

# **LEV III Workshop E10 Certification Fuel**

**November 16, 2010**

**California Environmental Protection Agency**

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**Air Resources Board**

# E10 Certification Fuel

- ➡ Will be proposed with the LEVIII rulemaking in April 2011
- ➡ E10 cert fuel based on in-use data accumulated by enforcement division
  - Used Predictive Model submissions by producers
- ➡ Dataset made up of approximately 600 different formulations
- ➡ Goal was to make certification fuel representative of current in-use E10 fuel

# E10 Certification Fuel

Fuel Property	MTBE	E10
Sensitivity (min)	7.5	7.5
Distillation Range °F		
10 pct. point	130-150	130-150
50 pct. point	200-210	205-215
90 pct. point	290-300	310-320
Sulfur, ppm by wt	30-40	8-11
RVP, psi	6.7-7.0	6.9-7.2
Olefins, vol %	4.0-6.0	4.0-6.0
Total Aromatic Hydrocarbons, vol%	22-25	19.5-22.5
Multi-Substituted Alkly Aromatic Hydrocarbons, vol% (max)	12-14	10
Benzene, vol %	0.08-1.0	0.6-0.8
Methyl tertiary-butyl ether, vol % (max)	10.8-11.2	0.05
Ethanol, vol %	--	9.8-10.2
Total Oxygen, wt%	--	3.3-3.7

# E10 Certification Fuel

<b>Fuel Property</b>	<b>MTBE</b>	<b>E10</b>
Octane (R+M)/2 (min)	91	91
Residue, vol% (max)	2.0	2.0
Phosphorous, g/gal (max)	0.005	0.005
EP, maximum	390	390
Lead, g/gal (max) (No lead added)	0-0.01	0-0.01
Additives: Sufficient to meet requirements of Title 13, CCR §2257		
Copper Corrosion	No. 1	No. 1
Gum, Washed, mg/100 ml (max)	3.0	3.0
Oxidation Stability, minutes (min)	1000	1000
Specific Gravity	Report	Report
Heat of Combustion	Report	Report
Carbon, wt%	Report	Report
Hydrogen, wt%	Report	Report

# E10 Certification Fuel Dataset

	<b>RVP</b>	<b>ARO</b>	<b>BEN</b>	<b>OLE</b>	<b>SUL</b>	<b>T50</b>	<b>T90</b>
<b>Average</b>	7.14	21.11	0.79	6.91	9.01	212.10	315.40
<b>Std Dev</b>	0.62	3.50	0.12	2.22	2.90	13.26	20.33
<b>Range</b>	6.5-7.2	11.2-31.8	0.48-1.1	1-10	2-19	193-220	284-330
<b>Total # of Samples</b>	586						

# Implementation of E10 Certification Fuel

- ➡ Staff is proposing that the E10 certification fuel to be required beginning 2014
- ➡ E10 Certification fuel would be optional for use upon the Office of Administrative Law's filing of the LEVIII rulemaking with the Secretary of State

# **Open Discussion and Questions**