
Saponification Number, mgKOH/g	ASTM D94	100
Color	Visual	Dark Amber
Flash, COC °F/°C	ASTM D92	302/150
Congealing Point, °F/°C	ASTM D938	131/55
Ash Content, wt %		0.3

APPLICATIONS

The high melting soaps of K-Ox™ P600/45 (calcium, zinc, barium, etc.) are effective as solvent cut back rust preventives. Alone or in combination with gelled sulfonates, oils, resins, other waxes or petrolatum, these compounds provide excellent resistance to humidity and salt spray. The metallic soaps of K-Ox™ P600/45, can be blended with asphaltic materials to formulate automotive undercoats as well. As other hard type rust preventatives with excellent exterior durability. Amine and alkanolamine soaps made from K-Ox™ P600/45 are also excellent rust inhibitors.

AVAILABILITY

K-Ox ™ P600/45 is available in rail tank cars, tank trucks, 55-gallon drums

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K-OX™ P600 LIGHT

Light Colored Oxidized Hydrocarbon Intermediates

GENERAL DESCRIPTION

K-Ox™ P600-25L and K-Ox™ P600-45L are light colored synthetic fatty acids made from petroleum hydrocarbons. These the formulation of cutting, drawing, spinning, and rolling oils. They are not subject to bacterial degradation as are the natural fats. These rust preventive intermediates are readily converted to avariety of metallic soaps.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		P600-25L	P600-45L
Acid Number (mgKOH/g)	KTI 01-105	25	50
Saponification Number, mgKOH/g	ASTM D94	64	95
Color	Visual	Light Amber	Light Amber
Melting Point, °F/°C	ASTM D127	144/62	144/62

APPLICATIONS

The high melting soaps of K-Ox™ P600 25L and 45L (calcium, zinc, barium, etc.) are effective as solvent cut back rust preventives. Alone or in combination with gelled sulfonates, oils, resins, other waxes or petrolatum, these compounds provide excellent resistance to humidity and salt spray. The metallic soaps of K-Ox™ P600 25L and 45L, can be blended with asphaltic materials to formulate automotive undercoats as well. As other hard type rust preventatives with excellent exterior durability. Amine and alkanolamine soaps made from K-Ox™ P600 25L and 45L are also excellent rust inhibitors. Use where light color is important.

AVAILABILITY

K-Ox™ P600 25L and 45L is available in rail tank cars, tank trucks, 55 gallon drums.

9/1/2015

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K-OX™ 3EB and 3EM

Ester Intermediate

GENERAL DESCRIPTION

K-Ox™ 3EB and K-Ox™ 3EM are partial butyl esters of a petroleum derivative. They are a dark brown, soft, semi-solid compounds. K-Ox™ 3EB and K-Ox™ 3EM are highly polar in nature making them excellent wetting agents that provide "oiliness" or lubricity to the formulated products. K-Ox™ 3EB and K-Ox™ 3EM function by being attracted to metal surfaces, thereby providing a multi-molecular film which lowers the coefficient of friction and, at the same time, affords mild rust protection.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		K-Ox™ 3EB	K-Ox™ 3EM
Ester Type		Butyl	Methyl
Acid Number	ASTM D947	10-20	25 max.
Saponification Number	ASTM D94	85-115	90-120
Flash, COC °F	ASTM D92	340	>230
Melting Point, °F	ASTM D127	105-135	100.4
Specific Gravity @ 60 °F	ASTM D1298	0.84-0.88	0.82-0.92
Pounds per Gallon @ 60°F		7.0-7.33	6.8-7.6

APPLICATIONS

Lubricity can be improved in a variety of formulations with dosage concentrations as low as 0.5% to 2.0%. K-Ox™ 3EB and K-Ox™ 3EM will materially aid in cutting oil and gear oil performance, especially in the presence of extreme pressure additives (lead, phosphorus, sulfur, and chlorine). When blended with metallic sulfonates, a variety of oil and solvent type, water displacing, corrosion preventive compounds may be obtained.

