



P-HTI STIMULATION SERVICE BULLETIN

08/21/08

P-HTI (PETROCHEM - HIGH TEMPERATURE INHIBITOR)

TECHNICAL DATA

P-HTI is effective in acid strengths up to 28% HCL, 12%HCL and 3%HF, and formic and acetic acid mixtures. P-HTI has a built in intensifier that provides corrosion protection at lower concentrations levels at temperatures up to 250⁰F/121⁰C. Typical dosage rates range from 0.1 to 4.0 volume percent, based on acid volume. Some surfactants and mutual solvents may require an increased inhibitor loading to provide acceptable corrosion protection.

At temperatures over 250⁰F/121⁰C, low levels of additional Petrochem inhibitor intensifier (P-HTI2) will extend the protection up to 350⁰F/176⁰C in 15% HCL and 300⁰F/148⁰C in 28% HCL, in most common oilfield tubular, including coil tubing and chrome alloys and is compatible with most acidizing additives.

P-HTI is a high-temperature acid corrosion inhibitor, which provides cost effective protection of oilfield metallurgy such as carbon steel (J55, N80, L80 and P100), chrome steel (chrome 9% and 13%) and coil tubing to 250⁰F/121⁰C. It provides corrosion inhibition by forming a protective film on metal surfaces. When combined with Petrochem inhibitor intensifier (P-HTI2).

CHEMICAL NATURE

P-HTI is a synergistic blend of organic nitrogen compounds, acetylenic alcohols, solvents and surfactants. It is cationic and contains no heavy metals harmful to process equipment or the environment.

GUIDELINE EXAMPLE - LOADING SCHEDULE

<u>TEMPERATURE</u> <u>Temperature °F.</u>	<u>EXPOSURE TIME</u> <u>HOURS.</u>	<u>CONCENTRATION REQUIRED* (GPT)</u>			
		<u>15 % HCL</u>		<u>28 % HCL</u>	
		<u>P-HTI</u>	<u>**P-HTI2</u>	<u>P-HTI</u>	<u>**P-HTI2</u>
200	6	1	none	4	5
225	6	2	none	4	5
250	6	5	none	5	10
275	6	8	none	10	10
300	6	6	10	15	60
325	6	10	30	not recommended	
350	6	20	50	not recommended	

* GPT - GALLONS INHIBITOR PER 1000 GALLONS ACID.

** GPT – GALLONS (P-HTI2) INHIBITOR INTENSIFYER PER 1000 GALLONS ACID.



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P-HTI (CONTINUED)

TYPICAL PHYSICAL PROPERTIES for P-HTI

Appearance:	Dark Liquid
Odor:	Alcoholic
Specific Gravity:	0.99 @ 60 ⁰ F/15.6 ⁰ C
Solubility in water:	Dispersible
Solubility in acids:	Dispersible
Solubility in diesel:	Dispersible
Solubility in HAN:	Dispersible
Viscosity:	4.4cst@100 ⁰ F/37.8 ⁰ C
Pour point:	-80 ⁰ F/-62 ⁰ C
Flash point, TCC:	64 ⁰ F/17.8 ⁰ C
Boiling point:	169 ⁰ F/76 ⁰ C
Evaporation rate:	2.1(BuAc=1)
Packaging:	55 Gallon drums.

SAFETY

P-HTI AND P-HTI2 ARE TOXIC MATERIALS AND ARE TO BE HANDLED WITH CARE. Chemical goggles, respirator, rubber gloves, rubber apron and rubber boots are needed when handling these materials. Be absolutely sure that all personnel have read and understood the (MSDS) Material Safety Data Sheet before handling these materials. The MSDS is to be available at the work site for immediate safety reference. Keep drum openings closed both for safety precaution and also to prevent product contamination and evaporation.

All treatment data is given as a guideline only and not as an absolute recommendation for use.