

# EXPRESS Work Selection of the selection

HAIR | SKIN | COLOR





The cosmetics market is not about beauty per se. It's about confidence—the confidence to face the day, the confidence to face others, and the confidence to express ourselves so that we can shine, shout, and stand out.

Beauty cannot be limited to a single characteristic, group, or preference. Personal care brands, therefore, must formulate with diversity and inclusion in mind. And that takes a special kind of chemistry: a collaborative one.

At Eastman, we offer a broad portfolio of specialty ingredients that empower formulators to create products that meet new consumer expectations for beauty, sustainability, comfort, and expression.

For example, we can help you formulate gender-neutral and color-expressive products such as mascara and nail polish. Expand your portfolio! Your customers want foundation shades tailored for ethnic inclusion. Leverage our expertise to create hair products that meet various *beliefs*, *lifestyles*, and *ethnicities*. Let's work on how you can develop beauty products that celebrate age as well as youth.

Your customers are unique—and rightfully so. Here's your opportunity to create product formulations that equally stand out, enabling diversity and inclusivity.

Eastman experts are here to help you develop the right combinations to give your customers the confidence they need to truly express themselves. **Learn how your brand can express itself through superior formulation.** 



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# FEATURED PRODUCTS

# EASTMAN AQ™ POLYMERS FOR HAIR CARE

Eastman AQ<sup>™</sup> polymers are highly versatile, water-dispersible polymers used in hairstyling, sun care, and color cosmetics for their film-forming properties. They are formulated in a variety of hairstyling products, including hair gels and sprays.

Eastman AQ 48 ultra polymer was designed specifically for use as a hair fixative in 55% VOC hair spray. Therefore, it is more compatible with higher levels of alcohol than Eastman AQ 38S or 55S and has good washout with shampooing. AQ 48 polymer provides excellent hold at high humidity in aerosol and pump hair sprays as well as in clear styling gels.

# **Hair cream (halal)** with Eastman AQ<sup>™</sup> 55S polymer

Part	Product name	Wt%	Ingredient/INCI name	Manufacturer
	Deionized water	94.6	Water (aqua)	_
	Triethyl citrate	0.05	Triethyl citrate	Vigon
	Carbopol® 980	1.00	Carbomer	Lubrizol
Α	Eastman AQ <sup>™</sup> 55S polymer	3.00	Polyester-5	Eastman
	EDETA® BD	0.05	Disodium EDTA	BASF
	Euxyl® PE 9010	0.80	Phenoxyethanol (and) ethylhexylglycerin	Ashland
	Triethanolamine	0.50	Triethanolamine	Spectrum Chemical

- 1. Combine water and disodium EDTA; heat to 75°C while stirring.
- **2.** At 75°C, add Eastman AQ 55S polymer pellets and turn off heat. Continue stirring until pellets are completely dispersed.
- 3. Cool to about 40°C. Add triethyl citrate while stirring.
- **4.** When mixture reaches room temperature, sprinkle in carbomer with rapid stirring.
- **5.** Add preservative after carbomer has completely dissolved.
- **6.** Continue stirring until homogeneous.
- 7. Adjust pH to 6.5–7.0 with triethanolamine.

# **Hair pomade for natural hair** with Eastman AQ<sup>™</sup> 48 ultra polymer

Part	Product name	Wt%	Ingredient/INCI name	Manufacturer
	Deionized water	65.15	Water (aqua)	_
	Glycerin	8.50	Glycerin	Making Cosmetics
Α	Provitamin B5 powder	0.10	Panthenol	Making Cosmetics
	Eastman AQ <sup>™</sup> 48 ultra polymer	5.00	Polyester-5	Eastman
	Dermofeel® PA-12	0.05	Sodium phytate	Evonik
В	Ceteareth-25	20.00	Ceteareth-25	Making Cosmetics
С	Aloe Vera Extract 10X	0.50	Aloe barbadensis (aloe) leaf juice	Making Cosmetics
	Kem Diol	0.70	Phenoxyethanol (and) caprylyl glycol	Akema

- 1. Weigh out the water of part A into a beaker and heat it to 80°–85°C.
- **2.** Once at temperature, incorporate the rest of part A in the order shown in the ingredients list.
- **3.** Once part A is at 80°–85°C, add part B to the batch slowly while mixing. Make sure the temperature doesn't drop below 75°C.
- **4.** Once all of part B is completely dissolved into the main vessel, let the temperature drop to 50°C.
- 5. Add part C.
- **6.** Adjust pH if required to 6.0–6.5.





