**FUSEL OIL**

**MATERIAL SAFETY DATA SHEET**

1. **IDENTITY OF MATERIAL**

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| --- | --- |
| Product Name : **Fuel Oil (FO-180 CST , FO-380 CST, LSHS)**(Producer/User : VBU, CPP,OM&S, Marketing) | Chemical Designation : **A complex Mixture of Hydrocarbons** |
| Trade Name: **FO(180 CST), FO(380 CST)** | Synonyms: **Residual Fuels, Furnace Oil.** |
| Formula: **A complex mixture of Hydrocarbons** | Label : Category Class **: 3** | CAS Number: **68476 – 33.5** | UN Number : **1223** |
| Regulated Identification:**UN no-1223** | Shipping Name Codes / Label: **Class C Flammable Liquid..** | Hazchem Code :**2PE** |

1. **PHYSICAL AND CHEMICAL PROPERTIES**

|  |  |  |
| --- | --- | --- |
| Physical State : **Liquid** | Boiling Point in ° C. :**185 – 500OC** | Vapour Pressure at 20 ° C : **< 1**---mm HG |
| Appearance(Colour) : **Brown to black colour** | Melting / Freezing Point in degree C: --- | Evaporation rate at 30 ° C: ---- |
| Odour : Characteristic smell (**Diesel like)** | Vapour Density ( Air-1): **3.00****– 5.00 ( Heavier Than Air.)** | Solubility in water at 30 ° C: **Insoluble** |
| Others (Corrosivity, Etc):--- | Specific Gravity (Water-1):**0.9 (Lighter Than Water.)** | pH: **Neutral.** |

1. **FIRE AND EXPLOSION HAZARDS DATA**

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| Explosion / Flammability:**Flammable** | Flash Point : **66° C** | Flammability Range : 1% to 5% | Auto ignition Temperature :**263-407° C** |

1. **REACTIVE HAZARDS**

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|  | Impact : **Stable** | Hazardous Combustion Products): **Carbon Di- Oxide(CO2), Carbon Monoxide(CO), Sulphur Dioxide(SO2** ) |

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| --- | --- | --- |
| Stability : | Static Discharge: **Yes** | (Hazardous Decomposition Products) : --- |
|  | Reactivity : --- | (Conditions to avoid) : --- |
| Hazardous Polymerization:--- | **May Not Occur** | (Conditions to avoid) : --- |

1. **HEALTH HAZARD DATA**



Effects of Exposure / Symptoms: **Spontaneous Vomiting, Oil Acne.**

LD 50 ( in rat) Orally or percutaneous absorption) LC 50 (in rat)

|  |  |  |  |
| --- | --- | --- | --- |
| (mg / kg body weight) : | --- |  | (mg/1hour.) : --- |
| Permissible Exposure Limit (PEL) : |  | ppm--- | mg /cu. m**5** |
| Threshold Limit Value(TLV) of ACGIH |  | ppm | mg/cu. m |
| ( If H2S is present.) : |  | --- | **10** |

# Emergency Treatment: Do Not Induce Vomiting If Ingested. Affected Body Parts Should Thoroughly Be Washed With Water And Soap.

1. **HAZARD SPECIFICATION**

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| --- | --- | --- | --- | --- |
| NFPA HAZARD SIGNAL | HEALTH:**2** | FLAMMABILITY:**2** | STABILITY:**0** | SPECIAL:**0** |

**Known Hazards**

|  |  |  |
| --- | --- | --- |
| Combustible Liquid : **Yes** | Water Reactive Material: **No** | Irritant: **Yes** |
| Flammable Material: **Yes** | Oxidiser: **No** | Sensitiser: : **No** |
| Pyrophoric Material: **No** | Organic Peroxide: **No** | Carcinogen: **No** |
| Explosive Material: **No** | Corrosive Material: **No** | Mutagen: **No** |
| Unstable Material: **No** | Compressed Gas: **No** | Others (Specify): **No** |

1. **SAFE USAGE DATA**

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| --- | --- |
| Ventilation | **Mechanical** |
| Personal Protective Equipment Required | Eyes (Specify): **Safety Goggle/Face shield.** |
|  | Respiratory (Specify**): Emergency Life Saving Apparatus(ELSA) / Self Contained Breathing Apparatus(SCBA).** |
| Gloves (Specify) : **Asbestos / PVC** |
|  | Clothing (specify):**Boiler Suit.** |
| Precautions | Handling & Storage Others ( Specify) : **Store At Cool, Ventilated & Specified Area.** |

1. **EMERGENCY RESPONSE DATA**

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| --- | --- |
|  | Fire Extinguishing Media: **Carbon Di-Oxide (CO2 ), Dry Chemical Powder(DCP), Aqueous Film Forming Foam.** |
| Fire | Special Procedures: **Water Spray To Be Used To Cool Containers If Exposed To Fire.** |
| Exposure ( Skin and eye contact, inhalation, Ingestion) | First Aid Measures : **Do Not Induce Vomiting If Ingested. Affected Body Parts To Be Washed With Water And Soap. Wash Eyes Thoroughly With Water, Seek Medical Help.** |
| Spills | Steps to be taken: **Recover Spillage Using Absorbent Material Like Sawdust, Sand, Do Not Push In To Drainage.** |
|  | Waste disposal method: **Recover Spillage Using Absorbent Material****Like Sawdust, Sand & Land Fill.** |

1. **ADDITIONAL INFORMATION ( DOS & DON’T)**
	* Incase of leaks monitor %LEL, restrict ignition sources. Stop traffic/vehicular movements and dilute vapor cloud with water spray.
	* Look for wind direction.
	* Approach from upwind side.
	* If caught on downwind, move perpendicular to wind direction and assemble at nearest safe assembly point.
	* Cordon off the area.
	* Use Self Contained Breathing Apparatus Set in case of Fire.
	* Contain leaking liquid on sand or earth.
	* Do not Panic.
	* Do not enter without knowing the wind direction.
	* Do not approach leaking / affected area without proper respiratory protection.
	* Do not approach from downwind direction
	* Do not run.
	* Do not move along or opposite to the direction of wind.
	* Do not allow unauthorized personnel.