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APPLYING OIL SPILL EATER II (OSE II) TO PUDDLE
GASOLINE OR DIESEL TO DETERMINE THE TIME TO
RENDER THE FUELS NON-FLAMMABLE

OSEI Corporation, along with a Texas Fire Chief, Tested OSE II for 16 hours to determine the non-flammable point of gasoline and diesel once OIL SPILL EATER II (OSE II) has been applied.

There were different size metal pans used in these determinations. The first pan was round with a depth of 6 inches. The other pans were 4' x 3' x 1", and 3' x 2' x 1" respectively.

A surface spill on pavement was also carried out to emulate what could occur at a vehicle accident scene. For flat spills on pavement, 3 minutes after applying OSE II and water, you cannot ignite the fuel.

Gasoline and diesel were placed in the pans at separate times at varying depths. OSE II diluted at varying dilution rates was also added to the pans with gasoline, and then diesel. An Acetylene Torch with a full force flame was held on the fuel which OSE II had been applied for 60 seconds. If the fuel failed to light - then this was determined to be the non-flammable point. This was an extreme test since during a spill event the availability of this type of heat/flame source is unlikely.

The non-flammable point of both gasoline and diesel required more time as the fuel depth was increased. However, OSE II was able to render fuel non-flammable point was cut off at 8 inches. However, contractors and fire chiefs have agreed that unless there is eminent danger, that any depth greater than 4 inches, a Vacuum-Truck would be called out, and then OSE II used to finish the cleanup of the fuel.

Keep in mind OSE II causes hydraulic lift, so OSE II will pull the fuel/oil out of the pavement so there is no free product residue that rainwater could wash into surrounding waters contaminating those waters.

OSE II also cleans up all the fuel so the pavement is no longer slick, which potentially could cause further accidents.

OSE II was also applied to gasoline and diesel that had been poured directly onto the pavement, and allowed so spread naturally. In these spill scenarios OSE II mixed 50 to 1 with water will render the fuel non-flammable in less than 5 minutes.

In most situations after fuel is rendered non-flammable, wait approximately 20 to 30 minutes and you can wash the effluent away without causing an adverse affect to the environment.

The Chart for both gasoline and diesel was established. The diesel will correlate to jp4, jp5, jp8, and Jet A.

These charts can be used, especially in emergencies, to determine how much OSE II and water is needed for the particular spilled fuel. The chart will also tell you based on the depth and the amount of fuel spilled, the time needed for the fuel to be rendered non-flammable.

OSE II will protect responders from potential fire problems and at the same time detoxify the fuel, so the effluent can be washed away. This will completely clean the pavement and protect the environment from the effluent wash down.

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The fire charts can be laminated so they can be carried on board emergency response vehicles. The charts are on the following pages.

OSE II is the first, and only response required to protect responders and the environment.

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Chart to Make Diesel & Jet Fuel Non-Flammable													*FLAT SPILLS		
Instructions for Applying OSE II to Diesel or Jet Fuel													Eductor at 2% and use 2 gallons of water for each gallon of diesel or jet fuel		
NOTE: These instructions show how to determine the amount of OSE II and water to use, based on the square footage and/or depth of fuel spilled.													OR		
Numbers in Boxes are Depth of Fuel in Inches													Use the volume of OSE II and water listed below		
OSE II	Water (Gallons)	Sq. Ft.	5	10	25	100	200	400	800	1200	1600	2000	Sq. Ft.	OSE II	Water (Gallons)
		Gal. Fuel											Gal. Fuel	2% or	
9 oz.	3	1	1/3	*Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	1	6 oz.	2
45 oz.	15	5	1 1/2	1	1/3	Flat	Flat	Flat	Flat	Flat	Flat	Flat	5	30 oz.	10
1 g - 97 oz.	75	25	8	4	1 1/2	1/2	Flat	Flat	Flat	Flat	Flat	Flat	25	1 g - 12 oz.	50
3 g - 96 oz.	150	50	***VAC	8	3	1	1/2	Flat	Flat	Flat	Flat	Flat	50	2 g - 44 oz.	100
7 g - 4 oz.	300	100	VAC	VAC	8	1 1/2	1	1/2	Flat	Flat	Flat	Flat	100	4 g - 88 oz.	200
14 g - 8 oz.	600	200	VAC	VAC	VAC	3	1 1/2	1	1/2	1/4	Flat	Flat	200	9 g - 48 oz.	400
35 g - 20 oz.	1500	500	VAC	VAC	VAC	8	4	2	1	3/4	1/2	1/2	500	20 g - 96 oz.	1000
52 g - 94 oz.	2250	750	VAC	VAC	VAC	VAC	6	3	1 1/2	1	3/4	1/2	750	35 g - 60 oz.	1500

* FLAT is any depth of fuel less than 1/4".
 *** VAC - After you vacuum fuel, apply 3 oz. of OSE II and 2 gallons of water for every 100 sq.ft. of surface area.
 - Pooled spills can be treated to reduce the flammability and then vacuumed.

TIME CHART												
Chart lists the time at which fuel has become non-flammable. However, after 25 minutes "OSE II" has bonded with the petroleum molecules and can be washed down safely.												
M = Minutes	Sq. Ft.	5	10	25	100	200	400	800	1200	1600	2000	Gal. Fuel
	Gal. Fuel											
Note: The times in this Chart relate to the same box in the chart above. Example: On above chart 5 g - 5 sq. ft. is 1 1/2 inches which is 90 minutes in the 5 g - 5 sq.ft. in Time Chart.	1	72 M	12 M	12 M	12 M	12 M	12 M	12 M	12 M	12 M	12 M	12 M
	5	90 M	82 M	72 M	12 M	12 M	12 M	12 M	12 M	12 M	12 M	12 M
	25	132 M	128 M	90 M	74 M	12 M	12 M	12 M	12 M	12 M	12 M	12 M
	50	VAC	132 M	114 M	82 M	74 M	12 M	12 M	12 M	12 M	12 M	12 M
	100	VAC	VAC	132 M	90 M	82 M	74 M	12 M	12 M	12 M	12 M	12 M
	200	VAC	VAC	VAC	114 M	90 M	84 M	74 M	70 M	12 M	12 M	12 M
	500	VAC	VAC	VAC	132 M	128 M	98 M	82 M	78 M	74 M	74 M	74 M
750	VAC	VAC	VAC	VAC	132 M	114 M	90 M	82 M	78 M	74 M	74 M	

Note: The non-flammable times were determined by using a butane road torch being held in one spot for more than 20 seconds. Thus, these times are very conservative for accident scenes.

A field test should be performed if flammability is an issue