AVAILABILITY

K-Ox™ 3EB and K-Ox™ 3EM are available in rail cars, tank trucks, 55-gallon drums

9/1/2015

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K-OX™ W15 & W75 LIGHT

Light Colored Oxidized Hydrocarbon Intermediate

GENERAL DESCRIPTION

K-Ox™ W15 and K-Ox™ W75 LIGHT are synthetic fatty acids made from petroleum hydrocarbons. K-Ox™ W15 and W75 LIGHT may be used as a total or partial replacement for natural fats, oils, or fatty acid in the formulation of cutting, drawing, spinning, and rolling oils. They are not subject to bacterial degradation as are the natural fats. The esters derived from K-Ox™ W15 and W75 LIGHT offer excellent lubricity and wetting characteristics to metalworking formulations. The higher acid number of K-Ox™ W-75 LIGHT offers more reactive sites for effective conversion to a variety soaps and esters. Oxidates with acid numbers between 15 and 70 are also available.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		K-OX W15	K-OX W75
Acid Number (mgKOH/g)	ASTM D947	15	70
Saponification Number, mgKOH/g	ASTM D94	28	120
Color	Visual	Light Amber	Light Amber
Melting Point, °F/°C	ASTM D127	47/116	47/116
Flash, COC, °F/°C	ASTM D92	356/180	356/180

APPLICATIONS

K-Ox™ W15 and K-Ox™ W75 LIGHT are rust preventive intermediates that are typically converted to metallic soaps or esters. The metallic soaps of K-Ox™ W15 and K-Ox™ W75 LIGHT offer excellent resistance to humidity and salt spray while the esters offer contribute good lubricity and water displacing/dispersing characteristics. K-Ox™ W15 and K-Ox™ W75 LIGHT may be used alone as a wetting agent or as a complete or partial replacement for natural fats (animals or vegetable) used in steam cylinder lubricants; and in the formulations of drawing, cutting, or rolling oils. K-Ox™ W15 or K-Ox™ W75 LIGHT can also be used as a corrosion inhibitor in grease at 2% concentrations and is best added to the grease during the cooling stage.

AVAILABILITY

K-Ox™ W15 and W75 LIGHT are available in tank trucks and 55-gallon drums

9/1/2015

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K-OX™ 9010D

Water Displacing, Non-Staining Corrosion Inhibitor

GENERAL DESCRIPTION

K-Ox™ 9010D is a non-staining, non emulsifiable, alkali resistant, water displacing, rust preventative which is particularly effective displacing water from metal parts after machinery operations or alkali cleaning. K-Ox™ 9010D can be blended with solvents, kerosene or oil depending on the type of film desired. The resulting films of K-Ox™ 9010D will be ultra-thin, and will provide excellent humidity resistance. The solutions of K-Ox™ 9010D provide excellent water displacement and will separate water displaced from metal surfaces quickly and completely, even after vigorous agitation.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9010D
Viscosity @ 100°C, cSt	ASTM D445	9.02
Density, Weight/Gallon @ 77°F (25°C)	ASTM D1250	7.7
Specific Gravity @ 60°F (16.5°C)	ASTM D1298	0.94
Flash Point, C.O.C., minimum °F	ASTM D92	>350°F
Physical Appearance	Visual	Light Brown Waxy Solid
Color @ 10% Dilution	ASTM D1500	<5
Acid Number, mgKOH/g	KTI 01-105	5-8
Melt Point, °F	ASTM D127	125°F (52°C)
Cone Penetration, dmm		120

PERFORMANCE PROPERTIES (10% K-Ox™ 9010D IN MINERAL SPIRITS)

5% Salt Spray, Hours	ASTM B117	48
Water Fog, Hours	ASTM D1735	400
J.A.N. Humidity, Hours	ASTM D1748	1500
Cleveland Condensation, Hours	ASTM D4585	340
De-emulsification, Minutes	80 ml tap water/20ml solution	<3.5
Detergent Water Break, Minutes	80 ml-1% Alkaline Cleaner/ 20 ml Solution	<3.5

AVAILABILITY

K-Ox™ 9010D is available in tank trucks and 55-gallon drums

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Globally Local

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K-OX™ 9015D

Water Displacing Non-Staining Corrosion Inhibitor
Enhanced Salt and Acid Resistance

