

Provisional Product data Sheet

Fluorolink AD1700

Fluorolink AD1700® is a solution of a perfluoropolyether (PFPE)-urethane acrylate in a mixture of Ethyl Acetate and Butyl Acetate (1:1 by weight).

The PFPE-urethane acrylate Fluorolink AD1700® combines the inner properties of PFPE-(meth)acrylates (low surface energy, high chemical resistance, excellent release) with a polar structure, which enhances its miscibility with hydrogenated acrylates and the compatibility with the photoinitiator; the hydrogen bonding of the urethane moieties also provides a higher mechanical strength in the cured coating.

Typical properties of **Fluorolink AD1700®** are as follows:

PROPERTY	Unit	Typical Values
PFPE-acrylate Dry Content	wt %	70
Ethyl Acetate Content	wt %	15
Butyl Acetate Content	wt %	15
Fluorine Content	wt %	24
Acrylics Concentration (referred to the dry content)	Eq/Kg	2.67
Appearance	–	Yellowish liquid
Flammability	–	Yes

BENEFITS

Since the Fluorolink AD1700® can be readily blended with conventional acrylic monomers, it finds application in many different fields: when it is used at concentrations of 30-50% w/w, it is suitable as an oligomer for UV-curable coatings which need a combination of an exceptional chemical resistance and the typical surface properties of highly fluorinated products.

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Fluorolink AD1700® can also be used as a surface modifying additive at low levels (0.5-5.0% w/w) in conventional acrylic UV-curable systems: in fact, thanks to its tendency to migrate to the air-material interface, it increases the water/oil repellency and lowers the surface tension of the cured coating and improves the surface cleanability, antigrffiti and antifingerprint properties.

At loading contents higher than 5.0% w/w into a conventional UV curable formulation, haziness can occur, so it is recommendable to check first the compatibility of Fluorolink AD1700® with the host formulation.

HOW TO USE

When used as an additive at low dosage (0.5-5.0% w/w) into a conventional UV-curable formulation, Fluorolink AD1700® does not require special curing conditions, the only recommendation is to adjust the loading content depending on the compatibility into the host formulation.

When a high content (30-50% w/w) of Fluorolink AD1700® is desired, it is recommended to formulate the Fluorolink AD1700® with suitable photoinitiators (such as Darocur 1173, available from Ciba Specialty Chemicals) and reactive diluents; examples of suitable reactive diluents are: TMPTA (available from SARTOMER as SR351), HDDA (available from SARTOMER as SR238) and THFFA (available from SARTOMER as SR285).

> Spread the mixture onto the substrate by means of the most suitable technique (spray, roll, doctor blade, etc..) to obtain a coating of the desired thickness.

> After evaporation of the solvent, irradiate with a medium pressure vapour mercury lamp preferably under inert nitrogen atmosphere until full conversion of the acrylic endgroups is reached.

Other photoinitiators may be employed depending on the specific application.

Even if the product shows an excellent shelf-life, it is recommended to avoid long and direct exposure to strong light sources.

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Gli utenti sono unicamente responsabili del loro utilizzo.

Inoltre, non si può pretendere alcun diritto di brevetto o di altri diritti simili per questo prodotto.

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