

RITA CORPORATION

POLYOXYETHYLENE ETHERS AND ESTERS



RITA
CORP

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GENERAL PRODUCT LISTING



Methyl Glucose Esters



Acritamers - Carbomers



Emollients



Natural Butters



Emulsifiers



Ritamulse SCG - natural emulsifier



Glycol and Glycerol Esters



Cationic Compounds, Conditioning
and Styling Aids



Ritafactants with Lactylate - sulfate
free surfactants



Ritafactants - sugar and amino
acids based surfactants



Ritafactants - Anhydrous surfactant
blends



Ritapan - Panthenol



Natural Oils



Natural Butters



Lanolin and Lanolin Derivatives

POLYOXYETHYLENE ETHERS AND ESTERS

Rita Corporation offers an extensive range of ethoxylated Polyoxyethylene Ethers and Esters which function as primary emulsifiers in many personal care formulations. Stable O/W emulsions will be formed when these products are used as the high HLB primary emulsifier and mixed with low HLB co-emulsifiers in a proper balance ratio. Therefore, these products are widely used for any O/W emulsion as well as oil dispersions. These emulsifiers are hydrophilic and are generally soluble or dispersible in water with varying degrees of solubility in other organic liquids like propylene glycol, some alcohols and other organic esters.

Typical Properties								
	RITABATE 20	RITABATE 40	RITABATE 60	RITABATE 80	RITOX 35	RITOX 52	RITOX 59	RITOX 721
INCI NAME	Polysorbate 20*	Polysorbate 40	Polysorbate 60*	Polysorbate 80*	Laureth 23	PEG-40 Stearate	PEG-100 Stearate	Steareth-21
APPEARANCE	Yellow liquid	Yellow liquid	Yellow liquid	Yellow liquid	White solid flake	Cream colored solid	Light tan solid or flake	White flakes or solid
ACID VALUE	2 Max	2 Max	2 Max	2 Max	5 Max	2 Max	2 Max	2 Max
SAPONIFICATION VALUE	40-50	41-52	45-55	45-55	N/A	28-40	9-20	N/A
*NF versions of these products are also available								
	RITOLETH 2	RITOLETH 5	RITOLETH 10	RITOLETH 20	RITACET 20	RITACET 25	RITAPEG 150DS-1	
INCI NAME	Oleth 2	Oleth 5	Oleth 10	Oleth 20	Ceteareth-20	Ceteareth-25	PEG-150 Distearate	
APPEARANCE	Slightly yellow liquid	Slightly yellow liquid	White paste	White to yellow solid	Light yellow solid	Light yellow solid	White flake	
ACID VALUE	1 Max	2 Max	10 Max	0.5 Max	0.5 Max	0.5 Max	10 Max	

POLYOXYETHYLENE DERIVATIVES OF SORBITAN FATTY ESTERS

This group of products is commonly referred to as Polysorbate and includes our Ritabate series of products. These are produced by the reaction of partial esters of sorbitol and its anhydrides and are made from various fatty acids. The Polysorbates are soluble in water, are good emulsifiers, and wetting agents. The number following the Polysorbate is associated with the fatty acid sorbitan part of the molecule.

Monolaurate is indicated by 20, monostearate by 60 and monooleate by 80. Each RITABATE product is ethoxylated with 20 moles of ethylene oxide. Please note that the RITABATE 20, 60 and 80 are available as NF products also.

POLYOXYETHYLENE ETHERS AND ESTERS

SOLUBILITY TABLE

PRODUCT NAME	WATER	PROPYLENE GLYCOL	ISOPROPANOL	MINERAL OIL
RITYABATE 20	Soluble	Soluble	Soluble	Insoluble
RITABATE 40	Soluble	Soluble	Soluble	Insoluble
RITABATE 60	Soluble	Dispersible	Soluble	Insoluble
RITABATE 80	Soluble	Dispersible	Soluble	Insoluble

All Polysorbates products are soluble or dispersible in water and tend to form o/w emulsions. The solubility of Polysorbates in various solvents is shown above in the key.

POLYOXYETHYLENE FATTY ACID ESTERS

This group of products includes the RITOX 52, RITOX59 and RITAPEG 150DS-1 products. These products are all Polyoxyethylene derivatives of Stearic Acid. These are hydrophilic emulsifiers that form stable emulsions when mixed with low HLB co-emulsifiers. They work well in the presence of salts and other electrolytes. They are widely used emulsifiers in personal care products, paints, and coatings, adhesives, and household/industrial products.