GENERAL DESCRIPTION

K-Ox™ 9015D is a barium soap of an oxygenated hydrocarbon that is readily miscible with oils and petroleum solvents. The resulting films of K-Ox™ 9015D are ultra-thin and non-staining. K-Ox™ 9015D provides excellent humidity resistance and is enhanced to provide limited protection to salt environments and acid atmospheres. Solutions of K-Ox™ 9015D will readily displace water and will separate the water displaced from metal surfaces quickly and completely even after vigorous agitation.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9015D
Viscosity @ 100°C, cSt	ASTM D445	8.69
Density, Weight/Gallon @ 77°F (25°C)	ASTM D1250	7.7
Specific Gravity @ 60°F (15.6°C)	ASTM D1298	0.92
Flash Point, C.O.C., minimum °F	ASTM D92	>350°F
Physical Appearance	Visual	Brown Waxy Solid
Color @ 10% Dilution,	ASTM D 1500	<5
Acid Number, mgKOH/g	KTI-12701-105	16-19
Melt Point, °F	ASTM D	110°F (43°C)
Cone Penetration, dmm		116

PERFORMANCE PROPERTIES (10% K-Ox™ 9015D IN MINERAL SPIRITS)

5% Salt Spray, Hours	ASTM B117	72
Water Fog, Hours	ASTM D1735	500
J.A.N. Humidity, Hours	ASTM D1748	1500
Cleveland Condensation, Hours	ASTM D4585	300

AVAILABILITY

K-Ox™ 9015D is available in rail tank cars, tank trucks, and 55-gallon drums.

Starting Formulations on Reverse Side

9/1/2015

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K-OX™ 9020

Emulsifiable Rust Preventive Additive

GENERAL DESCRIPTION

K-Ox™ 9020 is a versatile rust and corrosion inhibitor comprised of oxygenated hydrocarbons, barium and sodium sulfonates. K-Ox™ 9020 can be blended with oil or petroleum solvent and it can also be readily emulsified. This product demonstrates excellent humidity and corrosion properties. K-OX 9020 can be used as a general purpose corrosion inhibitor additive for use in slushing oils, rust preventative lubricants, and metal working fluids. It may also be used as an additive in the preparation of water base rust preventatives.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9020
Viscosity @ 100°C, cSt	ASTM D445	480
Density, Weight/Gallon @ 77°F (25°C)	ASTM D1250	8.2
Specific Gravity @ 60°F (15.6°C)	ASTM D1298	1.01
Flash Point, C.O.C., minimum °F	ASTM D92	350°F
Physical Appearance	Visual	Dark Brown Viscous Liquid
Color, 10% Dilution	ASTM D1500	<6
Acid Number, mg KOH/g	KTI 01-105	10

PERFORMANCE PROPERTIES (10% K-OX 9020 IN MINERAL SPIRITS)

5% Salt Spray, Hours	ASTM B117	24
Water Fog, Hours	ASTM D1735	300
J.A.N. Humidity, Hours	ASTM D1748	1000

APPLICATIONS

Use as a rust and corrosion inhibiting additive in slushing oils, metalworking lubricants and other preservative lubricants. An emulsifiable rust preventive can be prepared by using 20 to 28% of K-Ox™ 9020, 65 to 75% Oil, and 5% of a coupling agent such as glycol ether.

AVAILABILITY

K-Ox™ 9020 is available in Rail Tank Cars, Tank Trucks, 55 Gallon Drums

9/1/2015

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Globally Local

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K-OX 9025

Emulsifiable Rust Preventive Additive

GENERAL DESCRIPTION

K-Ox™ 9025 is a calcium containing emulsifiable rust preventive compound comprised of oxygenated hydrocarbons, calcium and sodium sulfonate. K-OX 9025 is a corrosion inhibitor that can be blended with oil or petroleum solvent and it can also be readily emulsified. This product demonstrates excellent humidity and corrosion properties. K-OX 9025 can be used as a general purpose corrosion inhibitor additive for use in slushing oils, rust preventative lubricants, and metal working fluids. It may also be used as an additive in the preparation of water base rust preventatives.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9025
Viscosity @ 40°C, cSt	ASTM D445	550
Density, Weight/Gallon @ 77°F (25°C)	ASTM D1250	8.2
Specific Gravity @ 60°F (15.6°C)	ASTM D1298	1.01
Flash Point, C.O.C., minimum °F	ASTM D92	>350°F
Physical Appearance	Visual	Dark Brown Viscous Liquid
Color @ 10% Dilution	ASTM D1500	<6
Acid Number, mg KOH/g	KTI 01-105	10

