

MAGELLAN PIPELINE ADDITIVE SPECIFICATIONS

Magellan will permit the types and concentrations of additives detailed below; all other types and concentrations or additives are prohibited.

Gasoline Additive Specifications

The following additive specifications apply to all grades except aviation products, LPG's, and Natural Gasoline, for the grades noted in each section.

(H, I, J8, L, Q, and W Grade)

Gum Inhibitors and Metal Deactivators

Gasoline shipments may, but are not required to, contain any of the following gum inhibitors and/or metal deactivators:

N, N'di-secondary butyl ortho-phenylenediamine
N, N'di-secondary butyl para-phenylenediamine
N, N'disalicylidene-1,2 propanediamine
N, N'di(1-ethyl-3-methylpentyl)-para-phnylenediamine
N, N'di-isopropyl-para-phenylenediamine
N, n'bis-(1, 4-demethylpentyl)-p-phenylenediamine n-Butyl -
para-aminophenol
2-6-di-tert-butylphenol
2,4,6-tri-tert-butylphenol
Ortho-tert-butylphenol

| | | |
|----------------|----------------|------------------|
| UOP 12P | UOP 12S | UOP 17P |
| UOP 3455 | UOP 5S | Innospec AO-31 |
| Innospec AO-36 | Innospec AO-37 | Ethyl 733 |
| Ethanox 4776 | Ethanox 4720 | Ethanox 4740 |
| Tolad 3905 | Tolad 3910 | Specaid 8Q202 |
| Nalco 88BU-118 | Unichem 7529 | Pitt-Consol M-56 |
| Tolad 4695 | | Specaid 8Q206 |

Gasoline, Fuel Oil and Diesel Fuel Additive

Corrosion Inhibitors

Products requiring compliance with NACE standard TM0172 may contain any of the following corrosion inhibitors:

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|------------------|-----------------|-------------------|
| Nalco 5403 | Nalco 5405 | Baypros 853 |
| Nalco Visco 3554 | Lubrizol 541 | UOP Unicor PL |
| Apollo PRI-19 | Innospec DCI-4A | Unichem 7504 |
| UOP Unicor | UOP Unicor J | Tolad 249 |
| Innospec DCI-6A | Hitec E-534 | Unichem 7501 |
| Tolad 245 | Tolad 4410 | Tolad 9715 |
| HiTech 580 | Spec-Aid 8Q5127 | Tolad 9719 |
| Nalco EC5407A | | Spec-Aid 8Q123ULS |
| | | Spec-Aid 8Q110ULS |

Fuel Oil and Diesel Fuel Additives

Stability

Fuel oil and/or diesel fuel shipments may contain one or more of the following stability additives as required to achieve compliance with the stability characteristics outlined in the applicable grade specification.

| | | |
|-----------------|-------------------|-----------------|
| Innospec FOA-3 | Chemtec 7220 | Specaid 8Q72 |
| UOP Polyflo-121 | Spec-Aid 8Q403ULS | Nalco 5303 |
| UOP Polyflo-122 | Tolad 9076 | Nalco 5301 |
| UOP Polyflo-128 | Unichem 7530 | UOP Polyflo-195 |
| Tolad 9022 | Spec-Aid 8Q401 | |

Cold Flow Additives

Fuel oil and/or diesel fuel shipments requiring additives to achieve compliance with low temperature properties may, but are not required to contain one or more of the following pour point depressant additives:

| | | |
|------------------|-------------------|------------------|
| Hitec 4541 | Innospec PDD-7450 | Tolad 3005 |
| Innospec 2152 | Spec-Aid 8Q5201 | Tolad 3030 |
| Betz Q5201 | Paradyne 25 | Betz 8Q12 |
| Hitec 4518 | Unichem 8094 | Hitec 4566 |
| Exxon ECA 7305 | Nalco 5375 | Spec-Aid 8Q14ULS |
| UOP Polyflo 6000 | Spec-Aid 8Q72ULS | |

Dyes

X5 Grade High Sulfur Fuel Oil is the only product in Magellan Pipeline that requires dye at the origin. Applicable dyes and required treat rates are listed in the X5 grade product specifications.

XR Grade Low Sulfur Fuel Oil is dyed at the Magellan rack.
