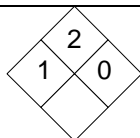










NFPA / WHMIS	Personal Protection	DOT/TDG Road/Rail
  	    	

## Section I. Product Identification and Uses

<b>Common/Trade name</b>	<b>Cat Cracker Feedstock</b>		
<b>Synonyms</b>	Cat Feed, Gas Oil, Atmospheric Gas Oil, Vacuum Gas Oil, Coker Gas Oil, Straight Run Fuel Oil, Heavy Vacuum Gas Oil, FCC Feed	<b>CAS #</b>	68955-27-1
<b>Chemical family</b>	Petroleum Hydrocarbon.	<b>DSL</b>	This product is on the Domestic Substances List (DSL). TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
<b>Supplier</b>	Husky Lima Refinery, 1150 South Metcalf Street, Lima OH, 45804 403-298-6111 (General Information)	<b>Manufacturer</b>	Husky Lima Refinery 1150 South Metcalf Street Lima, OH 45804
<b>Material uses</b>	This product is intended for use as a refinery feedstock, fuel, or for use in engineered processes. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.		

## Section 2. First Aid Measures

<b>Eye contact</b>	Flush eyes for at least 15 minutes with clean water. Patch lightly, allowing drainage. Seek medical attention.
<b>Skin contact</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. Seek medical attention if irritation develops.
<b>Inhalation</b>	Protect rescuer. Move exposed person to fresh air. If breathing has stopped apply artificial respiration. Seek medical attention.
<b>Ingestion</b>	If swallowed, do not induce vomiting or give liquids. Seek immediate medical attention.

## Section 3. Hazardous Ingredients

Name	CAS #	ACGIH TLVs (OSHA PELs in Section 7)						% by Weight
		TWA (ppm)	TWA (Mg/M3)	STEL (ppm)	STEL (Mg/M3)	CEIL (ppm)	CEIL (Mg/M3)	
Distillates (petroleum) residues vacuum, heavy fuel oil	68955-27-1	n/av	5	n/av	n/av	n/av	n/av	90-100
Hydrogen Sulfide	7783-06-4	10	14	15	21	n/av	n/av	0-1
Naphtha, petroleum	64741-41-9	300	n/av	n/av	n/av	n/av	n/av	0-1
Toluene	108-88-3	50	188	n/av	n/av	n/av	n/av	0-0.5
Naphthalene	91-20-3	10	52	15	79	n/av	n/av	0-0.5
Xylene	1330-20-7	100	434	n/av	n/av	n/av	n/av	0-0.5

<b>Toxicity values of the hazardous ingredients</b>	Toluene LD50: 5000 mg/kg Rat LC50: 8000 ppm Rat Xylene LD50 930 kg/mg Rat Naphthalene LD50 490 mg/kg Rat Hydrogen Sulfide LC50: 673ppm (Mouse, 1Hr) Hydrogen Sulfide LC50: 444ppm (Rat, 4 Hr)
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### Section 4. Physical Data

<b>Physical state and appearance</b>	Brownish green to brown.
<b>Odor</b>	Petroleum Odor Aromatic.
<b>pH (1% soln/water)</b>	Not applicable.
<b>Odor threshold</b>	Not available.
<b>Evaporation rate</b>	Slow.
<b>Freezing point</b>	Not available.
<b>Boiling point</b>	204-676.7°C (399.2-1250.7°F)
<b>Specific gravity</b>	<1 (Water = 1)
<b>Volatility</b>	Negligible
<b>Vapor density</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Water/oil dist. coeff.</b>	Not available.
<b>Solubility</b>	Insoluble
<b>Molecular Weight</b>	Not applicable.
<b>Melting Point</b>	Not available.
<b>Density</b>	Not available.

