

**POLAR GRAFTED POLYOLEFINS,
METHODS FOR THEIR MANUFACTURE, AND
LUBRICATING OIL COMPOSITIONS CONTAINING THEM**

Abstract of the Disclosure

5 A grafted polyolefin containing one or
more of N-vinylimidazole, 4-vinylpyridine, or
other ethylenically-unsaturated nitrogen-con-
taining or oxygen-containing graftable mon-
omers grafted to a polyolefin backbone is
10 disclosed. The grafted polyolefin preferably
has a weight average molecular weight of from
about 20,000 to about 500,000, a polydispers-
ity of less than about 10, and an ADT value of
at least about 8. The grafted polyolefin can
15 be defined as containing more than about 1.2%
by weight of grafted monomer on a polyolefin,
or as containing at least about 13 moles of
graftable monomers per mole of polyolefin, or
as having an asphaltene dispersancy test (ADT)
20 value of at least about 8. Also described is
a lubricating oil comprising a lubricant base
oil and a grafted polyolefin as described
above. Also described is a method of making a
dispersant viscosity index improver. N-vinyl-
25 imidazole or other ethylenically unsaturated
nitrogen-containing and/or oxygen-containing
graftable monomers and a graftable polyolefin
are reacted with enough of an initiator to
graft the monomer to the polyolefin. The ini-
30 tiator and/or graftable monomer is added to
the other ingredients, maintained at the reac-
tion temperature, over a period of time. The
reaction temperature is maintained at a level
high enough to give acceptable reaction times.
35 The N-vinylimidazole and the initiator each

can be added at a uniform, relatively slow rate during the reaction.