Optimal Design and Effective Control of TAME Production Process using Integrated Reactive Dividing Wall and Pressure Swing Columns

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1 Binary parameter of UNIQUAC model

Table S1. Thermodynamic UNIQUAC model parameters.

i-j	A_{ij}	A_{ji}	B_{ij}	B_{ji}
MeOH-2M1B	0.00	0.00	104.06	-1463.90
MeOH-2M2B	0.00	0.00	57.01	-1406.00
MeOH-TAME	0.00	0.00	130.55	-918.48
MeOH-nC5	0.00	0.00	1.92	-1612.80
MeOH-iC5	0.00	0.00	-10.50	-1241.40
MeOH-1-pentene	0.00	0.00	-13.23	-1124.90
2M1B-2M2B	0.00	0.00	-12.11	6.77
2M1B-nC5	0.00	0.00	-9.84	-12.32
2M2B-nC5	0.00	0.00	-5.55	-14.04
2M1B-iC5	0.00	0.00	123.94	-158.31
nC5-1-pentene	0.00	0.00	112.32	-158.75

Note that: The values of the binary interaction parameters in the UNIQUAC model can be obtained in Aspen Plus® simulator by regressing the vapor-liquid equilibrium data from Aspen Plus®. The values for A_{ij} and A_{ji} are zeros, which may not be zeros for other systems.