PERFORMANCE PROPERTIES (10% K-OX 9025 IN MINERAL SPIRITS)

5% Salt Spray, Hours	ASTM B117	24
Water Fog, Hours	ASTM D1735	300
J.A.N. Humidity, Hours	ASTM D1748	1000
Cleveland Condensation, Hours	ASTM D4585	400

APPLICATIONS

Use as a rust and corrosion inhibiting additive in slushing oils, metalworking lubricants and other preservative lubricants where barium is undesireable. An emulsifiable rust preventive can be prepared by using 20 to 28% of K-Ox™ 9025, 65 to 75% Oil, and 5% of a coupling agent such as glycol ether.

AVAILABILITY

K-Ox™ 9025 is available in Rail Tank Cars, Tank Trucks, 55 Gallon Drums

9/1/2015

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K-OX™ 9056

Acid Vapor Corrosion Inhibitor

GENERAL DESCRIPTION

K-Ox™9056 is a water displacing additive designed for compounding corrosion inhibitors. K-OX ™9056 can be used to protect bright, ground, or highly polished steel surfaces. It is soluble in aliphatic solvents, low aromatic solvents, kerosene, and most oils. K-OX ™9056 imparts water displacing characteristics and offers rust and corrosion protection in high humidity, salt water, and acid atmospheres. K-OX ™9056 can also be used in metalworking fluids and wax emulsions as a corrosion inhibitor when properly formulated with an amine such as triethanolamine.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9056
Appearance at 25°C	Visual	Dark Solid
Specific Gravity @ 60°F	ASTM D1298	0.930
Flash Point, °F, COC	ASTM D-92	>340°F
Melt Point, °F	ASTM D127	96
Total Acid Number, mg KOH/g	KTI 01-105	40
Saponification Number, mg KOH/g	ASTM D94	82
Density, Weight/Gallon @ 60°F	ASTM D1250	7.7

APPLICATIONS

K-OX™ 9056 can be used in rust preventive compounds at concentrations of 5-10% in oil and 5-25% in solvents, depending on the desired length of protection. In metalworking fluids, wax emulsions and polishes, the recommended concentration is 2-20%, depending on the protection required. The reaction of K-OX™ 9056 with an amine will improve its emsulsibility.

AVAILABILITY

K-OX™ 9056 is available in 55-gallon drums, in totes and in bulk.

9/1/2015

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K-OX™ 9065

Rust Preventive Compound for Ferrous and Non-Ferrous Metals

GENERAL DESCRIPTION

K-OX™ 9065 is a calcium soap of oxygenated hydrocarbon. K-OX™ 9065 can be blended with oil and petroleum solvents to produce films that are ultra-thin, non-staining, and offer excellent humidity resistance. The solutions of K-OX™ 9065 provide excellent water displacement and will separate water displaced from metal surfaces. This product is designed for use with both ferrous and non-ferrous metals.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9065
Viscosity @ 100°C,cSt	ASTM D445	9.66
Density, weight/gallon @ 77°F (25°C)	ASTM D1250	7.7
Specific Gravity @ 60°F (15.6°C)	ASTM D1298	0.94
Flash Point. C.O.C.,Minimum °F	ASTM D92	>350°F
Color @ 10% Dilution	ASTM D1500	<5
Acid Number, mg KOH/g	KTI 01-105	5-8
Melt Point, °F	ASTM D127	125°F (52°C)
Cone Penetration, dmm		133

Performance Properties (10% K-OX™ 9065 in Mineral Spirits)

5% Salt Spray, Hours	ASTM B117	48
Water Fog, Hours	ASTM D1735	400
J.A.N. Humidity, Hours	ASTM D1748	1,500
Cleveland Condensation, Hours	ASTM D4585	340
De-emulsification, Minutes	80 ml tap water/20ml solution	<3.5
Detergent Water Break, Minutes	80 ml 1% Alkaline Cleaner/20ml Solution	<3.5

