

Lubrication Engineers LE 452 ALMASOL Chain & Cable Medium

Lubrication Engineers NZ Ltd

Chemwatch Hazard Alert Code: 1

Chemwatch: 4743-55

Issue Date: 09/01/2015

Version No: 6.1.1.1

Print Date: 13/03/2015

Safety Data Sheet according to HSNO Regulations

Initial Date: **Not Available**

S.GHS.NZL.EN

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

Product Identifier

| | |
|--------------------------------------|---|
| Product name | Lubrication Engineers LE 452 ALMASOL Chain & Cable Medium |
| Synonyms | Not Available |
| Other means of identification | Not Available |

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

| | |
|---------------------------------|--|
| Relevant identified uses | Use according to manufacturer's directions. Lubricant |
|---------------------------------|--|

Details of the manufacturer/importer

| | |
|--------------------------------|---|
| Registered company name | Lubrication Engineers NZ Ltd |
| Address | 11F Piermark Drive North Harbour Industrial Estate Albany, Auckland New Zealand |
| Telephone | +64 09 415 9411 |
| Fax | +64 09 4158411 |
| Website | Not Available |
| Email | Not Available |

Emergency telephone number

| | |
|--|----------------|
| Association / Organisation | Not Available |
| Emergency telephone numbers | +64 21 3385487 |
| Other emergency telephone numbers | Not Available |

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.

CHEMWATCH HAZARD RATINGS

| | Min | Max |
|--------------|-----|-----|
| Flammability | 1 | 2 |
| Toxicity | 0 | 0 |
| Body Contact | 1 | 2 |
| Reactivity | 1 | 2 |
| Chronic | 0 | 0 |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|--|----------------|
| GHS Classification | Not Applicable |
| Determined by Chemwatch using GHS/HSNO criteria | Not Available |

Label elements

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| | |
|---------------------------|----------------|
| GHS label elements | 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 |
|---------------|-----------|--|
| 12001-26-2 | NotSpec | mica |
| | NotSpec | pigment as |
| 13463-67-7 | | titanium dioxide |
| 1309-37-1 | NotSpec | ferric oxide |
| Not Available | 100 | Ingredients determined not to be hazardous |

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Description of first aid measures

| | |
|---------------------|--|
| Eye Contact | <p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"> ▶ 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 | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation. |
| Inhalation | <ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary. |
| Ingestion | <ul style="list-style-type: none"> ▶ 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.

- ▶ Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- ▶ In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- ▶ High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

| | |
|--|------------------------|
| | ▶ Alcohol stable foam. |
|--|------------------------|

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- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|--|
| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

Advice for firefighters

| | |
|------------------------------|---|
| Fire Fighting | <ul style="list-style-type: none"> ▶ 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. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ 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**Personal precautions, protective equipment and emergency procedures**

| | |
|---|--|
| Minor Spills | Slippery when spilt. <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. |
| Major Spills | Slippery when spilt. Moderate hazard. <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. |
| Personal Protective Equipment advice is contained in Section 8 of the MSDS. | |

SECTION 7 HANDLING AND STORAGE**Precautions for safe handling**

| | |
|--------------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ 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. |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ No smoking, naked lights or ignition sources. ▶ Store in a cool, dry, well-ventilated area. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|--|
| Suitable container | <ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks. |
| Storage incompatibility | <ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents ▶ Avoid strong acids, bases. |



