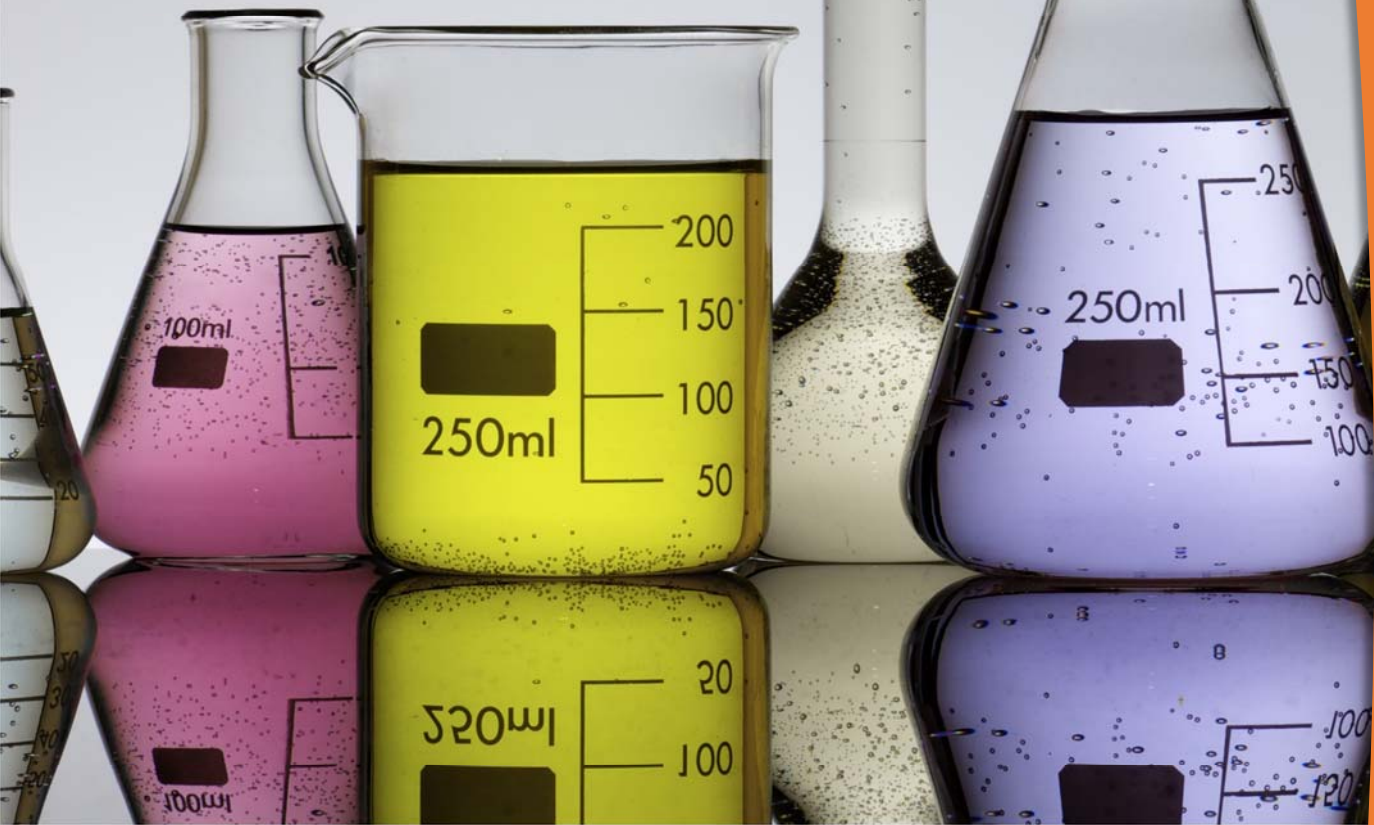


HYDRA FUELPLUS



Technical Specification

Hydra FuelPlus is a highly effective biocide utilising dual isothazolones for a broad spectrum kill of harmful microbes in all types of fuel. Effective in both the fuel and water phases found in fuel tanks, it is not deactivated by water.

This product does not contain any nitrogen, sulphur, hydrocarbons, phosphorous or metallic ingredients.

Normal Conditions:

It burns producing CO₂ and H₂O (Carbon dioxide and water) under normal condition.

Chemical Type:

Hydra FuelPlus active ingredients are a 3:1 ratio mixture of 5-chloro-2-methyl-3(2H)isothiazolone and 2-methyl-3(2H)isothiazolone (abbreviated name CMIT/MIT) CAS N°55965-84-9.

Hydra FuelPlus is a solution CMIT/MIT, in dipropylene glycol.

