CEPSA Química

MATERIAL SAFETY DATA SHEET

LINEAR ALKYLBENZENE

PETRELAB® 500-Q (P 500-Q)

DESCRIPTION AND USES

Petrelab® 500-Q is a linear alkylbenzene containing side alkyl chains of 10-13 carbon atoms, averaging 11.3 atoms. This high purity product is used primarily for the production of biodegradable synthetic detergents. Its relatively low molecular weight is especially suitable for the manufacturing of liquid detergents.

SULFONATION PROPERTIES

Petrelab® 500-Q alkylate can be sulfonated exceptionally well with either sulphur trioxide or fuming sulphuric acid to yield high quality sulfonic acid or sulfonate slurries.

BIODEGRADABILITY

Sulfonate derivatives of Petrelab® 500-Q are highly biodegradable (97% or greater), according to O.E.C.D.'s official method described on E.E.C. Directive, 82/243.

PRODUCTION

Petrelab® 500-Q is produced by CEPSA QUÍMICA BÉCANCOUR INC. (CQB), a CEPSA Group Company, at its manufacturing facilities in Bécancour (Québec), Canada.

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION AND USE

Trade name:	PETRELAB® 500-Q (P 500-Q)
Synonyms:	Linear Alkylbenzene, LAB
CAS number:	67774-74-7
EINECS number:	Not available.
Product use:	This high purity product is used primarily for the production of biodegradable synthetic detergents. Its relatively low molecular weight is especially suitable for the manufacturing of liquid detergents.
Manufacturer's name: **Address:**	CEPSA QUÍMICA BÉCANCOUR INC. 5250 Bécancour Boulevard Bécancour (Québec) CANADA G9H 3X3 Tel.: 1-819-294-1414
Emergency telephone number (24 hr) Canutec:	Tel.: 1-613-996-6666
Chemtrec:	Tel.: 1-800-424-9300

2. HAZARDOUS COMPOSITION / COMPONENT INFORMATION

COMPONENT	CAS NUMBER	WEIGHT %
Benzene, C_{10}-C_{16} alkyl derivatives	67774-74-7	100 %

3. PHYSICAL AND CHEMICAL DATA

Boiling Range (°C):	275 - 307
Melting Point (°C):	< -50
Vapor Pressure (mmHg):	< 0.1 mmHg @ 20°C (68°F)
Vapor density (Air = 1):	8.1
Solubility in water:	Insoluble
Molecular weight:	233 à 237 g/mol
pH:	Not applicable
Viscosity:	5 - 10 cps @ 20ºC
Evaporation Rate (water = 1):	Not available

Specific Gravity:	0.86
Appearance/odor:	Colourless, odourless, oily liquid

4. FIRE AND EXPLOSION DATA

Flash point (ºC):	130 (Pensky Martens)
Autoignition temperature (ºC):	Unknown
Lower Flammable Limits in Air (% by vol):	Unknown
Upper Flammable Limits in Air (% by vol):	Unknown
Combustible & thermal Product of decomposition:	Carbon monoxyde (CO), Carbon dioxyde (CO_2)
Unusual fire and explosion hazard	
▪ **Small Fires:**	Use a dry chemical, CO_2, water spray or AFFF foam.
▪ **Large Fires:**	Water spray, fog or AFFF foam. Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk.
▪ **Fire involving Tanks or Car/Trailer Loads:**	Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Self-contained breathing apparatus should be worn during fires in confined spaces.

5. STABILITY AND REACTIVITY DATA

Stability / Incompatibility:	The material is chemically stable, it is incompatible with strong oxidisers.
Potential reaction:	No dangerous polymerisation.

6. TOXICOLOGICAL PROPERTIES / HAZARD IDENTIFICATION

Way of penetration:	Skin, eye contact, vapour inhalation and ingestion.

EFFECTS OF OVEREXPOSURE

Acute overexposure: Irritation, dizziness, nausea.

Chronic overexposure: Unknown.