+ + + + X +

X — Must not be stored together

O — May be stored together with specific preventions

+ — May be stored together

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|------------------|---|-------------------------|---------------|---------------|--|
| New Zealand Workplace Exposure Standards (WES) | mica | Mica | 3 Respirable dust mg/m3 | Not Available | Not Available | 2011 correction |
| New Zealand Workplace Exposure Standards (WES) | titanium dioxide | Titanium dioxide | 10 mg/m3 | Not Available | Not Available | The value for inhalable dust containing no asbestos and less than 1% free silica. |
| New Zealand Workplace Exposure Standards (WES) | ferric oxide | Iron oxide dust and fume (Fe2O3), as Fe / Rouge | 5 mg/m3 / 102 mg/m3 | Not Available | Not Available | A range of airborne contaminants are associated with gas and arc welding. The type of metal being welded, the electrode employed and the welding process will all influence the composition and amount of fume. Gaseous products such as oxides of nitrogen, carbon monoxide and ozone may also be produced. In the absence of toxic elements such as chromium, and where conditions do not support the generation of toxic gases, the fume concentration inside the welder's helmet should not exceed 5mg/m3. |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|------------------|------------------------------------|----------|-----------|------------|
| mica | Mica; (mica silicates) | 9 mg/m3 | 99 mg/m3 | 590 mg/m3 |
| titanium dioxide | Titanium oxide; (Titanium dioxide) | 10 mg/m3 | 10 mg/m3 | 10 mg/m3 |
| ferric oxide | Iron oxide; (Ferric oxide) | 15 mg/m3 | 360 mg/m3 | 2200 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|--|-----------------------|---------------|
| mica | N.E. mg/m3 / N.E. ppm | 1,500 mg/m3 |
| titanium dioxide | N.E. mg/m3 / N.E. ppm | 5,000 mg/m3 |
| ferric oxide | N.E. mg/m3 / N.E. ppm | 2,500 mg/m3 |
| Ingredients determined not to be hazardous | Not Available | Not Available |

Exposure controls

| | |
|---|---|
| Appropriate engineering controls | <p>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.</p> <p>The basic types of engineering controls are:</p> <ul style="list-style-type: none"> 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. |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> 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. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> |

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| | |
|-------------------------|--|
| | Suitability and durability of glove type is dependent on usage. |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. ▶ Barrier cream. |
| Thermal hazards | Not Available |

Recommended material(s)

Respiratory protection

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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| Material | CPI |
|----------|-----|
|----------|-----|

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|--|--|----------------|
| Appearance | Red/brown paste with a hydrocarbon odour; not miscible with water. | | |
| Physical state | Non Slump Paste | Relative density (Water = 1) | 0.95 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | 6-8 | 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) | 203 | 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) | Not Available | Gas group | Not Available |
| Solubility in water (g/L) | Immiscible | pH as a solution | Not Available |
| Vapour density (Air = 1) | <1 | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

| | |
|-------------------|---------------|
| Reactivity | See section 7 |
|-------------------|---------------|

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| | |
|---|--|
| Chemical stability | <ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ 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

| | |
|---------------------|---|
| Inhaled | <p>There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Inhalation of oil droplets or aerosols may cause discomfort and may produce chemical inflammation of the lungs.</p> |
| Ingestion | <p>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.</p> |
| Skin Contact | <p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> |
| Eye | <p>There is some evidence to suggest that this material can cause eye irritation and damage in some persons.</p> |
| Chronic | <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet.</p> |

| | | |
|--|--|---------------------------------------|
| Lubrication Engineers LE 452 ALMASOL Chain & Cable Medium | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| mica | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| titanium dioxide | TOXICITY | IRRITATION |
| | Inhalation (rat) LC50: >2.28 mg/l4 h ^[1] | Skin (human): 0.3 mg /3D (int)-mild * |
| | Inhalation (rat) LC50: >3.56 mg/l4 h ^[1] | |
| | Inhalation (rat) LC50: >6.82 mg/l4 h ^[1] | |
| | Inhalation (rat) LC50: 3.43 mg/l4 h ^[1] | |
| | Inhalation (rat) LC50: 5.09 mg/l4 h ^[1] | |
| ferric oxide | TOXICITY | IRRITATION |
| | Oral (rat) LD50: >5000 mg/kg ^[1] | Not Available |
| Legend: | <p>1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's msds Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances</p> | |

| | |
|-------------------------|---|
| MICA | No significant acute toxicological data identified in literature search. |
| TITANIUM DIOXIDE | <p>The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>Exposure to titanium dioxide is via inhalation, swallowing or skin contact.</p> <p>* IUCLID</p> |
| FERRIC OXIDE | Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due |

