

PUMA Cotton Picker Grease

Puma Energy Australia

Chemwatch: **13-92195** Version No: **2.1.1.1**

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code:

Issue Date: **03/10/2018**Print Date: **08/10/2018**L.GHS.AUS.EN

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

Product Identifier

| Product name | PUMA Cotton Picker Grease |
|-------------------------------|---------------------------|
| Synonyms | Not Available |
| Other means of identification | Not Available |

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

Relevant identified uses Lithium soap based grease for cotton pickers.

Details of the supplier of the safety data sheet

| Registered company name | Puma Energy Australia |
|-------------------------|--|
| Address | 365 Macarthur Avenue Hamilton QLD 4007 Australia |
| Telephone | 1300 723 706 |
| Fax | 1300 723 321 |
| Website | www.Pumaenergy.com |
| Email | PumaAu-Safety@pumaenergy.com |

Emergency telephone number

| Association / Organisation | Chemwatch Emergency Line 24/7 |
|-----------------------------------|--|
| Emergency telephone numbers | 1800 039 008 |
| Other emergency telephone numbers | 1800 24 88 66 (Puma Energy Bitumen Technical Helpline) |

CHEMWATCH EMERGENCY RESPONSE

| Primary Number | Alternative Number 1 | Alternative Number 2 |
|----------------|----------------------|----------------------|
| 1800 039 008 | +61 2 9186 1132 | Not Available |

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

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

CHEMWATCH HAZARD RATINGS

| | Min | Max | |
|--------------|-----|-----|--------------------------|
| Flammability | 1 | | |
| Toxicity | 0 | | 0 = Minimum |
| Body Contact | 1 | | 1 = Low |
| Reactivity | 0 | | 2 = Moderate 3 = High |
| Chronic | 0 | | 4 = Extreme |

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| | , |
|---------------------|----------------|
| Poisons Schedule | Not Applicable |
| Classification | Not Applicable |
| Label elements | |
| Hazard pictogram(s) | Not Applicable |
| | |
| SIGNAL WORD | NOT APPLICABLE |

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 |
|--------|-----------|--|
| | 100 | Ingredients determined not to be hazardous |

SECTION 4 FIRST AID MEASURES

Description of first aid measures

| Eye Contact | If this product comes in contact with the eyes: • Wash out immediately with fresh running water. • Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. • Seek medical attention without delay; if pain persists or recurs seek medical attention. • Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. | |
|--------------|---|--|
| Skin Contact | If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. | |
| Inhalation | Inhalation | |
| 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.

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Special hazards arising from the substrate or mixture

| Special hazards arising from the substrate or mixture | | |
|---|---|--|
| Fire Incompatibility | None known. | |
| Advice for firefighters | | |
| Fire Fighting | 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 courses. Use water delivered as a fine spray to control fire and cool adjacent area. 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. Equipment should be thoroughly decontaminated after use. | |
| Fire/Explosion Hazard | Combustible. 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 toxic fumes of carbon monoxide (CO). | |

SECTION 6 ACCIDENTAL RELEASE MEASURES

HAZCHEM

Personal precautions, protective equipment and emergency procedures

▶ May emit acrid smoke.

May emit corrosive fumes.

Not Applicable

▶ Mists containing combustible materials may be explosive.

See section 8

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Environmental precautions

See section 12

Methods and material for containment and cleaning up

| Minor Spills | Clean up all spills immediately. Avoid contact with skin and eyes. Wear impervious gloves and safety goggles. Trowel up/scrape up. Place spilled material in clean, dry, sealed container. Flush spill area with water. |
|--------------|--|
| Major Spills | Minor hazard. Clear area of personnel. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment as required. Prevent spillage from entering drains or water ways. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal. Wash area and prevent runoff into drains or waterways. If contamination of drains or waterways occurs, advise emergency services. |

▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| Precautions for safe handling | | |
|-------------------------------|--|--|
| 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. DO NOT allow material to contact humans, exposed food or food utensils Avoid contact with incompatible materials. 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. | |
| | | |

▶ Use good occupational work practice.