AVAILABILITY

K-OX™ 9065 is available in Bulk Tank Truck and 55-Gallon Drums

9/1/2015

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K-OX™ 9068

Non-Staining, Water Displacing Rust Preventive

GENERAL DESCRIPTION

K-OX™ 9068 is a Calcium Sulfonate containing oxidate temporary rust preventive. K-OX™ 9068 provides corrosion protection in a salt environment as well as good protection in humid and acid atmospheric conditions. It is soluble in naphthenic and paraffinic base oils and in many petroleum solvents. Its' thin waxy film offers excellent water displacing properties. This product is non-staining and is suitable for use with both ferrous and non-ferrous metals.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9068
Density, weight/gallon @ 60°F (15.5°C)	ASTM D1250	7.5
Specific Gravity @ 60°F (15.6°C)	ASTM D1298	0.90
Flash Point. C.O.C., Minimum °C	ASTM D92	>150
Appearance	Visual	Brown Waxy Solid
Acid Number, mg KOH/g	KTI 01-105	24
Melt Point, °F	ASTM D127	79 (26°C)

APPLICATIONS

K-OX™ 9068 is designed to be used at concentrations from 5 to 20 wt% in solvents and oils to make dip tank fluids, slushing and honing oils, and coatings for temporary storage or shipping. It can be applied by dipping, brushing or spraying.

AVAILABILITY

K-OX™ 9068 is available in 55-gallon drums, in totes and in bulk.

9/1/2015

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K-OX™ 9080HF

Solvent Cut-Back, Waxy Rust Preventive Compounds

GENERAL DESCRIPTION

K-OX™ 9080-55HF and 9080-70HF are economical calcium soaps of oxidized petrolatum used in rust preventive compounds. K-OX™ 9080-55HF and 9080-70HF are fairly dark colored waxy compounds which have been reduced with solvent to reach non-volatile contents of 55% and 70% respectively. The K-OX™ 9080 products deposit a hard but waxy barrier film after the solvent has evaporated. These products are effective automotive, truck, and trailer rust proofing compounds. They are also are a good choice for marine maintenance coatings because of their resistance to salt water and salt spray. K-OX 9080-55HF and 9080-70HF can be used alone or as additives in other rust preventive coating formulations. They are especially synergistic with gelled calcium sulfonate such as Kimes Technologies' Jalpon™ products.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9080-55HF	9080-70HF
Non-Volatiles, wt. %	ASTM D2369	55	70
Density, Weight/Gallon @ 60°C	ASTM D1475	7.0-7.5	7.3-8.0
Flash Point, COC °F/°C	ASTM D92	140/60	140/60

APPLICATIONS

K-OX™ 9080-55HF and 9080-70HF can be applied by brush, spray or dipping. Typically, these products are used for vehicle undercoatings, automotive cavity waxes, and truck and trailer frame coatings. They are very synergistic with gelled sulfonates, such as Jalpon™ 1700 or Jalpon™ 1760, and when properly formulated, will create dripless, long term rust preventives. K-OX™ 9080-55HF and 9080-70HF can also be applied on mower underdecks to prevent clippings from adhering to the mower as well as preserving the deck metal frame.

AVAILABILITY

Rail Cars, Tank Trucks, and 55 Gallon Drums

9/1/2015

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K-OX™ 9165

Barium Free, Non-Staining, Water Displacing Rust Preventive

GENERAL DESCRIPTION

K-OX™ 9165 is a blend of calcium sulfonate and oxidized petrolatum. It is a barium free, non-staining, water displacing rust preventive that is soluble in vegetable oils, naphthenic oils, paraffinic oils, as well as aliphatic and aromatic solvents. K-OX™ 9165 is a good choice for formulating slushing and honing oils, dip tank fluids, and other temporary rust preventives.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9165
Appearance		Waxy Brown Solid
Melting Point, °C	ASTM D-938	31
Flash Point, COC, °C	ASTM D-92	>150
Total Acid Number	mgKOH/g	20
Specific Gravity @ 60°F		0.90
Pounds per Gallon @ 60°F		7.5

APPLICATIONS

K-OX™ 9165 should be used in concentrations of 5% to 20% in desired diluent. K-OX™ 9165 will deposit a thin, waxy film providing temporary corrosion protection for up to 100 hours in the salt fog cabinet K-OX™ 9165 is applied by spraying, dipping, or brushing.