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to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

| | | | |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity | ☹ | Carcinogenicity | ☹ |
| Skin Irritation/Corrosion | ☹ | Reproductivity | ☹ |
| Serious Eye Damage/Irritation | ☹ | STOT - Single Exposure | ☹ |
| Respiratory or Skin sensitisation | ☹ | STOT - Repeated Exposure | ☹ |
| Mutagenicity | ☹ | Aspiration Hazard | ☹ |

Legend:
 ✓ – Data required to make classification available
 ✗ – Data available but does not fill the criteria for classification
 ☹ – Data Not Available to make classification

CMR STATUS

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------------|-------------------------|------------------|
| titanium dioxide | HIGH | HIGH |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------------|-----------------|
| titanium dioxide | LOW (BCF = 10) |

Mobility in soil

| Ingredient | Mobility |
|------------------|-------------------|
| titanium dioxide | LOW (KOC = 23.74) |

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: <ul style="list-style-type: none"> ▶ 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. |
| | Ensure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001. |

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|-------------------------|----------------|
| Marine Pollutant | NO |
| HAZCHEM | Not Applicable |

Land transport (UN): 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 73 / 78 and the IBC code

| Source | Ingredient | Pollution Category |
|---|------------------|--------------------|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | titanium dioxide | Z |

SECTION 15 REGULATORY INFORMATION

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

This substance is to be managed using the conditions specified in an applicable Group Standard

| HSR Number | Group Standard |
|------------|---|
| HSR008053 | Graphic Materials Group Standard 2009 |
| HSR100628 | Straight-chained Lepidopteran Sex Pheromone Group Standard 2012 |

| | |
|--|---|
| mica(12001-26-2) is found on the following regulatory lists | "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)" |
| titanium dioxide(13463-67-7) is found on the following regulatory lists | "New Zealand Inventory of Chemicals (NZIoC)", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "New Zealand Workplace Exposure Standards (WES)" |
| ferric oxide(1309-37-1) is found on the following regulatory lists | "New Zealand Inventory of Chemicals (NZIoC)", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "New Zealand Workplace Exposure Standards (WES)" |

Location Test Certificate

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations a location test certificate is required when quantity greater than or equal to those indicated below are present.

| Hazard Class | Quantity beyond which controls apply for closed containers | Quantity beyond which controls apply when use occurring in open containers |
|----------------|--|--|
| Not Applicable | Not Applicable | Not Applicable |

Approved Handler

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

| Class of substance | Quantities |
|--------------------|----------------|
| Not Applicable | Not Applicable |

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

| Name | CAS No |
|------------------|---|
| mica | 12001-26-2, 129899-84-9, 61076-94-6 |
| titanium dioxide | 100292-32-8, 101239-53-6, 116788-85-3, 12000-59-8, 12188-41-9, 12701-76-7, 12767-65-6, 12789-63-8, 1309-63-3, 1317-70-0, 1317-80-2, 1344-29-2, 13463-67-7, 185323-71-1, 185828-91-5, 188357-76-8, 188357-79-1, 195740-11-5, 221548-98-7, 224963-00-2, 246178-32-5, 252962-41-7, 37230-92-5, 37230-94-7, 37230-95-8, 37230-96-9, 39320-58-6, 39360-64-0, 39379-02-7, 416845-43-7, 494848-07-6, 494848-23-6, 494851-77-3, 494851-98-8, 55068-84-3, 55068-85-4, 552316-51-5, 62338-64-1, 767341-00-4, 97929-50-5, 98084-96-9 |

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.

A list of reference resources used to assist the committee may be found at:

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www.chemwatch.net/references

The (M)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.

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