# FEATURED PRODUCTS

# SAIB

Eastman Sustane™ SAIB (sucrose acetate isobutyrate) and Eastman SAIB are sucrose-based adhesion promoters used to improve adhesion of products to fingernails, skin, and hair. SAIB is available in a variety of low-viscosity blends for cosmetics and personal care applications.

# AQ POLYMERS FOR SKIN CARE

Eastman AQ<sup>™</sup> polymers are highly versatile, water-dispersible polymers used in hairstyling, sun care, and color cosmetics for their film-forming properties.

Eastman AQ 38S polymer provides excellent film formation and water resistance in sunscreen products. As indicated by the number in the product name, AQ 38S polymer has a  $T_g$  of about 38°C. Because of its low  $T_g$ , Eastman AQ $^{\text{M}}$  38S forms flexible films on the skin. It imparts a smooth feel to creams, lotions, and sprays and adheres to the skin.

# Tattoo protection sunscreen stick with Eastman CAB 381-20

	Product name	Wt%	Ingredient/INCI name	Manufacturer
А	Triglyceride	24.50	Capric/caprylic triglyceride	Making Cosmetics
	Octyldodecanol	5.00	Octyldodecanol	Making Cosmetics
	Squalane	1.50	Squalane	Making Cosmetics
	Tegosoft <sup>®</sup> DEC	10.00	Diethylhexyl carbonate	Evonik
	Cyclopentasiloxane	7.00	Cyclopentasiloxane	Making Cosmetics
	Sunflower oil, high oleic	2.00	Sunflower seed oil	Gova Distribution
	Neoderm AB	5.00	C12-C15 alkyl benzoate	Gova Distribution
	Zinc oxide	12.00	Zinc oxide	Making Cosmetics
	CAB 381-20	1.00	Cellulose acetate butyrate	Eastman
	Ozokerite	10.00	Ozokerite wax	Strahl & Pitsch
	Beeswax	9.00	Beeswax	Strahl & Pitsch
В	Shea butter	5.00	Shea butter	Making Cosmetics
	Lipocol™ HCO39	8.00	PEG-40 hydrogenated castor oil	Vantage Personal Care

- **1.** In a beaker, weigh the ingredients and prepare part A at 70°C; mix until homogenized. Grind the zinc oxide before use.
- 2. In another beaker, weigh the ingredients in part B and heat them at 70°–75°C; mix until completely melted.
- **3.** After all ingredients are melted/dissolved, mix the two parts.
- **4.** Pour the formulation into a stick tube, and let it rest for a couple of hours until it solidifies.

