

MATERIAL SAFETY DATA SHEET

(According to Regulation EC No 1907/2006 - REACH and Regulation EC No 1272/2008 - CLP)

REPSOL MOTO CHAIN

1. PRODUCT IDENTIFICATION		
Company: REPSOL YPF Lubricantes y Especialidades, S.A. Address: Glorieta del Mar Caribe N°1. 28043 Madrid Tel# 34 913489400 Fax# +34 913483610 e-mail address: FDSRCP@repsol.com	Commercial name: REPSOL MOTO CHAIN	
	Chemical name: NP	
	Synonyms: NP	
	Molecular formula: NP	CAS #: NP
	EC (EINECS)#: NP	Annex I (Dir. 67/548/EEC)#: NP

2. HAZARDS IDENTIFICATION	
PHYSICAL / CHEMICAL	TOXICITY (SYMPTOMS)
Extremely flammable and combustible product. Vapour forms explosive mixtures with air.	Inhalation: High concentrations may cause harmful central nervous system effects, including excitation, euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma and respiratory arrest. Propellant may become an anaesthetic and subsequently an asphyxiant by diluting or decreasing the available oxygen in potential breathing zones. Ingestion/Aspiration: The product is a gas at room temperature and pressure, so ingestion and aspiration are unlikely. Contact skin/eyes: Prolonged and repeated contact with skin may cause redness, swelling and itching. Contact with eyes may produce irritation, causing pain, tearing and hazy vision. General toxic effects: Propellant is a simple asphyxiant due to oxygen removal from air. May cause harmful central nervous system effects and skin and eyes irritation.
Vapours are heavier than air and may travel substantial distances to remote ignition sources and flash back.	
Vapour displaces air in low lying and confined spaces, creating risk of asphyxia.	
Empty containers are as dangerous as full containers.	

REPSOL MOTO CHAIN

Rev.:1.1

Date:May 21st 2008

Doc:33/4362/9J.02

1 de 8

3. COMPOSITION

General composition: Aerosolized lubricant.

Dangerous components	Range %	Classification	S Phrases
Decane: CAS#: 124-18-5 N° CE (EINECS)# 204-686-4	<16	F; R10 Xn; R65 R66	S(2-)-46-43-24
Hydrocarbons, C3-4 rich, petroleum distillate; Petroleum gas: CAS#: 68512-91-4 CE (EINECS)# 270-990-9 Annex I (Dir. 67/548/EEC)# 649-083-00-0	57,8	F+; R12	S(2-)-9-16-33

REPSOL MOTO CHAIN

Rev.:1.1

Date:May 21st 2008

Doc:33/4362/9J.02

2 de 8

4. FIRST-AID MEASURES

Inhalation: Move the casualty to fresh air. If the casualty is stuporous, some physical restraint may be necessary to prevent self injury. If unconscious, place in the recovery position and give oxygen if needed. If respiratory failure occurs, assist breathing preferably by an exhaled air method. Keep the casualty quiet and maintain normal body temperature. Call for medical assistance urgently.

Ingestion/Aspiration: Not probable.

Contact skin/eyes: Wash the affected areas with plenty of water. Do not rub. In contact with eyes, immediately flush with plenty of water for at least 15 minutes. If irritation persists, call for medical attention.

General measures: Call for medical attention.

5. FIRE-FIGHTING MEASURES

Extinguishing agents: Water spray, dry chemicals, foam.

Non suitable extinguishing agents: NP

Combustion products: CO₂, H₂O and CO (in defect of oxygen).

Special measures: Do not extinguish fire until flow is shut. Move containers from fire area if possible without risk. Apply cooling water to sides of containers exposed to flames until well after fire is out. Stay away from containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles to avoid risks. If the fire is impossible to control, withdraw from area and let fire burn. Consult and follow existing emergency standard procedures.

Special hazards: Extremely flammable/combustible product. May be ignited by heat, sparks, static electricity or flames. Vapour is heavier than air and may travel long distances to a source of ignition and flash back. Containers without security valves may explode after exposure to high temperatures. Empty containers are as dangerous as full ones. Vapour explosion hazard in confined areas, outdoors or in pipes. Runoff to sewer are specially dangerous due to fire and explosion hazard.

Protective equipment: Heat-resistant suit and gloves. Self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Avoid entrance of the material in drains or sewers.

Personal precautions: Isolate hazard area. Keep away from possible ignition sources. Keep out of low confined areas where flammable and asphyxiant vapours can accumulate.

