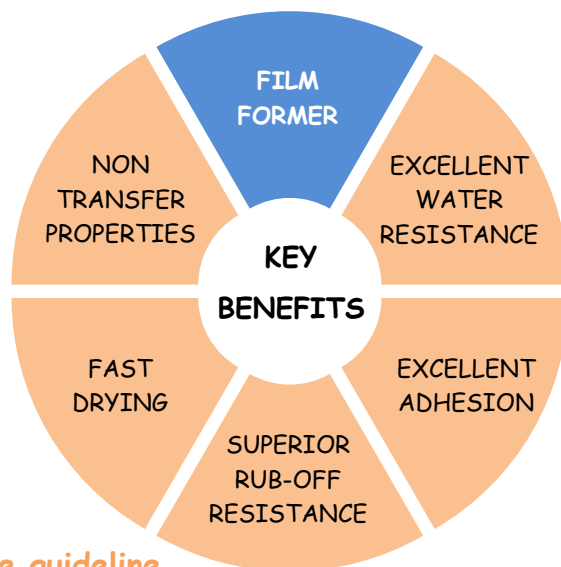


COMPOSITION

INCI NAME **STYRENE/ACRYLATES COPOLYMER**



Chemical and physical properties

- Appearance: milky white liquid
- Odor: characteristic
- Solid content = 50±2%
- Preservative: sodium dehydroacetate
- Tg ~ 7°C
- pH ~ 6,5-7,5
- Viscosity ~ 600 mPa.s

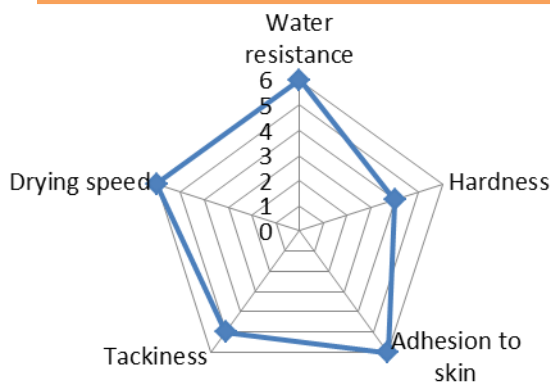
Formulation

- **pH:** stable over a pH range of 6,0-8,0
pH<6,0 or > 8,0 thicker
- **Salts:** incompatible
- **Alcohols:** compatible
- **Surfactants:** compatible
- **Oils:** incompatible
- **Pigments:** compatible
- **Treated pigments:** compatible with all DAITO's treatments
- **Thickeners:** compatible with synthetic (carbomers or polyacrylates) and natural (xanthan gums or cellulose derivatives)
- **Film formers:** compatible with cellulose derivatives
- **Beads:** compatible with MAKIBEADS, CELLULOBEADS
- **Fibers:** compatible with nylon, rayon and PLA fibers

Use guideline

- Add at the end of the process at a temperature below 40°C
- Easy to use: low viscosity
- Ready for use: no prior polymer dispersion or neutralization required
- Very good water resistant film former which can be used to deliver active ingredient on the skin
- Is the polymer of choice for formulating waterproof products
- Use level: 0.1-60%

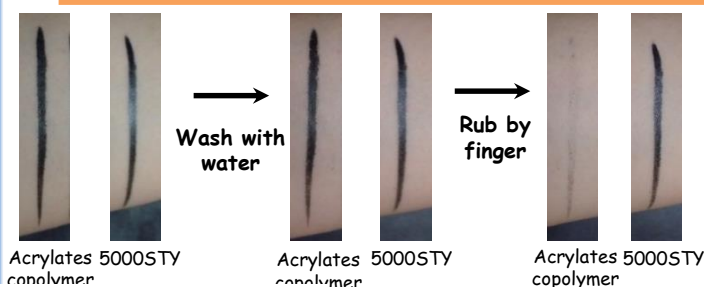
Performance properties



Cosmetic benefits

- Forms a transparent, flexible & glossy film
- Dries quickly to form long lasting water resistant film with good skin adhesion
- Provides a high wear comfort

Rub-off resistance



Eyeliner formulations are applied on the skin and dried for 5 minutes. Wash with water and rub gentle.

DAITOSOL 5000STY imparts rub-off resistance to formulations.

Water resistance

The water resistance of the film is evaluated by immersion in water. The polymer is applied on a PET film (thickness 0,1 mm). After drying (1 hour), the film is immersed in water for 3 hours. The whitening of the film is an indication of the water resistance.

t = 5 min

t = 3 hours



After 3 hours of immersion all the films except DAITOSOL 5000STY whiten. After drying the transparency is recovered for all the DAITOSOL products.

Daitosol 5000STY absorbs the lowest amount of water and has the ability to significantly improve water resistance.

Fluid foundations are applied on an artificial skin substrate. A droplet of water is deposited on the substrate. The spreading of the water droplet is an indication of the ability of DAITOSOL 5000STY to impart water resistance.

t = 0 min



t = 30 min



Foundation containing DAITOSOL 5000STY shows improved water resistance..

Applications

EYELINERS

DKK 055 Felt pen eyeliner
DKE 53 Charcoal black eyeliner

MASCARA

DKK 035 Long lasting mascara - STY
DKK 087 Ecofiber mascara



AQUEOUS NAIL PRODUCTS

DKE 162 Aqueous nail polish

BODY PAINTS

DKK 089 Face and body paint

Safety and regulatory information

Product safety: A BCOP test showed that styrene/acrylates copolymer is non irritating. A Human patch test did not demonstrate skin irritation for styrene/acrylates copolymer .

Material Safety Data Sheets are available for all DAITO KASEI's products.

REACH: All the ingredients, unless exempted, will be registered on May 2018.

For additional information

Please contact:

DAITO KASEI EUROPE SAS
62 boulevard Henri Navier
Taverparc Bât 5.2
95150 Taverny - FRANCE
☎ : +33(0)1 30 40 01 01
☎ : +33(0)1 30 40 01 11
✉ : dkeurope@dkeurope.fr

HEAD OFFICE
DAITO KASEI KOGYO Co., LTD
1-6-28 Akagawa, Asahiku
Osaka - JAPAN
☎ : 81 6 6922 1632
☎ : 81 6 6921 9562

DAITO KASEI CHINA
6F/room 612
555 Wuding road Jing An District
Shangai, CHINA 200040
☎ : +86 21 32 53 25 16

The information presented within this sheet is offered in good faith, and is based on our present state of knowledge. It is offered for informational and evaluation purposes only. Users of DAITO KASEI product should initiate their own testing to determine the suitability of this product for their intended purpose. DAITO KASEI assumes no liability or responsibility for any damage to person or property resulting from the use of this product or the incorporation of this product into any final formulation or product. Statements concerning the use of this product are not to be construed as a recommendation, suggestion or inducement to use the product in any way or within any formulation that is unlawful to create or sell, that violates any applicable regulations or that infringes upon any patent. No liability arising out of such a use is assumed.