# **Foundation for all skin shades** with Eastman AQ<sup>™</sup> 38S polymer and Eastman Sustane<sup>™</sup> SAIB MCT

	Product name	Wt%	Ingredient/INCI name	Manufacturer
А	Water	57.85	Water (aqua)	_
	Eastman AQ 38	5.00	Polyester-5	Eastman
	Dermofeel® PA-12	0.10	Sodium phytate	Evonik
	Glycerin	3.00	Glycerin	Making Cosmetics
	Solagum <sup>®</sup> AX	1.00	Xanthan gum	Seppic
	SS4230	5.00	Cyclopentasiloxane (and) trimethylsiloxysilicate	Momentive Performance Materials
	SS4267	3.00	Dimethicone (and) trimethylsiloxysilicate	Momentive Performance Materials
	SIMULSOL™ 165	3.00	PEG-100 stearate (and) glyceryl stearate	Seppic
	Eastman GEM™ 2-ethylhexyl palmitate	2.00	2-Ethylhexyl palmitate	Eastman
	Eumulgin® B 25	1.50	Ceteareth-25	BASF
В	Aerosil® R 974	2.00	Silica dimethyl silylate	Evonik
D	Tegosoft® APM	1.50	PPG-3 myristyl ether	Evonik
	SAIB MCT	2.00	Sucrose acetate isobutyrate (and) caprylic/capric triglyceride	Eastman
	Stearic acid	2.00	Stearic acid	Making Cosmetics
	PEG-8 dimethicone	1.00	PEG-8 dimethicone	Making Cosmetics
	Dimethicone fluid	1.00	Dimethicone fluid	Making Cosmetics
	Castor oil	1.50	Castor oil	Gova Distribution
	Signature mineral base	1.00	Mica, zinc oxide, titanium dioxide, silica	Making Cosmetics
C	Titanium dioxide, micronized	0.50	Titanium dioxide (and) aluminum hydroxide (and) lauric acid	Making Cosmetics
	Pigment	5.00	Titanium dioxide, CI 77492 (iron oxides)	Making Cosmetics
D	Euxyl® PE 9010	1.00	Phenoxyethanol (and) ethylhexylglycerin	Ashland
D	Vitamin E	0.05	Tocopherol	Making Cosmetics

- 1. Heat water to 80°C and add AQ polymer until a dispersion is formed.
- **2.** Slurry the gum in the humectant (glycerin) and stir into part A until homogeneous gel forms.
- 3. In a separate beaker, add part B ingredients and heat to 75°C.
- **4.** Add part B to part A; stir until homogeneous cream is formed.

- Grind part C and add slowly to parts A/B; stir until a homogeneous, dark paste forms.
- 6. Homogenize mixture for 1 minute per 100 g.
- 7. Allow to cool to < 40°C and add part D; stir until homogeneous.
- 8. Adjust pH to 6-6.5.





# FEATURED PRODUCTS

### **CELLULOSE ESTERS**

Cellulose esters are polymers used by the nail care industry as film formers. Films formed from cellulose esters have fast solvent release. Compared to nitrocellulose, cellulose esters are nonyellowing and have excellent clarity and stability. They are nontoxic and easily pigmented. Cellulose acetate butyrate (CAB) and cellulose acetate propionate (CAP) resins are available in a range of viscosities and solubilities to meet formulators' needs.

### AO POLYMERS FOR COLOR

Eastman  $AQ^{\mathsf{M}}$  polymers are highly versatile, water-dispersible polymers used in hairstyling, sun care, and color cosmetics for their film-forming properties. In color cosmetics, they are used in mascara, eyeliners, and makeup.

Eastman AQ 55S has good film integrity when combined with other cosmetic ingredients and is the preferred AQ polymer to improve water and smudge resistance of water-based makeup and mascaras.

# **Color-expressive mascara** with Eastman AQ<sup>™</sup> 38S polymer

Part	Product name	Wt%	Ingredient/INCI name	Manufacturer
А	Water	50.00	Water (aqua)	_
	Eastman AQ™ 38S polymer	10.00	Polyester-5	Eastman
	Dermofeel® PA-12	0.10	Sodium phytate	Evonik
	Glycerin	2.50	Glycerin	Making Cosmetics
	Solagum <sup>®</sup> AX	0.30	Xanthan gum	Seppic
	Cutina® GMS-SE	1.00	Glyceryl stearate SE	BASF
	Stearic acid (triple pressed)	2.00	Stearic acid	Making Cosmetics
	Palmitic acid	1.00	Palmitic acid	Making Cosmetics
	Cetearyl alcohol	3.00	Cetearyl alcohol	Making Cosmetics
В	Polysorbate-20	1.00	Polysorbate-20	Making Cosmetics
	Neoderm AB	6.00	C12-C15 alkyl benzoate	Gova Distribution
	Beeswax	5.00	Beeswax (cera alba)	Strahl & Pitsch
	Isododecane	5.05	Isododecane	Gova Distribution
	Carnauba wax	4.00	Carnauba wax	Strahl & Pitsch
_	KTZ® INTERFINE VIOLET	3.00	Mica (and) titanium dioxide	Kobo Products
	Mica Carmine Red	5.00	Mica (CI 77019), iron oxide (CI 77491), carmine (CI 75470)	Making Cosmetics
D	Euxyl® PE 9010	1.00	Phenoxyethanol (and) ethylhexylglycerin	Ashland
D	Vitamin E	0.05	Tocopherol	Making Cosmetics

