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| **Environmental Enlightenment #243** By Ami Adini - Issued June 6, 2018   |  | | --- | | This is a SHORT, LIGHT and SIMPLE newsletter. Its purpose is to rekindle in the initiated terminology they have once learned and enlighten the uninitiated on terms they may have heard but never known the meaning of. | | **Flash Point and Volatility**  Generally, a flammable liquid means a liquid which may catch fire easily.   |  |  | | --- | --- | | Oil-based paints are flammable. | http://amiadini.com/NewsletterArchive/180606-NL243/envEnl-243_clip_image001.jpg | |  |  | | Gasoline is **highly** flammable | http://amiadini.com/NewsletterArchive/180606-NL243/envEnl-243_clip_image002.jpg | |  |  | | A **flash** is a sudden short blaze of intense light of flame.  When something flashes, it bursts suddenly into flame. | http://amiadini.com/NewsletterArchive/180606-NL243/envEnl-243_clip_image003.jpg | |  |  |   The **flash point** of a flammable liquid is the lowest temperature where it will evaporate enough liquid to form an ignitable mixture in atmospheric air.  The flash point is an indication of how easy a chemical may burn. It is also an indication of how easy it will vaporize.  Materials with higher flash points are less flammable than chemicals with lower flash points.  Here are comparative flashpoints (in degrees Fahrenheit) for various liquids in open air (atmospheric pressure):   |  |  |  |  | | --- | --- | --- | --- | |  | Fuels: |  |  | |  |  | Diesel fuels | 100-130 | |  |  | Ethyl (grain) alcohol | 55 | |  |  | Fuel oils | 100-336 | |  |  | Gasoline | -45 | |  |  | Jet fuel | 100 degrees F | |  |  | Kerosene | 100-162 | |  |  | Propane | -156 | |  |  |  |  | |  | Oils: |  |  | |  |  | Corn oil | 650 | |  |  | Gear oil | 375-580 | |  |  | Mineral oil | 370 | |  |  | Motor oil | 420-485 | |  |  | Olive oil | 437 | |  |  | Paraffin oil | 390 | |  |  | Peanut oil | 620 | |  |  |  |  | |  | Solvents: |  |  | |  |  | Acetone | 0 | |  |  | Benzene | 12 | |  |  | Methyl (wood) alcohol | 52 | |  |  | Naphtha | 106 | |  |  | Toluene | 40 | |  |  | Xylene | 63 | |  |  |  |  | |  | Rearranging the list by values of flashpoints also indicates the comparative volatilities of these substances: | | | |  |  | Propane | -156 | |  |  | Gasoline | -45 | |  |  | Acetone | 0 | |  |  | Benzene | 12 | |  |  | Toluene | 40 | |  |  | Methyl (wood) alcohol | 52 | |  |  | Ethyl (grain) alcohol | 55 | |  |  | Xylene | 63 | |  |  | Jet fuel | 100 degrees F | |  |  | Naphtha | 106 | |  |  | Diesel fuels | 100-130 | |  |  | Fuel oils | 100-336 | |  |  | Kerosene | 100-162 | |  |  | Mineral oil | 370 | |  |  | Paraffin oil | 390 | |  |  | Gear oil | 375-580 | |  |  | Motor oil | 420-485 | |  |  | Olive oil | 437 | |  |  | Corn oil | 650 | |  |  | Peanut oil | 620 |   In the USA, there is a precise definition of **flammable liquid** as one with a flashpoint below 100 degrees Fahrenheit. Less-flammable liquids (with a flashpoint between 100 degrees and 200 degrees Fahrenheit) are defined as **combustible liquids**.  Acknowledgment: Materials in this newsletter have been borrowed from these sources: <http://en.wikipedia.org/wiki/Main_Page> [http://www.thefreedictionary.com](http://www.thefreedictionary.com/) <http://www.engineeringtoolbox.com/flash-point-fuels-d_937.html> | | You can find past issues of our "Environmental Enlightenment" at [amiadini.com](http://www.amiadini.com/)Wealth of information about environmental site assessments in the real estate transactions and issues concerning assessment and cleanup of contamination in the subsurface soil and groundwater. |  |  | | --- | | Call me if you have any questions. There are **no obligations.**  Ami Adini Environmental Services, Inc. Environmental Consultants & General Engineering Contractors California Lic. #1009513 A B HAZ ASB **818-824-8102**; [**mail@amiadini.com**](mailto:mail@amiadini.com) [www.amiadini.com](http://amiadini.com/)  Ami Adini is a veteran environmental practitioner with over 40 years of experience. He carries a Bachelor of Science degree (B.Sc.) in Mechanical Engineering including academic credits in Nuclear and Chemical Engineering and postgraduate education in these fields. His career includes design and construction of nuclear plant facilities, chemical processing plants and hazardous wastewater treatment systems. He is a former California Registered Environmental Assessor Levels I & II in the 1988-2012 registry that certified environmental professionals in the assessment and remediation of environmentally impacted land, and a Registered Environmental Professional (REP) since 1989 with the National Registry of Environmental Professionals (NREP). He is a California Business & Professions Code Qualifying Responsible Managing Officer (RMO) in the General Engineering Contractor classification with Hazardous Substance Removal and Asbestos certifications, and president of AMI ADINI ENVIRONMENTAL SERVICES, INC. (AAES), a general engineering contractor and consulting firm specializing in environmental site assessments, rehabilitation of contaminated sites and removal of environmental risks from real-estate transactions. (Contact Ami for a complete resume.) **AAES provides practical solutions to environmental concerns using the highest standards of ethics and integrity while providing its clients with maximum return on their investments.** | |