TOXICITY DATA

The following effects have been reported in studies with animals exposed separately, by a variety of routes, to similar linear alkylbenzenes. Weight loss, food consumption and maternal weight gain; effects on offspring (no effects in standard tests at low dose); liver toxicity; increased tumors following lifetime dermal exposure at skin damaging concentration (skin damage confounds the interpretation of the significance of these effects for human health).

Skin contact: A single semi-occlusive application of Petrelab® 500-Q to intact rabbit skin for four hours elicits slight to well defined dermal reactions. P 500-Q elicited very slight to well defined erythema with very slight to slight oedema in tests. All erythema and oedema disappeared after eight days.

Acute Lethal Dermal: The acute lethal dermal dose to rats of Petrelab® 500-Q is greater than 2.0 g/kg bodyweight.

Eye contact: Instillation of Petrelab® 500-Q into the rabbit eye elicits no corneal opacification or iridial inflammation. Transient well-defined conjunctivitis irritation only is observed. Instillation of P 500-Q elicited dulling of the cornea and well defined to moderate conjunctivitis irritation. The eyes were normal after five to seven days after instillation.

Inhalation: No information available.

Ingestion: The acute lethal oral dose of Petrelab® 500-Q to rats is greater than 2.0 g/kg bodyweight.

HAZARDS

Eyes: Liquid contact or exposure to high vapour concentrations may result in irritation.

Skin: Repeated or prolonged skin contact may result in irritation or drying of the skin, progressing to dermatitis.

Inhalation: Due to low volatility, this product is not hazardous under normal circumstances. Prolonged exposure to high vapour concentrations may cause dizziness and headaches.

Ingestion: Ingestion of small amounts may result in nausea and vomiting.

THRESHOLD LIMIT VALUES	TWA	STEL
OSHA (USA)	Not available	Not available
(Occupational Safety and Health Administration)		
ACGIH (USA)	Not available	Not available
(American Conference of Governmental Industrial Hygienists)		
CSST (Québec, Canada)	Not available	Not available
(Commission de la Santé et Sécuritéau travail)		

Carcinogenicity, mutagenicity, teratogenicity, reproductive toxicity

Not available.

7. ACCIDENTAL RELEASE MEASURES

STEP TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

ELIMINATE all ignition sources (no smoking, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basement or confined areas. A vapour suppressing foam may be used to reduce vaporous. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

MAJOR SPILL

Dike far ahead of liquid spill for later disposal. Water spray may reduce vapor; but may not prevent ignition in closed spaces.

EMPTY CONTAINERS

Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner.

8. FIRST AID MEASURES

Eyes:	Flush thoroughly with water for at least 20 minutes. Seek medical attention.
Skin:	Remove contaminated clothing and wash it before reuse. Flush affected areas with large amounts of water for at least 20 minutes. Wash area with mild soap and water. If irritation occurs, seek medical attention.
Inhalation:	Move person to fresh air. If breathing has stopped, administer artificial respiration, oxygen or cardiopulmonary resuscitation if needed. Seek medical attention.
Ingestion:	DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Seek medical attention.

9. HANDLING AND STORAGE

Usual shipping containers:	Tank cars. Tank trucks. Drums.
Type of material:	Carbon steel. Baked epoxy or phenolic resin coatings. Aluminum.
Electrostatic accumulation hazard:	No, proper bonding and grounding, when loading and unloading hydrocarbon material is always a proper safety measure.
Storage/transport pressure:	Atmospheric.
Loading/unloading temperature:	Ambient.
Storage/transport temperature:	Ambient.

10. OTHER INFORMATION ON EXPOSURE CONTROL / PERSONAL PROTECTION

VENTILATION REQUIREMENTS

Local exhaust is recommended for use of material in enclosed spaces or at elevated temperatures.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

Respiratory:	N.I.O.S.H. – approved organic vapour air-purifying or air-supplied equipment depending on concentration.
Eyes:	Chemical goggles or face shield.
Hands:	Rubber gloves or other similar impervious material to prevent repeated contact.
Other Clothing and Equipment:	Impervious clothing (boots, slicker suits) as needed to prevent prolonged skin contact.