- Heat water to 80°C and add AQ polymer until a dispersion is formed.
- **2.** Slurry the gum in the humectant (glycerin) and stir into part A until homogeneous gel forms.
- 3. In a separate beaker, add part B ingredients and heat to 75°C.
- **4.** Add part B to part A; stir until homogeneous cream is formed.

- **5.** Grind part C and add slowly to parts A/B; stir until a homogeneous, dark paste forms.
- 6. Homogenize mixture for 1 minute per 100 g.
- 7. Allow to cool to < 40°C and add phase D; stir until homogeneous.
- **8.** Adjust pH to 6–6.5.

# **Gender-neutral mascara** with Eastman AQ<sup>™</sup> 48 ultra polymer

Part	Product name	Wt%	Ingredient/INCI name	Manufacturer
Α	Deionized water	81.50	Water (aqua)	_
	Zemea® propanediol	10.00	Propanediol	DuPont Tate & Lyle BioProducts
В	Eastman AQ™ 48 ultra polymer	7.00	Polyester-5	Eastman
С	Farmal® Xanthan 2312 TC	1.00	Xanthan gum	Ingredion
D	SharoSENSE® Plus 181-N	0.50	Maltol (and) polyquaternium-80	Sharon Laboratories

- 1. Premix part B. Add part A to part B with side-sweep agitation.
- **2.** Heat parts A/B to 80°C to dissolve the polymer. Stir with side-sweep agitation until homogeneous.
- **3.** Add part C to parts A/B with dispersion blade stirring. Mix until uniform.
- **4.** Add part D to parts A/B/C and mix until glossy and smooth.

# **Chrome/mirror-effect nail polish** with Eastman CAB 381-20

Part	Product name	Wt%	Ingredient/INCI name	Manufacturer
Α	CAB 381-20	70.1	Cellulose acetate butyrate	Eastman
В	Claytone® MPZ V	10.0	Stearalkonium bentonite	Eckart
С	SAIB 90 EA	0.7	Sucrose acetate isobutyrate	Eastman
D	Metalure® A-31017 AE	1.8	Aluminum powder/ethyl acetate	Eckart
Е	n-Butyl acetate	17.4	Butyl acetate	Eastman

- **1.** Prepare a 10% solution of part A in 60:40 ethyl acetate/butyl acetate with a high-shear mixer.
- **2.** Make a 7% pre-gel of part B in 60:40 ethyl acetate/butyl acetate with a high-shear mixer.
- **3.** Blend parts A, B, and C together with a paddle stirrer.
- **4.** Carefully mix part D into this blend using mild agitation to avoid damaging flake.
- **5.** Dilute to application viscosity with part E.
- **6.** Pour mixture into nail polish bottle if required.

# ABOUT EASTMAN

# IT'S ALL ABOUT THE INGREDIENTS.

Eastman is a global specialty chemical company that produces a broad range of advanced materials, additives and functional products, specialty chemicals, and fibers that are found in products people use every day. We have a long history of providing specialty ingredients to the personal care and cosmetics industry, offering a wide variety of products—from adhesion promoters to film formers to active ingredients.

Personal care and cosmetics formulators rely on our innovative solutions to create and successfully introduce new products with tangible consumer benefits.

To learn more about how Eastman ingredients can best enhance your personal care and cosmetics products, visit us at eastman.com/personalcare.



# NOTES

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# **EASTMAN**

The results of insight

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