SOLUBILITY TABLE

PRODUCT NAME	WATER	PROPYLENE GLYCOL	ISOPROPANOL	MINERAL OIL
RITOX 52	Soluble	Insoluble	Soluble	Insoluble
RITOX 59	Soluble	Insoluble	Soluble	Insoluble
RITAPEG 150DS-1	Soluble	Insoluble	Soluble	Insoluble

POLYOXYETHYLENE ETHERS AND ESTERS

POLYOXYETHYLENE ALCOHOL ETHERS

These products are composed of a fatty alcohol derived from natural oils and fats ethoxylated with various moles of ethylene oxide. The fatty alcohols used to produce these products are Cetyl, Stearyl and Oleyl alcohols.

As a group, these are effective non-ionic primary emulsifiers for o/w formulations except for the RITOLETH-2 and RITOLETH-5 which tend to act as w/o emulsifiers. These products work well with polar oils that generally offer better spreading in most skin care preparations. They also work well for broad pH ranges making them good emulsifiers for AHA and BHA based products. These products are commonly used as emulsifiers in soaps and cosmetics, as well as pharmaceutical preparations including gels, creams and lotions, shampoos, bath and hair products. The RITABATE and RITOX products are also used as Solubilizer for fragrance oils and other materials that are difficult to include in cosmetic applications. Emulsions utilizing these products are easily prepared by melting out the product into the oil phase and heating to 70-80°C. Heat the water phase to 70-80°C and add the oil phase to the water phase using mechanical agitation.

CLAIMS

Nonionic o/w emulsifiers which tolerate a broad pH range

Compatible with standard emulsifiers like Cetyl and Stearyl alcohol for o/w emulsions

Stabilize antiperspirant emulsions using aluminum-zirconium salt

Produce dense and stable aerosol foams

Stabilize emulsions with elevated levels of alcohol

Solubilize fragrance oils and other polar type oils

APPLICATIONS

Aerosol Foams
Skin Creams
Hair Conditioners
Skin Lotions
Antiperspirants
AHA and BHA creams
Sun Care products
Baby creams and lotions
Textiles
Adhesives
Agricultural
I&I
Paints and Coatings



Polyoxyethylene Ethers and Esters

LIQUID HAND SOAP

DI Water	Q.S. to 100%
Esaflor EC4 Guar Hydroxypropyltrimonium Chloride	0.70%
Ritafactant 138ANEC Decyl Glucoside, Sodium Lauroyl Lactylate, Disodium Coco-glucoside Citrate	30.00%
Ritaloe 1X Aloe Barbadensis Leaf Juice	2.00%
Rita EGMS Glycol Stearate	2.00%
Ritapeg 150DS-1 PEG-150 Distearate	1.00%
Phenoxyethanol Phenoxyethanol	1.00%

RINGING HAIR GEL

DI Water	Q.S. to 100%
Propylene Glycol Propylene Glycol	10.00%
Ritadecene 20 Hydrogenated Polydecene	8.00%
Ritoeth 5 Oleth 5	10.00%
Supersat AWS-4 PEG-20 Hydrogenated Lanolin	14.00%
Ritox 721 Steareth-21	3.00%
Phenoxyethanol Phenoxyethanol	1.00%

CREAM HAND CLEANER

DI Water	Q.S. to 100%
Luxtra Light Isohexadecene	5.00%
Pumice Pumice	3.00%
Ritabate 20 Polysorbate 20	10.00%
Mineral Oil 70 Mineral Oil	4.00%
Glycerin, USP Glycerin	4.00%
Viscolam AT 100P Sodium Polyacryloyldimethyl Taurate, Hydrogenated Polydecene, Trideceth-10	3.00%
Laneto 50 PEG-75 Lanolin	4.00%
Amitose R Dihydroxypropyl Arginine HCl	1.00%
Ritapan DL Panthenol	0.20%
Phenoxyethanol Phenoxyethanol	1.00%

MOISTURIZING LOTION

DI Water	Q.S. to 100%
Acritamer 934 Carbomer	0.20%
Glycerin, USP Glycerin	5.00%
Rita Allantoin Allantoin	0.50%
Ritastearic Stearic Acid	1.00%
Ritacet 20 Ceteareth-20	2.00%
Petrolan Ultra White Petrolatum	1.00%
Rita Cetearyl Alcohol 50/50 Cetearyl Alcohol	1.00%
Rita IPM Isopropyl Myristate	1.00%
Ritasil DM 350 Dimethicone	1.00%
Vitamin E Acetate Tocopherol Acetate	1.00%
Phenoxyethanol Phenoxyethanol	1.00%



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