

murco petroleum limited

MATERIAL SAFETY DATA SHEET



LIGHT CATALYTICALLY CRACKED NAPHTHA

1 IDENTIFICATION OF THE SUBSTANCE & OF THE COMPANY / UNDERTAKING

IDENTIFICATION OF THE SUBSTANCE OR PREPARATION:

Light Catalytically Cracked Naphtha also known as Light Catalytically Cracked Spirit (LCCS), or "Cat Naphtha", is a refinery stream used for gasoline blending or as a raw material for further processing.

COMPANY IDENTIFICATION: **Murco Petroleum Limited**
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2 COMPOSITION / INFORMATION ON INGREDIENTS:

Substances presenting a health hazard:

Naphtha (petroleum), light catalytically cracked, sweetened; Low boiling point cat-cracked naphtha

CAS No. 86290-81-5

EINECS No. 289-220-8

A complex mixture of hydrocarbons mainly boiling in the range of approximately 35° to 210°C.

The following component, present at significant concentration, has health effects:

Conc.	Component	Class.	Risk phrases
<1%	Benzene	T Xn	R45 - May cause cancer R65 - May cause lung damage if swallowed

3 HAZARDS IDENTIFICATION

Light Catalytically Cracked Naphtha is classified as **Extremely Flammable**. The vapour is heavier than air and explosive mixtures can accumulate in low spots. It may be ignited at some distance away from exposed motor spirit resulting in flashbacks.

Aspiration into the lungs caused by vomiting is harmful and can be fatal.

Hazardous components include Benzene for which there is a maximum exposure limit of 5 ppm/16 mg m⁻³ (HSE Occupational Exposure Limits EH40). Benzene is listed in EH40, Appendix 9: Substances defined as Carcinogens for the purpose of the COSHH Regulations. If Benzene is present at a concentration equal to or in excess of 0.1% the Risk Phrase "R45 - May cause cancer" will apply.

CONTAINS BENZENE (CAS No. 71-43-2) : Carcinogen - Category 2.

4 FIRST AID MEASURES

TYPE OF EXPOSURE

Ingestion

The swallowing of small amounts may cause nausea and diarrhoea; larger amounts may cause irritation and drowsiness with vomiting.

Skin

Unlikely to cause irritation on single contact. Prolonged or repeated contact is likely to cause short-term irritation, de-fatting of the skin and could result in dermatitis.

Eyes

Likely to cause short-term irritation with redness and stinging.

Inhalation

High vapour concentrations can cause irritation to eyes and mucous membranes, and drowsiness leading to loss of consciousness.

FIRST AID MEASURES

Ingestion

Wash mouth out with water and give water to drink (milk if available) - get medical advice. **DO NOT INDUCE VOMITING BECAUSE OF THE DANGER OF ASPIRATION.**

Skin

Wash skin as soon as possible with soap and water. Change contaminated clothing immediately and launder before reuse. Get medical advice if irritation persists.

Eyes

Wash out immediately with large amounts of water. If redness and/or irritation continues get medical advice.

Inhalation

If inhalation of vapour causes irritation or drowsiness remove to fresh air. Get medical advice if the symptoms continue.

5 FIRE-FIGHTING MEASURES

Extinguish with agents approved for Class B hazards (e.g. Dry Powder, Foam or Carbon Dioxide). For small fires use CO₂, Dry Powder, sand, earth.

Note - Classified Extremely Flammable. Flammability Limits between 1% and 7%.

Fires in closed or confined spaces should be tackled by trained personnel who should wear breathing apparatus. Do not use water jets; the use of water fog should be left to experienced personnel.

6 ACCIDENTAL RELEASE MEASURES

Treat any spillage as a major fire hazard. Explosive mixtures can be formed particularly where there is poor ventilation. Vapour heavier than air and can collect in sumps and drainage systems.

Contain spillage - do not wash spillage down drain. Absorb using absorbent clay, diatomaceous clay or other suitable absorbent. May cause damage to surfaces, making them slippery.

7 HANDLING AND STORAGE

7.1 Handling

Where exposure is likely PROTECTIVE CLOTHING must be worn including impervious GLOVES and EYE PROTECTION. Ensure good ventilation at all times - classified **Extremely Flammable.**

7.2 Storage

Storage is controlled by the Petroleum (Consolidation) Act 1928 and the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations, 1972. A licence issued by a Local Authority or the Health and Safety Executive is required if more than 3 gallons (13.6 litres) are to be stored.

Drums should be stored on their sides on racks preferably under cover, out of direct sunlight, in well ventilated conditions.

