

# Technical Applications Bulletin 108

## Estimated Rejection of Various Solutes (for reference only)

To aid customers in estimating the rejection performance of LG Chem Inc.'s TFN RO membranes, a table has been compiled featuring the rejection rates of various solute compounds. It is important to note that these rejection rates are provided for reference purposes only, as the actual system performance can differ due to factors like feed water concentration, ion composition, pH, temperature and system design condition. LG Chem Inc. strongly advises to conduct a pilot study to accurately determine the actual rejection rates in a specific system and application.

**Table 108.1 Estimated Rejection of Various Solutes**

Solute	Rejection (%)
1,2-Dichlorethane + Benzene	90
1,4-Dioxane	> 90
Acetaminophen	> 99
Acetone	66 ~ 67
Aluminum	83
Arsenic III	> 55
Arsenic V	> 99
Bromodichloromethane	45
Cadmium	> 90
Caffeine	> 99.9
Carbon disulfide	88
Chloroform	40
Chromate	> 80
Copper	> 96
Cyanide	86 ~ 92
DEET	99.7
Dibromochloromethane	70
Ethanol	50 ~ 65
Formaldehyde	66
Gemifibrozil	> 99
Iohexol	99.9
Iopromide	> 99
Iron	> 99
Isopropyl alcohol	80 ~ 98
Lead	> 95
Lithium	95

Solute	Rejection (%)
Manganese	> 95
Mercury	> 95
Methanol	10 ~ 15
Methylene chloride	50
NDMA	80
Nickel	> 95
Orthophosphate	> 99
Perfluoro-2-methoxyacetic acid	> 88
Perfluorobutanesulfonic acid	> 23
Perfluorobutanoic acid	> 71
Perfluoroheptanoic acid	> 77
Perfluorohexanesulfonic acid	> 35
Perfluorohexanoic acid	> 82
Perfluorooctanesulfonic acid	> 83
Perfluorooctanoic acid	> 74
Perfluoropentanoic acid	> 79
Phosphaste	95 ~ 98
Polyphosphate	96 ~ 98
Selenium	94 ~ 96
Silver	> 95
Sucralose	> 99
TCEP	> 99
Thiosulfate	97 ~ 98
Triclosan	> 99
Zinc	97 ~ 99

**Notes:**

1. The rejection rates in the table above are estimated values and for reference only.
2. LG Chem Inc. does not guarantee the performance of its membranes in terms of estimated rejection rates.
3. The Actual rejection rates must be verified by pilot study.

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