Cleanup methods: Take up with non combustible absorbent material and placed into containers for later disposal.

Personal protection: Wear air-supplied breathing apparatus in presence of high gas concentrations. Impervious gloves and other protective resistant clothing if contact with product is possible.

7. HANDLING AND STORAGE

Handling:

General precautions: Wear appropriate protective clothing to avoid contact with product and respiratory protection if gas may be inhaled. Keep away from ignition sources. Do not weld or cut near containers. Avoid static charge accumulation. Ground and bond all lines and equipment.

Specific conditions: Good local exhaust ventilation in confined areas (according to legislation in force). Working spark resistant equipment and tools. In cylinder filling operations or handling of containers, use appropriate impervious suits and antistatic footwear; it is recommended in this operations to wear goggles or security mask to avoid possible splashes. Qualified personal and special existing safety manuals and codes should be used during bulk loading, cleaning and maintaining tanks or containers (tanks must be empty before any inspection by trained personal is carried out).

Storage:

Temperature and decomposition products: Do not store at high temperatures (at temperatures below 50 °C).

Dangerous reactions: Extremely flammable/combustible product. The liquid has a marked tendency to build up static charge when transferred by pipelines. It is essential to earth receiving and transfer vessels.

Storage conditions: Aerosol container contains flammable gas under pressure. Containers product resistant, properly identified, placed in appropriate areas. For indoor storage, use areas prepared for flammable gas storage. Outdoor or detached storage is preferred. Protect against physical damage and fire. In areas where storage is under in force legislation, automatic fire fighting systems should be fitted. Gas detectors are recommended.

Incompatible materials: Oxidants agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection:

Eye protection: Safety goggles or face-shield.

Respiratory protection: Self-contained breathing apparatus if gas may be inhaled.

Skin protection: Gloves and antistatic suit and footwear.

Other protective equipment: Showers and eye-washers in working area.

General precautions: Avoid product contact and gas inhalation. Contaminated clothing must be quickly wet to avoid possible inflammation risk. Remove wet clothes if they are not adhered to the skin.

Specific hygiene measures: Contaminated footwear should be discarded. Contaminated clothing should not be taken home for laundering. Regular changing of underwear is also important if penetration of outer clothing occurs. Disposable wipes should be used. Washing/Showering facilities with a non-solvent based skin cleaner, hot water and soap must be provided and used. Use skin reconditioning cream after work.

Exposure controls: TLV/TWA (ACGIH) = 5 mg/m³ (oil mist)
UK:OEL-TWA(COSHH):5mg/m³; OEL-STEL:10mg/m³ [Oil mist]

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: NP

pH: NP

Colour: NP

Odour: NP

Boiling point: -11.7 °C (Propellant)

Melting/Freezing point: -138.3 °C (Propellant)

Flash point: -82.7 °C (Propellant)

Autoignition temperature: 460 °C (Propellant)

Explosive properties: LEL: 1.9%; UEL: 8.5% (butane)

Oxidizing properties: NP

Vapour pressure: 2.50 Kg/cm² at 20 °C (Propellant)

Density: (liq.) 0.550 g/cm³ at 25 °C (Propellant)

Surface tension: 14.1 dynes/cm at -10 °C (Propellant)

Viscosity: NP

Vapour density: 2 (air=1)

Partition coefficient (n-octanol/water): log K_{o/w}: 2.76 (Propellant)

Water solubility: 48.9 mg/l at 25 °C (Propellant)

Solubility: Alcohol, ether, chloroform.

Other data:

SAE: 30

Fire point: 240°C min. (ASTM D-92)

10. STABILITY AND REACTIVITY

Stability: Extremely flammable and combustible.

Conditions to avoid: High temperatures. Exposure to flames, heat, sparks and static electricity.

Materials to avoid: Oxidants agents.

Hazardous decomposition/combustion products: CO (in defect of oxygen), CO₂, H₂O.

Polymerization risk: NP

Conditions to avoid: NP

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Inhalation is the most frequent route of exposure. Contact with skin and eyes. Aspiration into lungs and ingestion are unlikely.

Acute and chronic effects: Propellant is a simple asphyxiant due to oxygen removal from air. May cause harmful central nervous system effects and irritation to skin and eyes.

Carcinogenicity: No carcinogenic effects registered.

Reproductive toxicity: This product has no known mammalian reproductive toxicity.