AVAILABILITY

K-OX™ 9165 is available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums

8-2-2015

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K-OX™ 9211

Heavy Duty Rust Preventive

GENERAL DESCRIPTION

K-OX™ 9211 is a calcium based rust preventive that can be blended with oil or petroleum solvents to produce light colored films. The films of K-OX™ 9211 will be waxy when blended with solvents and soft/greasy when blended with oils and will provide excellent protection against high humidity and salt atmospheres. K-OX™ 9211 lends itself very well to automotive rustproofing and long-term outdoor storage applications.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		9211
Density, Weight/Gallon @ 77°F (25°C)	ASTM D1250	7.4
Specific Gravity @ 60°F (15.6°C)	ASTM D1298	0.89
Flash Point, C.O.C., minimum °F	ASTM D92	>350°F
Physical Appearance	Visual	Brown Waxy Solid
Acid Number, mg KOH/g	KTO 01-105	5-8
Calcium Percent		4%
Melt Point, °F	ASTM D127	175

PERFORMANCE PROPERTIES (10% K-OX 9211 in Mineral Spirits)

		Wax Film	Soft Film
% Solids	ASTM D2369	30	30
Film Thickness, mils		2.4	.8
5% Salt Spray, Hours	ASTM B117	1000	720
J.A.N. Humidity Cabinet, Hours	ASTM D1748	1000+	1000+

AVAILABILITY

K-OX™ 9211 is available in Rail Tank Cars, Tank Trucks, and 55 Gallon Drums.

9/1/2015

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SYNSTOCK™ LV2, LV4, LV6, LV8, LV10

Low Viscosity Polyalphaolefins

GENERAL DESCRIPTION

Synstock™ LV Polyalphaolefins are low viscosity synthetic base stocks in the Group IV category. They are hydrogenated oligomers made by catalytic polymerization of linear alphaolefins. All Synstock™ products meet the requirements for Technical White Oil and are listed in the NSF White Book as Category Code H1, Lubricants with General Incidental Food Contact. Benefits from choosing Synstock™ Group IV base oils over other options include good hydrolytic and thermal stability, very low pour points, and low volatility.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		LV2	LV4	LV6	LV8	LV10
Kv, cSt @ 100ºC / 212ºF	ASTM D445	2.0	4.1	5.8	8.0	10.0
Kv, cSt @ 40ºC / 104ºF	ASTM D445	6.4	19	31	48	66
Kv, cSt @ -40ºC	ASTM D2270	-	2900	7800	19000	39000
Viscosity Index	ASTM D2270	-	126	138	139	137
Pour Point, ºC / ºF	ASTM D97	-57 / 71	-66 / 87	-57 / 71	-48 / 54	-48 / 54
Color	ASTM D1500	<0.5	<0.5	<0.5	<0.5	<0.5
Flash Point, COC, ºC / ºF	ASTM D92	>150/302	220/428	246/475	260/500	266/511
Specific Gravity @15.6 ºC	ASTM D1298	0.798	0.820	0.827	0.833	0.835
Total Acid Number, mg KOH/g	ASTM D974	<0.05	<0.05	<0.05	<0.05	<0.05
Water, ppm	ASTM D-6304	<50	<50	<50	<50	<50

APPLICATIONS

Typically, these products are used as synthetic base stocks for formulating Passenger Car Motor Oils and Heavy Duty Diesel Engine Oils, Transmission Oils, Gear Oils, and other industrial products requiring superior performance. Synstock™ LV products are a good choice for use as the diluent oils in the manufacture of sulfonates and other products that have application in lubricants for the food industry.

AVAILABILITY

Synstock™ LV PAO's are available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums.

9/9/2015

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Globally Local

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SYNSTOCK™ HV and mHV Products

