Basekim
Chemical Production Co.Ltd.

Material Safety Data Sheet (MSDS) – Crude Oil

Product Name: Crude Oil
Supplier/Manufacturer: Basekim
Origin: UAE / Turkey / Middle East
Recommended Use: Refining into fuels (gasoline, diesel, kerosene), lubricants, petrochemicals, asphalt, and other industrial products.

Emergency Contact:
Local Emergency Services / Basekim Technical Support

Section 1: Identification

- **Product Name:** Crude Oil
- **Synonyms:** Petroleum, Raw Oil, Hydrocarbon Crude
- **Chemical Family:** Hydrocarbons – natural mixture
- **Uses:** Feedstock for refineries and petrochemical plants
- **Supplier Details:**
  Basekim, UAE / Turkey
  Website: basekim.com

Section 2: Hazard Identification

Classification (GHS):

- Flammable Liquid (Category 1 or 2)
- Acute Toxicity – Inhalation (Category 4)
- Skin Irritation (Category 2)
- Carcinogenicity (Category 1B) – due to benzene and polycyclic aromatic hydrocarbons (PAHs)
- Aquatic Chronic Toxicity (Category 2)

Signal Word: DANGER

Hazard Pictograms:
🔥 (Flammable) ☣️ (Health Hazard) ⚠️ (Exclamation Mark) 🐟 (Environmental Hazard)

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Hazard Statements:

- Extremely flammable liquid and vapor.
- May cause cancer through prolonged or repeated exposure.
- Causes skin and eye irritation.
- Harmful if inhaled.
- Harmful to aquatic life with long-lasting effects.

Precautionary Statements:

- Keep away from heat, sparks, and open flames.
- Wear protective gloves, goggles, and protective clothing.
- Use explosion-proof equipment and proper grounding.
- Avoid release into the environment.
- Obtain special instructions before use.

Section 3: Composition / Information on Ingredients

Crude oil is a complex mixture of hydrocarbons, typically containing:

Component	CAS Number	Typical Range (%)
Alkanes, Cycloalkanes (C4-C40)	64741-44-2	40 – 90%
Aromatic Hydrocarbons (BTEX)	100-41-4, etc.	5 – 25%
Benzene	71-43-2	0.1 – 1.5%
Sulfur Compounds	—	0.1 – 5%
Nitrogen Compounds	—	Trace amounts
Metals (Nickel, Vanadium, etc.)	—	Trace amounts
Water and Sediment	—	0.5 – 3%

Note: Exact composition depends on crude source and grade.

Section 4: First Aid Measures

Eye Contact:

- Flush eyes with clean water for at least 15 minutes.
- Seek immediate medical attention if irritation persists.

Skin Contact:

- Remove contaminated clothing immediately.
- Wash affected area with soap and water.
- Do not use solvents or thinners.
- Seek medical attention if irritation or burns occur.

Inhalation:

- Move victim to fresh air immediately.
- If breathing is difficult, give oxygen and seek medical attention.

Ingestion:

- Do NOT induce vomiting due to aspiration hazard.
- Rinse mouth and seek immediate medical care.

Section 5: Firefighting Measures

- **Flash Point:** Typically below 40°C (varies by crude grade)
- **Flammable Limits:** Lower Explosive Limit (LEL) ~0.6%, Upper Explosive Limit (UEL) ~8%
- **Autoignition Temperature:** 250 – 400°C
- **Suitable Extinguishing Media:** Foam, dry chemical powder, CO_2
- **Unsuitable Media:** Direct water stream may spread fire.
- **Fire Hazards:** Vapors are heavier than air and may travel to ignition sources.
- **Decomposition Products:** CO, CO_2, SO_2, NO_x, toxic smoke.
- **Special Equipment:** Firefighters should wear SCBA and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions:

- Eliminate ignition sources.
- Use explosion-proof equipment.
- Evacuate non-essential personnel.
- Wear full PPE and respirators.

Environmental Precautions:

- Prevent crude oil from entering waterways or drains.
- Notify authorities of large spills.

Cleanup Methods:

- Contain spill with sand, earth, or booms.
- Recover oil by vacuum or absorbents.
- Dispose of according to local environmental laws.

Section 7: Handling and Storage

Handling:

- Use proper grounding to prevent static discharge.
- Avoid breathing vapors.
- Keep containers closed when not in use.

Storage:

- Store in cool, ventilated, and explosion-proof facilities.
- Keep away from heat and oxidizers.
- Typical storage temperature: 10 – 35°C.

Section 8: Exposure Controls / Personal Protection

Substance	OSHA PEL	ACGIH TLV
Crude Oil Vapor	500 ppm	200 ppm
Benzene	1 ppm (TWA)	0.5 ppm
Hydrogen Sulfide (H_2S)	20 ppm (Ceiling)	10 ppm

PPE Requirements:

- **Respiratory:** Use respirator if vapors exceed limits.
- **Eye Protection:** Chemical splash goggles.
- **Skin Protection:** Nitrile or neoprene gloves, flame-resistant clothing.
- **Hygiene:** Wash thoroughly after handling.

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Section 9: Physical and Chemical Properties

Property	Typical Value
Appearance	Dark brown to black liquid
Odor	Strong petroleum smell
Flash Point (°C)	<40
Density @ 15°C (kg/L)	0.80 – 0.95
API Gravity	20 – 45
Viscosity @ 40°C (cSt)	20 – 200
Pour Point (°C)	-30 to 0
Solubility	Insoluble in water
Vapor Pressure (mmHg)	5 – 400 (varies by grade)

Section 10: Stability and Reactivity

- **Stability:** Stable under normal storage conditions.
- **Incompatible Materials:** Strong oxidizers, acids, halogens.
- **Hazardous Decomposition Products:** CO, CO_2, SO_2, NO_x, and toxic smoke.
- **Conditions to Avoid:** Heat, open flames, sparks, static discharge.

Section 11: Toxicological Information

- **Acute Toxicity:** Harmful if inhaled or ingested.
- **Skin Contact:** Prolonged contact can cause dermatitis.
- **Eye Contact:** May cause redness, pain, irritation.
- **Chronic Effects:** Contains carcinogens (benzene, PAHs).
- **Aspiration Hazard:** May enter lungs and cause chemical pneumonia.

Section 12: Ecological Information

- **Aquatic Toxicity:** Very harmful to aquatic organisms.
- **Persistence:** Not readily biodegradable.
- **Bioaccumulation:** High potential.
- **Spill Impact:** Crude oil spills can damage marine and terrestrial ecosystems.

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Section 13: Disposal Considerations

- Treat as hazardous waste.
- Do not release to the environment.
- Dispose of according to local regulations using approved disposal contractors.

Section 14: Transport Information

Parameter	Information
UN Number	UN1267
Proper Shipping Name	Petroleum Crude Oil
Hazard Class	3 (Flammable Liquid)
Packing Group	I, II, or III (depending on flash point)
Marine Pollutant	Yes

Section 15: Regulatory Information

- GHS-compliant labeling required.
- Subject to OSHA, REACH, IMO, and local environmental laws.

Section 16: Other Information

- **Revision Date:** September 2025
- **Prepared By:** Basekim Technical Team
- **Disclaimer:** Information provided is believed to be accurate and represents the best available data. No warranty is expressed or implied.