Other types of containers should be stored under cover out of direct sunlight, in well ventilated conditions. Care should be taken to avoid over-stacking. Storage and transfer equipment should be adequately earthed and bonded to prevent the accumulation of static charges.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

Where prolonged or repeated exposure is likely PROTECTIVE CLOTHING must be worn including impervious GLOVES and EYE PROTECTION.

Respiratory protection - Unlikely to be required in normal use but ensure good ventilation - note classified Extremely Flammable. It is suggested that exposure is kept well below the ACGIH Threshold Limit Values -

8 hour TWA	- 300 ppm - 900 milligrams per cubic metre
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15 minute STEL	- 500 ppm - 1500 milligrams per cubic metre
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A Maximum Exposure Limit for Benzene is listed in HSE Guidance Note EH 40 -

Long term exposure limit - (8 hour TWA reference period) - 5 ppm
- 16 milligrams / cubic metre

No short term limit is listed.

Hand and skin protection - HAND and SKIN PROTECTION recommended at all times

Eye protection - EYE PROTECTION is recommended at all times.

9 PHYSICAL AND CHEMICAL PROPERTIES

Typical properties:

Appearance	Pale colourless fluid
Density at 15°C	0.670
Boiling Range °C	Approx. 36 – 102
Vapour Pressure at 20°C, hPa	150
Flash Point (PMC) °C	Typically < - 15
Flammability Limits % vol	Lower 1.3 - Upper 8
Auto Ignition Temperature °C	260
Relative Vapour Density (Air = 1)	2.7
Log P n-octanol/ water	2.13
Viscosity at 20°C (mm ² /s)	~0.56

10 STABILITY AND REACTIVITY

Conditions to Avoid - heat (classified Extremely Flammable)

Materials to Avoid - may react with strong oxidising materials.

Hazardous Decomposition Products - thermal decomposition may lead to the formation of a multiplicity of compounds some of which may be hazardous. With incomplete combustion smoke and hazardous fumes and gases, including carbon monoxide may be formed.

11 TOXICOLOGICAL INFORMATION

Toxicity following a single exposure to high levels (oral, dermal, inhalation) is of a low order. Light Catalytically Cracked Naphtha is classified category 2 carcinogens due to its benzene content. Adherence to the recommended hygiene measures will reduce any risks, which under normal conditions of use will be minimal.

12 ECOLOGICAL INFORMATION

Likely to harm aquatic organisms; may cause long-term adverse effects in the aquatic environment. Likely to evaporate readily, but any films formed on water may affect oxygen transfer and damage organisms. Inherently biodegradable.

Ecotoxicology:

96 hr LC50 (Fish: <i>Salmo gairdinerii</i>) mg/l	5.2
48 hr EC50 (<i>Daphnia magna</i>) mg/l	200
72 hr IC50 (Algae) mg/l	525

13 DISPOSAL CONSIDERATIONS

Disposal should be carried out by incineration or as required under Local Authority Regulations. Under no circumstances should Light Catalytically Cracked Naphtha be discharged into the public drainage system, or marine and inland waterways.

14 TRANSPORT INFORMATION

TRANSPORT CLASSIFICATION

Flammable liquid

HAZCHEM Code: 3/Y/E Symbol: "Flammable Liquid" Diamond
UN: Flammable Liquid, Class 3
UN Number (Substance Identification Number): 3295 "Hydrocarbons, liquid, n.o.s."
UN Packing Group: II IMO Hazard Class: 3.2
ADR/RID Hazard Class: 3. (F1)
IATA: Flammable liquid Class 3,

15 REGULATORY INFORMATION

LABELLING

- Symbols: (i) Black flame on Orange Square
(ii) Black skull and crossbones on Orange Square
- Classification: Extremely Flammable. Harmful [Contains Benzene, a Category 2 Carcinogen]. Irritant. Dangerous for the environment.
- R12 - Extremely Flammable
R65 - Harmful: May cause lung damage if swallowed
R38 - Irritating to skin
R45 - May cause cancer
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 - Vapours may cause drowsiness and dizziness
- S7 - Keep container tightly closed
S16 - Keep away from sources of ignition - No smoking
S23 - Do not breathe fumes or vapour
S24 - Avoid contact with skin
S43 - In case of fire use foam/dry powder/CO2/Halon - Never use water
S53 - Avoid exposure – obtain special instructions before use
S61 - Avoid release to the environment. Refer to special instructions/Safety Data Sheet
S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show the container or label

16 OTHER INFORMATION

Further information can be found in Health and Safety Executive publications, a list of which may be made available on request from HSE Books - Tel: 01787 881165.

This data sheet has been prepared in accordance with the requirements of the Data Sheet Directive 91/155/EEC.

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