

Sta-Sol[®] ESS: Dimethyl Esters

Sta-Sol[®] dimethyl esters are used as solvents and intermediates in a wide range of industrial applications.

The Sta-Sol[®] ESS family of products are available in standard ratios of dimethyl esters and purified grades of dimethyl adipate, dimethyl glutarate and dimethyl succinate. We also offer customized versions of the esters that can be tailored to a particular application or formulation.

All dimethyl esters are available in 5 gallon pails, 55 gallon drums, IBCs, and bulk.

Chemical and Physical Properties*

Chemical Properties	ESS-I	ESS-II	DMG	DMA	DMS
Dimethyl Succinate, wt. %	17-25	1.0 max.	1.0 max.	1.0 max.	98.5 min.
Dimethyl Glutarate, wt. %	59-73	72-76	99.0 min.	1.0 max.	1.0 max.
Dimethyl Adipate, wt. %	10-14	23-27	1.0 max.	99.0 min.	1.0 max.
Acid Content, mg KOH/g, max.	0.3	0.1	0.1	0.1	0.1
Water Content, wt. %, max.	0.1	0.1	0.1	0.1	0.1
Methanol Content, wt. %, max.	0.2	0.1	0.1	0.1	0.1
Color, APHA, max.	15	15	15	15	15
Physical Properties					
Molecular Weight	159	163	160	174	146
Distillation Range, °C	195-216	203-220	203-214	216-230	192-201
Density, #/gal, @25 °C	9.1	8.98	9.03	8.82	9.28
Specific Gravity @ 25 °C	1.091	1.076	1.082	1.057	1.112
Viscosity, cps, @ 25 °C	3.88	3.31	3.66	4.33	3.91
Solubility in Water, wt. %	5.5	4.3	5.1	2.1	10.3
Water Solubility in DMEs, wt. %	3.6	3.2	2.9	2.9	4
Freezing Point, °C	-40	-42.4	-37.5	9.4	16.8
Flash Point, F (Pensky-Martin cc)	212	226	224	255	201
Flash Point, C (Pensky-Martin cc)	100	108	107	124	94
Surface Tension, dynes/cm	35.3	35	35.6	35.1	34.6
Electrical Resistance, megohms	1.3	1.9	2.3	5	1.3
Vapor Pressure, @20 °C (Torr)	0.06	0.04	0.05	0.01	0.12

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