

# HiTEC<sup>®</sup> 5708

## *Shear Stable Viscosity Index Improver*

### Application

HiTEC<sup>®</sup> 5708 Polymethacrylate is a viscosity index improver with moderate shear stability. It is designed for multigrade hydraulic oils. It also provides efficient pour point depressant performance.

### Recommended Dosage

Please contact your Afton Chemical representative for specific recommendations.

### Features

- Superior viscosity index improvement without compromise to hydrolytic stability or filtration performance
- Oils containing HiTEC<sup>®</sup> 5708 Polymethacrylate are approved by major OEMs and are on the approved Denison Parker HF-0 list
- Suitable for use in formulations designed to meet Eaton, Cincinnati Machine, DIN 51524 (III), US Steel, Bosch Rexroth, SAE, ISO and JCMAS
- Provides both Viscosity Index and Pour Point Depressant characteristics
- Excellent solubility in a range of base oils
- Dilute version available

### Typical Characteristics

Kinematic Viscosity @ 100°C, cSt	1500
Flash Point, PMCC, °C	135
Specific Gravity, 60°F/60°F	0.94
Kinematic Viscosity @ 40°C, cSt	76,000

### Viscometric Performance in Group I Oils:

Wt% HiTEC <sup>®</sup> 5708	70N Oil			100N Oil			150N Oil			325N Oil		
	0	5	10	0	5	10	0	5	10	0	5	10
Viscosity at 100°C, cSt	3	4.7	7	4.1	6.2	9	5.2	7.8	11.3	8	11.4	16.1
Viscosity at 40°C, cSt	12.8	19	28	20.2	29.1	42.1	30.6	43.1	61.3	61.8	82.2	111.4
Viscosity Index	88	179	229	95	168	203	99	151	180	94	130	155
Pour Point, °C	-17	-51	-45	-18	-39	-48	-15	-42	-48	-12	-27	-30
Viscosity at -35°C, cP	---	4940	5490	---	25200	15920	---	52100	37500	---	---	---

## Shear Stability:

Shear Stability					
30 Cycle Bosch		20 Hr. KRL		40 Min. Sonic	
P-SSI	% Vis. Loss	P-SSI	% Vis. Loss	P-SSI	% Vis. Loss
6	2	64	19	38	12

## Formulation Examples:

Components, %wt	ISO 32	ISO 46	ISO 68
	%wt	%wt	%wt
HiTEC® 5708 PMA	3.5	4.6	6.7
HiTEC® 521F Hydraulic Additive	0.85	0.85	0.85
100N Group I base oil	44.16		
150N Group I base oil	51.49	84.74	61.95
600N Group I base oil		9.81	30.5
<i>TOTAL</i>	<i>100</i>	<i>100</i>	<i>100</i>
Test	Results	Results	Results
Kinematic Viscosity at 40°C, cSt	32	46	68
Kinematic Viscosity at 100°C, cSt	6.3	8.1	10.9
Viscosity Index	150	150	150
KRL After Shear viscosity			
Kinematic Viscosity at 100°C, cSt	5.2	6.5	8.2
100°C % viscosity loss	17.5	19.8	24.8
Kinematic Viscosity at 40°C, cSt	27.5	38.4	53.3
40°C % viscosity loss	14.1	16.5	21.6

## Shipping Information

### STANDARD CONTAINERS

Tanks cars and non-returnable 55-gallon steel drums

## Storage, Handling & Toxicity

HiTEC® 5708 Viscosity Index Improver is a viscous material and should be handled at elevated temperatures with the following temperature limits:

Recommended Unloading Temperature.: 80°C (175°F)

Max. Short Term Handling Temperature: 100°C (210°F)

Max. Storage Temperature in Air: 90°C (195°F)

Max. Storage Temperature in Nitrogen: 90°C (195°F)

Maximum Skin Temperature: 130°C (265°F)

Shelf Life Recommendation: 36 months @ ambient temperature

(If product will not be used for extended periods, e.g. 4+ weeks, it is advisable to cut steam/heating media off in the storage tank)

For specific safety, handling and toxicity information, please refer to the current Material Safety Data Sheet or call 1-800-325-7079.

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