### Section 5. Fire and Explosion Data

<b>Auto-ignition temperature</b>	OPEN CUP: 260°C (500°F) (COC)
<b>Flash points</b>	60°C - 116 °C (140°F - 240°F)
<b>Flammable limits</b>	LFL 1% UFL 7%
<b>Extinguishing Media</b>	Use DRY chemicals, CO2, or foam to extinguish fire. Water may not be an effective medium to extinguish fire. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
<b>Special fire fighting procedures</b>	Use supplied air or self contained breathing apparatus (SCBA) for large fires or for fires in enclosed areas.
<b>Flammability</b>	Released vapors may form combustible/explosive mixtures at or above the flash point. Vapors may travel considerable distances to ignition sources and cause a flash fire. Grounding of containers/pouring equipment is necessary.  <b>Remark</b> No additional remark.
<b>Risks of explosion</b>	At temperatures above the flash point this material is sensitive to static discharge. This product is not sensitive to mechanical impact.  <b>Remark</b> No additional remark.

**Section 6. Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Hazardous decomp. products</b>	Carbon monoxide, carbon dioxide and irritant fumes and gases including sulphur oxides, nitrogen oxides and aldehydes.
<b>Reactivity</b>	Incompatible material: Strong acids, strong oxidizers, chlorine. Hazardous polymerization: Will not occur.
	<b>Remark</b> No additional remark.

**Section 7. Toxicological Properties**

<b>Routes of entry</b>	Ingestion. Inhalation. Eye contact. Skin contact.
<b>OSHA PEL</b>	Hydrogen Sulfide OSHA PEL 20 ppm (Acceptable Ceiling Concentration) 50 ppm (Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift) Toluene OSHA PEL 200 ppm (8 Hour TWA) 300 ppm (Acceptable Ceiling Concentration) 500 ppm (Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift) Xylene OSHA PEL 100 ppm (8 Hour TWA) Naphthalene OSHA PEL 10 ppm (Acceptable Ceiling Concentration) 50 ppm (Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift)
<b>Toxicity to animals</b>	Toluene LD50: 5000 mg/kg Rat LC50: 8000 ppm Rat Xylene LD50 930 kg/mg Rat Naphthalene LD50 490 mg/kg Rat Hydrogen Sulfide LC50: 673ppm (Mouse, 1Hr) Hydrogen Sulfide LC50: 444ppm (Rat, 4 Hr)
	<b>Remark</b> No additional remark.
<b>Chronic effects</b>	Naphtha - petroleum distillates is known to cause dizziness, drowsiness, headache, nausea; dry cracked skin; chemical pneumonitis (aspiration liquid) and Irritation of eyes, nose and throat. Hydrogen sulfide is known to cause apnea, coma, convulsions; conjunctivitis, eye pain, lacrimation (discharge of tears), photophobia (abnormal visual intolerance to light), corneal vesiculation; dizziness, headache, lassitude (weakness, exhaustion), irritability, insomnia; gastrointestinal disturbance and irritation eyes, respiratory system. Xylene is known to cause reproductive toxicity, staggering gait, corneal vacuolization, anorexia, nausea, vomiting, abdominal pain and dermatitis. Naphthalene is known to cause carcinogenicity (IARC 2B), eye irritation, headache, confusion, excitement, malaise (vague feeling of discomfort); nausea, vomiting, abdominal pain; irritation bladder; profuse sweating; jaundice; hematuria (blood in the urine), renal shutdown; dermatitis, optical neuritis and corneal damage. Toluene is known to cause visual impairment and affect reproduction. Toluene vapors cause narcosis. Toluene is known to cause anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver and kidney damage.
	<b>Remark</b> No additional remark.
<b>Acute effects</b>	Sensitizing Capabiltiy: No effects known. Irritancy: Skin, eye and upper respiratory tract irritant.
<b>Ingestion</b>	Pulmonary aspiration hazard if swallowed and vomiting occurs.
<b>Skin</b>	Prolonged skin contact can cause defatting of the skin resulting in dry cracked skin and dermatitis.
<b>Eyes</b>	Eye contact with product or product vapors may result in eye irritation.
<b>Inhalation</b>	May cause headache, dizziness, loss of appetite and loss of consiousness. Product vapors are irritating to the respiratory tract.
	<b>Remark</b> This product may contain trace quantities of hydrogen sulphide (H2S) gas which may collect in confined spaces. Acute effects vary with concentration of H2S released from mild eye, nose and throat irritation at approximately 100 ppm to sudden unconsciousness or death at 500 ppm.