11. DISPOSAL CONSIDERATIONS

Wastes can be incinerated under controlled conditions or landfilled according to official regulations.

12. TRANSPORTATION INFORMATION

CANADIAN TRANSPORTATION OF DANGEROUS GOODS (CTDG)

This product is not a dangerous good as defined by Canadian TDG for ground transportation.

U.S. DOT DESCRIPTION

This product is not hazardous for ground transportation according to DOT regulations.

Hazardous Material Description and Proper Shipping Name:	Not applicable
Hazardous Class:	Not applicable
Identification Number:	Not applicable
Packing Group:	Not applicable
Label Codes:	Not applicable
Placards:	Not applicable

ICAO / IATA DESCRIPTION / IMO DESCRIPTION (IMDG CODE)

This product is not a dangerous good as defined by IATA for air transportation, IMO in the IMDG Code for water transportation.

13. REGULATORY INFORMATION

CANADIAN REGULATIONS

Workplace Hazardous Materials Information System (WHMIS) Classification:

This material is a controlled product as defined by Canada's Workplace Hazardous Materials Information System (WHMIS):

- D2B "Material causing other toxic effects".

Canadian Domestic Substance List (DSL) Inventory Listing:

Chemical Name:	Benzene, C_{10}-C_{16} alkyl derivatives.
CAS Number:	67774-74-7

U.S. FEDERAL REGULATIONS

OSHA Hazard Communication Standard Classification (1910-1200):

Skin and eye irritant as defined by the OSHA Hazard Communication Standard.

TSCA Inventory Listing:

Component:	Benzene, Mono C_{10}-C_{16} alkyl derivatives.
CAS Number:	67774-74-7

SARA 302 Status:

Component:	Contains no chemicals subject to SARA 302 reporting.
CAS Number:	Not applicable
Maximum Weight %:	Not applicable

SARA 311/312 Classification:

"Immediate (Acute) Health Hazard" according to SARA 311/312.

SARA 313 Chemicals:

Component:	Contains no chemicals subject to SARA 313 reporting.
CAS Number:	Not applicable
Maximum Weight %:	Not applicable

CALIFORNIA'S "PROPOSITION 65"

Benzene is the only chemical under California's "Proposition 65" that could be an impurity in CEPSA QUÍMICA BÉCANCOUR's detergent alkylates. The concentration is always below 1 ppm (CQB's detection limit). On a random basis, alkylate is analyzed by an external laboratory with a typical result of < 0.01 ppm detection limit. It would be advisable to use 0.2 ppm as maximum level to allow benzene concentration variability in our process.

EUROPEAN ECONOMIC COMMUNITY

As described on E.E.C. Directive 79/831, Annex VI, Part II (D), as described in Commission Directive 93/21/EEC, the next phases **ARE NOT REQUIRED**:

R22:	"Dangerous if swallowed"
R21:	"Dangerous on skin contact"
R36:	"Eye irritating"
R38:	"Skin irritating"

REACH-IT PRE-REGISTRATION NUMBER

REACH-IT pre-registration number : 05-2116631470-55-000

14. ENVIRONMENTAL INFORMATION

The sodium sulfonate obtained in the neutralization of sulfonic acid derived of P 500-Q comply with biodegradation requirements as described in the EU Detergent Regulation (EC 648/2004).

15. OTHER INFORMATION

HAZARD RATING	**NFPA**	**HMIS**
Health:	1	1
Flammability:	1	1
Reactivity:	0	0

The above data are based on test and experience which CEPSA QUÍMICA BÉCANCOUR INC. believes reliable and are supplied for information purposes only.

CQB disclaims any liability for damage or injury which results from the use of the above data and nothing contained therein shall constitute a guarantee, warranty or representation (including freedom from patent liability) by CQB with respect to the data, the product described, or the use for any specific purpose even if that purpose is known to CQB.

16. PREPARATION INFORMATION

DATE OF MSDS: 2009/06/01

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