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**EFFECT OF CHEMISTRY AND BOILING-POINT DISTRIBUTION ON THE
PROPERTIES AND CHARACTERISTICS OF SYNTHETIC PARAFFINIC KEROSENE
AND BLENDS WITH JET A**

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Two synthetic paraffinic kerosenes (SPK) have been produced from the same synthetic crude product derived from natural gas using a Fischer-Tropsch process. The two SPKs differed primarily in boiling-point distribution and in the normal/iso-paraffin ratio. The first SPK had a larger fraction of normal paraffins and, therefore, required a lighter boiling-point distribution in order to meet the requirement for freezing point. The second SPK was produced by hydro-isomerization of the syncrude, and it was able to meet freezing point with a significantly broader boiling-point distribution. Both SPKs met all of the requirements of Table 1 in the Jet A/Jet A-1/JP-8/F-34 fuel specifications except for density.

Blends were then made with a conventional Jet A in the ratio of 50/50. These blends met all of the Table 1 requirements including density.

The properties of the blends were found to be very similar to each other and to the original Sasol semi-synthetic jet fuel, which used coal as the feed source for the SPK; the blends also had fit-for-purpose properties and characteristics that were very typical of conventional jet fuels.