

Puma Energy Ltd

Chemwatch: 13-04516 Version No: 2.1.1. Safety Data Sheet according to WHS and ADG requirements Chemwatch Hazard Alert Code: 0

Issue Date: **10/08/2018** Print Date: **13/08/2018** L.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	Puma Marine TBN 30 SAE 40
Synonyms	Not Available
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Marine, Industrial and locomotive Diesel Engine oil.

Details of the supplier of the safety data sheet

Registered company name	Puma Energy Ltd	Puma Energy Papua New Guinea
Address	365 Macarthur Avenue, Hamilton QLD 4006 Australia	PO Box 1971 Port Moresby, NCD Papua New Guinea
Telephone	1300 723 706	+67 5 309 9100 (Office hours)
Fax	1300 723 321	+67 5 321 1842
Website	www.pumaenergy.com.au	http://www.pumaenergy.com/
Email	PumaAu-Safety@pumaenergy.com.au	orderspng@pumaenergy.com

Emergency telephone number

Association / Organisation	Chemwatch 24hr	Not Available
Emergency telephone numbers	1800 039 008	+67 5 309 9136 (24 hours)
Other emergency telephone numbers	1800 24 88 66	+67 5 7190 3024

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
1800 039 008	1800 039 008	+612 9186 1132

Once connected and if the message is not in your prefered language then please dial 01

NOT APPLICABLE

SECTION 2 HAZARDS IDENTIFICATION

SIGNAL WORD

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification	Not Applicable
Label elements	
Hazard pictogram(s)	

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
	>90	paraffinic base stock, severely solvent refined.
	<4.95	calcium alkylsalicylate/sulphide/sulphonate.
	<4.95	calcium alkylsalicylate.
	<0.95	sulfurized alkylphenol.
	<0.95	zinc alkyldithiophosphate.
	<0.49	alkylphenol, branched.

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	 If this product comes in contact with eyes: Wash out immediately with water. If irritation continues, seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ► Flush skin and hair with running water (and soap if available). ► Seek medical attention in event of irritation.
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▸ Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting

• Alert Fire Brigade and tell them location and nature of hazard.

	 Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Combustible.
Fire/Explosion Hazard	 Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit irritating/ toxic fumes. May emit acrid smoke. Mists containing combustible materials may be explosive.
HAZCHEM	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	 Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

	Avoid all personal contact, including inhalation.
	 Wear protective clothing when risk of exposure occurs.
	► Use in a well-ventilated area.
	 Prevent concentration in hollows and sumps.
	 DO NOT enter confined spaces until atmosphere has been checked.
	 Avoid smoking, naked lights or ignition sources.
	 Avoid contact with incompatible materials.
Safe handling	When handling, DO NOT eat, drink or smoke.
-	 Keep containers securely sealed when not in use.
	 Avoid physical damage to containers.
	 Always wash hands with soap and water after handling.
	 Work clothes should be laundered separately.
	 Use good occupational work practice.
	 Observe manufacturer's storage and handling recommendations contained within this SDS.
	• Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

Other information	 Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.
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Conditions for safe storage, including any incompatibilities

Suitable container	 Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks. [Drums - 20L 200L, IBC 1000 L.
Storage incompatibility	Avoid contamination of water, foodstuffs, feed or seed. None known

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Puma Marine TBN 30 SAE 40	Not Available	Not Available	Not Available	Not Available
Ingredient	Original IDLH		Revised IDLH	
Puma Marine TBN 30 SAE 40	Not Available		Not Available	

MATERIAL DATA

Oil mist, refined mineral, TWA ,5 mg/m3

Exposure controls

	Engineering controls are used to remove a bezard or place a barrier between the worker and the baze		
	Engineering controls are used to remove a hazard or place a barrier between the worker and the haza engineering controls can be highly effective in protecting workers and will typically be independent of to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove contaminant if designed properly. The design of a ventilation system must match the particular proce contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.	of worker interactions k. In the worker and ve or dilute an air	
	General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in ware		
	storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine		
Appropriate engineering	storage areas. Air contaminants generated in the workplace possess varying "escape" velocities whi the "capture velocities" of fresh circulating air required to effectively remove the contaminant.	,	
Appropriate engineering controls		Air Speed:	
	the "capture velocities" of fresh circulating air required to effectively remove the contaminant.		
	the "capture velocities" of fresh circulating air required to effectively remove the contaminant. Type of Contaminant:	Air Speed: 0.25-0.5 m/s	
	the "capture velocities" of fresh circulating air required to effectively remove the contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (in still air) aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of	Air Speed: 0.25-0.5 m/s (50-100 f/min) 0.5-1 m/s	