Physical Properties

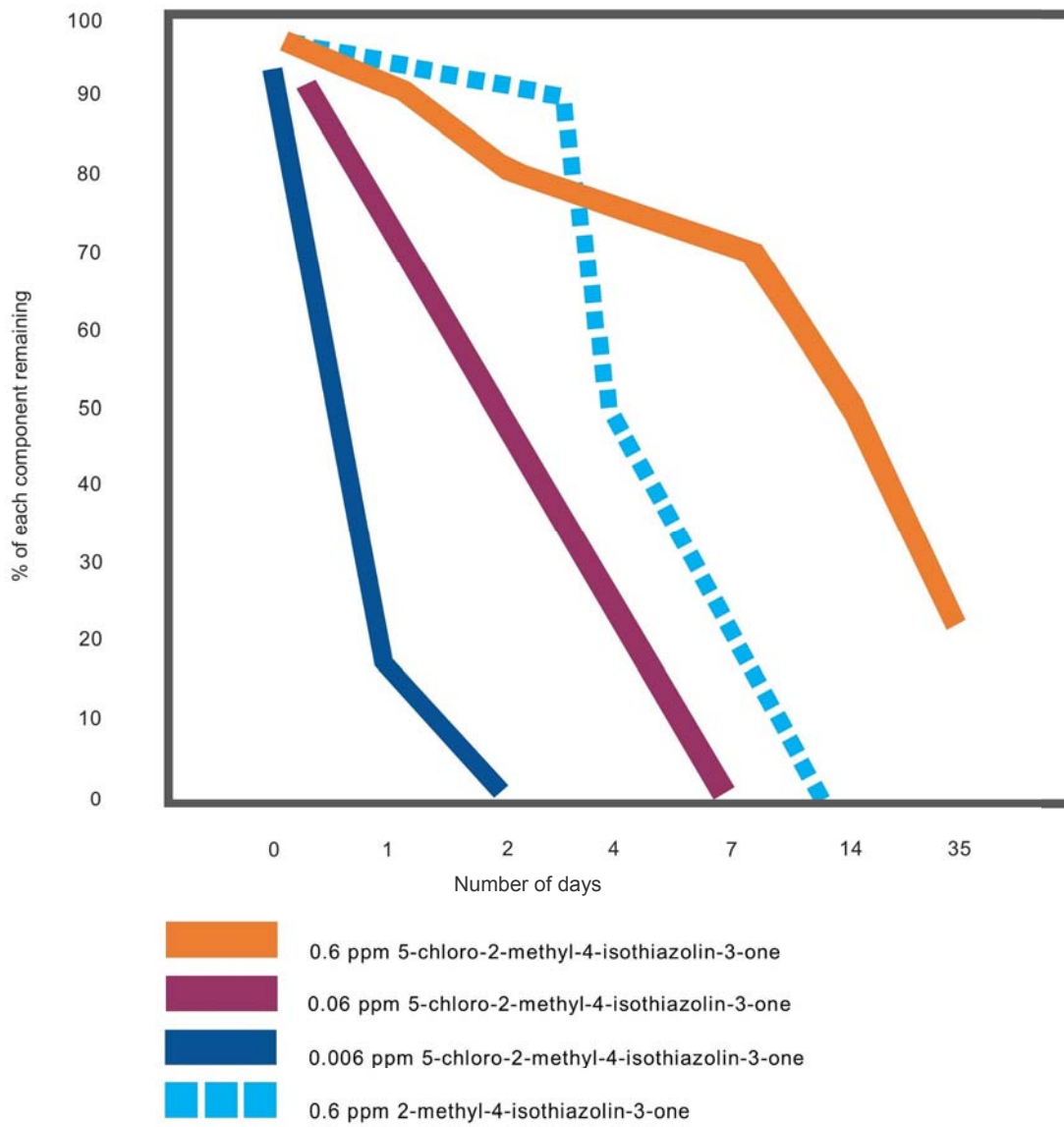
Appearance:	Pale brown liquid
Odour:	Slight mild odour
pH (as produced):	4 - 6
Specific Gravity (25°C):	1.205
Viscosity (25°C):	103 Cps
Solvent:	Dipropylene glycol
Volatility:	Non-volatile - no VOC
Freezing Point:	-29°C (-20°F)
Storage Conditions:	Min. ≥ -23°C (≥ 10°F), Max. ≤ 55°C (≤ 131°F)

These values do not constitute specifications.

Environmental Impact

- Very low use levels.
- Readily biodegradable/non-persistent in the environment.
- Does not lead to the presence of chlorinated organics.
- The performance of waste water treatment plants remains unaffected.
- Variety of tests have proved that Hydra FuelPlus is an eco-friendly product.

Dissipation of Hydra FuelPlus in Sea Water



Inhibition of Micro-Organisms

The minimum concentration of Hydra FuelPlus required to inhibit commonly occurring fuel microbes are given below.

Organism Type	Organism	ATCC #	MIC (ppm AI)
Bacteria(a)	<i>Aureobasidium foliicola</i>	14098	1.5
	<i>Bacillus sp.</i>	31183	2
	<i>Citrobacter freundii</i>	43864	1.5
	<i>Enterobacter aerogenes</i>	15038	0.375
	<i>Escherichia coli</i>	700928	1.5
	<i>Kurthia sp.</i>	14757	0.875
	<i>Proteus mirabilis</i>	12453	1.5
	<i>Pseudomonas aeruginosa</i>	47085	0.375
	<i>Pseudomonas oleoverans</i>	8062	0.375
	Fungi(b)	<i>Aspergillus fumigatus</i>	1022
<i>Penicillium corylophilum</i>		52576	4
<i>Penicillium funiculosum</i>		20783	5
<i>Paecilomyces varioti</i>		74097	3
Yeast(b)	<i>Candida albicans</i>	10231	1.5
	<i>Candida lipolytica(c)</i>	20373	1.5
	<i>Candida silvicola</i>	13689	3

a – MIC at 48 Hours

b – MIC at 7 days

c – Hydrocarbon utilising microorganism



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