High Viscosity Polyalphaolefins

GENERAL DESCRIPTION

Synstock™ HV Polyalphaolefins are high viscosity synthetic base stocks in the Group IV category. Synstock HV40 and HV100 are decene derived polyalphaolefins of highly regular structure. Synstock™ mHV65, mHV100, and mHV150 are metallocene catalyzed branched isoparaffinic polyalphaolefins. All products exhibit good shear stability and low temperature properties. The metallocene PAO's offer even lower pour points, improved oxidative stability and tremendous air-release and non-foaming characteristics.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		HV 40	mHV65	HV100	mHV100	mHV150
Kv, cSt @ 100ºC / 212ºF	ASTM D445	40	65	100	101	156
Kv, cSt @ 40ºC / 104ºF	ASTM D445	395	605	1250	1023	1719
Kv, cSt @ -40ºC	ASTM D2270	-	-	-	-	-
Viscosity Index	ASTM D2270	150	181	170	192	205
Pour Point, ºC / ºF	ASTM D97	-30 / -22	-46 / -51	-24 / -11	-44 / -47	-39 / -38
Color	APHA	20	0 (pt-co)	25	0 (pt-co)	0 (pt-co)
Flash Point, COC, ºC / ºF	ASTM D92	294 / 561	266 / 511	301 / 574	260 / 500	278 / 532
Specific Gravity @15.6 ºC	ASTM D1298	0.842	0.846	0.847	0.847	0.849

APPLICATIONS

Typically, these products are used as synthetic base stocks and viscosity builders for a wide range of engine and industrial oils such as; Passenger Car Motor Oils and Heavy Duty Diesel Engine Oils, Transmission Oils, Gear Oils, and other industrial products requiring superior performance and low pour points. Synstock™ HV and mHV products are a good choice for use as the diluents in the manufacture of sulfonates and other products that have application in lubricants for the food industry.

AVAILABILITY

Synstock™ HV and mHV are available in Rail Tank Cars, Tank Trucks, and 55-Gallon Drums.

9/9/2015

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CrudeRes™ HV25 & HV26

High Viscosity, Crude Resins

GENERAL DESCRIPTION

CrudeRes™ HV25 and CrudeRes™ HV26 are crude resins derived from Pennsylvania and Appalachian Grade Crude refinery processes. While CrudeRes™ HV26 is solely from Pennsylvania Grade Crude, CrudeRes™ HV25 is derived from both Pennsylvania and Appalacian Crudes. CrudeRes™ HV25 and CrudeRes™ HV26 are very dark in color. They are higher in carbon and lower in sulfur and oxygen than other resins from naphthenic and asphaltic crudes.

TYPICAL PROPERTIES (NOT SPECIFICATIONS)

		HV 25	HV 26
Viscosity, SUS @ 210 ºF / 98.9ºC	ASTM D445	3000	2600
Viscosity, cSt @ 104 ºF / 40 ºC	ASTM D445		48,000
Viscosity, cSt @ 210 ºF / 98.9 ºC	ASTM D445	612	550
Viscosity Index	ASTM D2270		100
Pour Point, ºF / ºC	ASTM D5949	69.98 / 21.1	80.6 / 27
Flash Point, (COC) ºF / ºC	ASTM D92	346 / 655	343 / 650
Density, Pounds per Gallon	ASTM D1250	7.97	7.95

APPLICATIONS

These unique resins are good viscosity builders in metalworking applications, wire rope lubricants, and open gear compounds. They have utility in asphalt modification, both roofing and paving. Most notably, these CrudeRes™ HV products are used to help control the quench rate in quenching oils. Despite the very dark color, these resins can find use in various coating formulations where they have the advantage of excellent solubility in inexpensive solvents; they can add gloss to coatings and hardness when baked. The CrudeRes™ HV products can be incorporated in spirit varnishes and in modifications of phenolics, alkyds and ester gum varnishes.

AVAILABILITY

CrudeRes™ HV25 & CrudeRes™ HV26 are available in Tank Trucks, and 55-Gallon Drums.

9/9/2015

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Kimes History

Kimes Technologies was formed in 1996 by Norm Kimes and, at that time, was named Kimes Trading International, Inc. which reflected the global nature of the marketing organization.

The company has diligently sought to add value by working closely with manufacturing principals to create technology and application specific products for key niche markets. In 2010, the company was renamed Kimes Technologies International to reflect this technological contribution to the products we sell; also, Julie Kimes was named President in September 2010.

Our goal is to focus on the short term objectives of our customers while setting our sights well into the future to ensure that every product Kimes Technologies offers to the marketplace is of the highest quality and of sound technology.

Our philosophy is to create a workplace where all individuals are empowered so that they may contribute their absolute best to the growth and sustenance of the company.

Our pledge to our manufacturing principals is that we will work hard and with transparency at all times.

Our pledge to our customers is that we will treat them as we would want to be treated.

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