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| | 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 are maintained. |
|-------------------|---|
| 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. 20,208,1000 L. |

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. |
|-------------------------|--|
| Storage incompatibility | 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 Cotton Picker Grease | Not Available | Not Available | Not Available | Not Available |
| | | | | |
| Ingredient | Original IDLH | | Revised IDLH | |
| PUMA Cotton Picker Grease | Not Available | | Not Available | |

MATERIAL DATA

Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions 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 the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Appropriate engineering controls

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

| Type of Contaminant: | Air Speed: |
|---|---------------------------------|
| solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s (50-100 f/min) |
| 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 active generation) | 0.5-1 m/s (100-200 f/min.) |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion) | 2.5-10 m/s (500-2000 f/min.) |

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| | With a selection of the comment of the description of the comment | |
|-------------------------|---|--|
| | Within each range the appropriate value depends on: | |
| | Lower end of the range | Upper end of the range |
| | 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 awa Velocity generally decreases with the square of distance from the expeed at the extraction point should be adjusted, accordingly, after The air velocity at the extraction fan, for example, should be a min solvents generated in a tank 2 meters distant from the extraction performance deficits within the extraction apparatus, make it essen factors of 10 or more when extraction systems are installed or user | extraction point (in simple cases). Therefore the air reference to distance from the contaminating source. imum of 1-2 m/s (200-400 f/min) for extraction of point. Other mechanical considerations, producing tial 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 document, describing the wearing of lenses or restrictions on us should include a review of lens absorption and adsorption for the experience. Medical and first-aid personnel should be trained in available. In the event of chemical exposure, begin eye irrigatic practicable. Lens should be removed at the first signs of eye re environment only after workers have washed hands thoroughly. 1336 or national equivalent] | se, should be created for each workplace or task. This see class of chemicals in use and an account of injury their removal and suitable equipment should be readily on immediately and remove contact lens as soon as dness or irritation - lens should be removed in a clean |
| Skin protection | See Hand protection below | |
| Hands/feet protection | ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber | |
| Body protection | See Other protection below | |
| Other protection | Overalls. P.V.C. apron. Barrier cream. Skin cleansing cream. Eye wash unit. | |

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | Green non slump paste with no odour; not miscible with water. | | |
|--|---|---|----------------|
| Physical state | Non Slump Paste | Relative density (Water = 1) | 0.85 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Applicable | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | >220 (COC) | 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 |

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| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
|---------------------------|---------------|------------------------------|---------------|
| Vapour pressure (kPa) | Not Available | 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

| Inhaled | Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. | | |
|--------------------|--|---------------|-----|
| Ingestion | Ingestion may result in nausea, abdominal irritation, pain and | vomiting | |
| Skin Contact | Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. | | |
| Еуе | Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. | | |
| Chronic | Long-term exposure to the product is not thought to produce Directives using animal models); nevertheless exposure by a | | ` ` |
| PUMA Cotton Picker | TOXICITY | IRRITATION | |
| Grease | 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 | 0 | Aspiration Hazard | 0 |

Legend: X − Data available but does not fill the criteria for classification

✓ – Data available to make classification

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SECTION 12 ECOLOGICAL INFORMATION

Toxicity

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| DUMA Oction Biolog | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|------------------------------|--------------------------------|--------------------------------|---|---------------------------|------------------|
| PUMA Cotton Picker Grease | Not Available | Not Available | Not Available | Not Available | Not Available |
| Legend: | Toxicity 3. EP Data 5. ECET | IWIN Suite V3.12 (QSAR) - Aqua | ope ECHA Registered Substances - Eco atic Toxicity Data (Estimated) 4. US EPA Data 6. NITE (Japan) - Bioconcentration | A, Ecotox database - 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

- ▶ 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.

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 | Υ |
| Canada - DSL | Υ |
| Canada - NDSL | Υ |

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| China - IECSC | Y |
|----------------------------------|---|
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Υ |
| Korea - KECI | Υ |
| New Zealand - NZIoC | Υ |
| Philippines - PICCS | Υ |
| USA - TSCA | Υ |
| 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

| Revision Date | 03/10/2018 |
|---------------|------------|
| Initial Date | 03/10/2018 |

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

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TEL (+61 3) 9572 4700.