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Puma Marine TBN 30 SAE 40

	Lower end of the range	Upper end of the range	
	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents	
	2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity	
	3: Intermittent, low production.	3: High production, heavy use	
	4: Large hood or large air mass in motion	4: Small hood - local control only	
	Simple theory shows that air velocity falls rapidly with distance away Velocity generally decreases with the square of distance from the en- speed at the extraction point should be adjusted, accordingly, after re- The air velocity at the extraction fan, for example, should be a mini- solvents generated in a tank 2 meters distant from the extraction point performance deficits within the extraction apparatus, make it essenti- factors of 10 or more when extraction systems are installed or used	xtraction point (in simple cases). Therefore the air eference to distance from the contaminating source. imum of 1-2 m/s (200-400 f/min.) for extraction of int. Other mechanical considerations, producing al that theoretical air velocities are multiplied by	
Personal protection			
Eye and face protection	 Safety glasses with side shields Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] 		
Skin protection	See Hand protection below		
Hands/feet protection	The selection of suitable gloves does not only depend on the materia from manufacturer to manufacturer. Where the chemical is a prepart glove material can not be calculated in advance and has therefore to The exact break through time for substances has to be obtained fro to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves m hands should be washed and dried thoroughly. Application of a non-p Suitability and durability of glove type is dependent on usage. Impo frequency and duration of contact, chemical resistance of glove material, glove thickness and dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US When prolonged or frequently repeated contact may (breakthrough time greater than 240 minutes according to E recommended. When only brief contact is expected, a glove with a p greater than 60 minutes according to EN 374, AS/NZS 2161 Some glove polymer types are less affected by mov considering gloves for long-term use. Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as Excellent when breakthrough time > 480 min Good when breakthrough time < 20 min Fair when breakthrough time < 20 min Fair when glove material degrades For general applications, gloves with a thickness typically greater tha It should be emphasised that glove thickness is not necessarily a greater than due that glove thickness is not necessarily a greater than four the should also be based on consideration of times. Glove thickness may also vary depending on the glove manufacturers' technical data should always be taken into account to the should be to thok the should always be taken into account to the should always be	ration of several substances, the resistance of the obe checked prior to the application. Im the manufacturer of the protective gloves and has houst only be worn on clean hands. After using gloves, berfumed moisturiser is recommended. Internet factors in the selection of gloves include: S F739, AS/NZS 2161.1 or national equivalent). To occur, a glove with a protection class of 5 or higher N 374, AS/NZS 2161.10.1 or national equivalent) is protection class of 3 or higher (breakthrough time .10.1 or national equivalent) is recommended. It is should be taken into account when this should be taken into account when sets and this should be taken into account when the set composition of the glove material. The task requirements and knowledge of breakthrough the task requirement and knowledge of breakthrough the task requirement and knowledge of breakthrough the task requirements and knowledge of breakthrough task requirements and knowledg	

	single use applications, then disposed of. Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: • Overalls. • Barrier cream. • Eyewash unit.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Bright, clear liquid with characteristic odour; not miscible with water.		
Physical state	Liquid	Relative density (Water = 1)	0.92
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	>300
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	-18	Viscosity (cSt)	160, 15.7 @ 100C
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	235	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Negligible	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC
Inhaled	Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and
	that suitable control measures be used in an occupational setting.

Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.
Skin Contact	The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives .
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Puma Marine TBN 30 SAE	TOXICITY	IRRITATION	
40	Not Available	Not Available	
Legend:	 Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances 		

Acute Toxicity	0	Carcinogenicity	0
Skin Irritation/Corrosion	0	Reproductivity	0
Serious Eye Damage/Irritation	0	STOT - Single Exposure	0
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	\otimes	Aspiration Hazard	\odot
		Legend: 🗙 – Data availab	le but does not fill the criteria for classification

Data available to make classification

🚫 – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

То	xic	ity

Puma Marine TBN 30 SAE 40	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Toxicity 3. EP Data 5. ECE1	n 1. IUCLID Toxicity Data 2. Europe ECHA IWIN Suite V3.12 (QSAR) - Aquatic Toxici TOC Aquatic Hazard Assessment Data 6. N tion Data 8. Vendor Data	ty Data (Estimated) 4. US EPA, Ecotox da	tabase - Aqua	

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation	
	No Data available for all ingredients	

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill. Recycle containers if possible, or dispose of in an authorised landfill.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

National Inventory Status

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	Y
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Υ
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Issue Date: 10/08/2018 Print Date: 13/08/2018

Puma Marine TBN 30 SAE 40

Revision Date	10/08/2018
Initial Date	10/08/2018

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit IARC: International Agency for Research on Cancer ACGIH: American Conference of Governmental Industrial Hygienists STEL: Short Term Exposure Limit TEEL: Temporary Emergency Exposure Limit。 IDLH: Immediately Dangerous to Life or Health Concentrations **OSF: Odour Safety Factor** NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value **BCF: BioConcentration Factors** BEI: Biological Exposure Index This document is copyright.

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