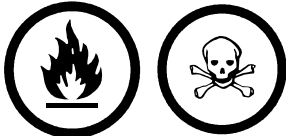
Synergistic materials Not available.

**Continued on Next Page**

### Section 8. Preventive Measures

<b>Waste disposal</b>	Dispose of in accordance with all federal, state/provincial and local regulations.
<b>Storage</b>	Keep away from all ignition sources. Maintain temperature below the flash point. Head spaces in storage containers may contain hydrocarbon vapors and toxic hydrogen sulfide gas.
<b>Ventilation</b>	In poorly ventilated areas, provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit values.
<b>Spill and leak</b>	Evacuate unnecessary personnel. Eliminate all ignition sources. Stop leak if safe to do so. Contain spill and absorb with inert absorbent. Large spills should be removed with explosion proof vacuum equipment. Large pools may be covered with foam to prevent vapor evolution. Comply with federal, state/provincial, and local requirements for spill notification.

### Section 9. Classification/Regulatory Information

<b>DOT/TDG Road/Rail</b>	TDG Class 3: Combustible liquid.									
										
	GAS OIL, 3, UN1202, PGIII									
<b>Remark</b>	No additional remark.									
<b>WHMIS</b>	WHMIS Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). WHMIS CLASS D-2A: Material causing other toxic effects (TOXIC). WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).									
										
<b>Remark</b>	No additional remark.									
<b>Other</b>	This product is on the Domestic Substances List (DSL). TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory. <b>Refer to federal, state/provincial, and local legislation for further requirements.</b>									
<b>National Fire Protection Association (U.S.A.)</b>	<table border="0"> <tr> <td></td> <td style="text-align: center;">2</td> <td>Flammability</td> </tr> <tr> <td>Health</td> <td style="text-align: center;">1</td> <td>Instability</td> </tr> <tr> <td></td> <td style="text-align: center;">0</td> <td>Special</td> </tr> </table>		2	Flammability	Health	1	Instability		0	Special
	2	Flammability								
Health	1	Instability								
	0	Special								

### Section 10. Protective Clothing

<b>Eye</b>	Non-vented chemical goggles to prevent eye irritation from the solvent vapors.
<b>Skin</b>	Impervious gloves and clothing should be worn as appropriate to protect against skin contact. Neoprene or nitrile material is suggested.
<b>Respiratory</b>	Under normal conditions respiratory protection is not required. Respiratory protection may be required in poorly ventilated areas and under heated conditions. Properly fitted air purifying masks equipped with organic vapor filters will provide protection at low concentrations. Wear NIOSH approved respiratory protection adequate for the expected concentration of the substance in the air.

**Other** As required by the situation according to your companies policies and procedures. Contact your supervisor for direction.



**Section 11. Preparation Information**

**References** -Provisional Domestic Substances List, Canadian Environmental Protection Act, Volume 1-Registry Number Index, April 1990; Environment Canada. -SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. CCOHS (Chem advi)  
 CCOHS(Cheminfo) Documentation of the Threshold Limit Values and Biological Exposure Indices (ACIGH)  
 Pocket Guide to Chemical Hazards (NIOSH)  
 Transportation of Dangerous Goods Shedule II List II

**MSDS Status**

**Acronyms:** TLV = Threshold Limit Value N/AP = Not applicable N/AV = Not Available COC = Cleveland Open Cup PMCC = Pensky Martens Closed Cup

**Validated by Health & Safety Department on 5/23/2008.**

**Verified by Health & Safety Department.**

**Supersedes: 03/19/2003**

**Printed 5/23/2008.**

**Emergency Phone # Canada: 403-262-2111**

**Emergency Phone # USA: Chemtrec 1-800-424-9300**

*While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.*