Medical conditions which increase hazard to exposure: Preexisting skin or eye disorders may be aggravated by exposure to this product.

12. ECOLOGICAL INFORMATION

Pollutant potential:

Persistence and degradability: There are no data available about this product, but released to the environment, propellant suffers strong evaporation, while volatilisation and adsorption are the most important fate processes for decane.

Mobility/bioaccumulative potential: There are no data about this product, but propellant shows no bioaccumulation and high mobility in soil, while heptane has low mobility in soil and an estimated bioconcentration factor (log BCF) of 2.53-3.31, suggesting bioconcentration may be an important factor in aquatic systems.

Ecotoxicological effects: There are no data available but propellant do not present aquatic or terrestrial contamination risks.

13. DISPOSAL CONSIDERATIONS

Disposal methods (surplus): When contents are depleted continue to depress button until all gas is expelled to atmosphere.

Waste:

Disposal: Dispose of container in accordance local, national or communitarian regulation.

Handling: Do not puncture or incinerate containers.

Provisions: Companies which recover, dispose, store, transport or handle waste should comply with Dir. 2008/98/EC on waste, or other local, national or community provisions.

14. TRANSPORT INFORMATION

Special precautions: Flammable aerosol. Exemptions related to dangerous goods packed in limited quantities are applied when the maximum content of the receptacles is 1 l. (ADR 2005, Chapter 3.4). The release valves and dispersal devices of aerosol dispensers shall ensure that the receptacles are so closed as to be leakproof and shall be protected against accidental opening.

Additional information:

UN Number: 1950

ADR/RID: Class 2. Classification code: 5F.

Hazard identification number: NP

IATA-DGR: Class 2

Proper shipping name: AEROSOLS, flammable

IMDG: Class 2

15. REGULATORY INFORMATION

CLASSIFICATION
F+; R12

LABELLING

Symbols: F+

Phrases R

R12: Extremely flammable.

Phrases S

S23: Do not breathe vapour.

S46: If swallowed, seek medical advice immediately and show this container or label.

S51: Use only in well-ventilated areas.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children.



Other regulations: NP

16. OTHER INFORMATION

Data Bases consulted

EINECS: European Inventory of Existing Commercial Substances.
TSCA: Toxic Substances Control Act, US Environmental Protection Agency
HSDB: US National Library of Medicine.
RTECS: US Dept. of Health & Human Services

R phrases/Hazard Class-and-Category shown in the document:

R10: Flammable.
R65: Harmful: may cause lung damage if swallowed.
R66: Repeated exposure may cause skin dryness or cracking.

Legislation consulted

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
Regulation (EC) no 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Dir. 67/548/EEC about classification, labelling and packaging of dangerous substances (including amendments and adaptations in force).
Dir. 1999/45/EC about classification, labelling and packaging of dangerous preparations (including amendments and adaptations in force).
Dir. 91/689/EEC dangerous waste; Dir. 2008/98/EG waste management.
Royal Decree 363/95: Regulation about notification of new substances and classification, packaging and labelling of dangerous substances.
Royal Decree 255/2003: Regulation about classification, packaging and labelling of dangerous preparations.
European Agreement concerning the international carriage of dangerous goods by road (ADR).
Regulation on the international transport of dangerous goods on the railway. (RID)
International maritime code of dangerous goods. (IMDG)
International Air Transport Association (IATA) regulation pertaining to air shipment.

Glossary

CAS: Chemical Abstract Service
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists.
TLV: Threshold Limit Value
TWA: Time Weighted Average
STEL: Short-term Exposure Level
REL: Recommendable Exposure Limit
PEL: Permissible Exposure Limit
INSHT: Instituto Nal. de Seguridad e Higiene en el Trabajo

VLA-ED: Valor Límite Ambiental – Exposición Diaria
VLA-EC: Valor Límite Ambiental – Exposición Corta
LD₅₀: Lethal Dose Medium
LC₅₀: Lethal Concentration Medium
EC₅₀: Effective Concentration Medium
IC₅₀: Inhibitory Concentration Medium
BOD: Biological Oxygen Demand.
NP: Not Pertinent
| : Changes from the last revision

The information given in this document has been compiled based on the best existing information sources, latest available knowledge and according to the current requirements on classification, packaging and labelling of hazardous substances. It does not imply the information is exhaustive or accurate in all cases. It is the user's responsibility to determine the validity of the information contained in this Material Safety Data Sheet to apply depending on the case.