

Section 1. Chemical product and company identification

Common name : ROYCO 634
MSDS# : EH1078
MILSPEC# : MIL-PRF-63460
Material use : Lubricant.
Supplier/Manufacturer : Anderol Inc., 215 Merry Lane, East Hanover, NJ 07936
 Tel: (973) 887-7410 Fax: (973) 887-8422
In case of emergency : CHEMTREC: 800-424-9300 (United States)

Section 2. Hazards identification

Physical state : Liquid. (Clear.)
Emergency overview : Warning!
 CAUSES EYE AND SKIN IRRITATION.
 MAY CAUSE ALLERGIC SKIN REACTION.
 MAY CAUSE RESPIRATORY TRACT IRRITATION.
 COMBUSTIBLE LIQUID AND VAPOR.
 VAPOR MAY CAUSE FIRE.
 Avoid contact with skin and clothing. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects
Eyes : Irritating to eyes.
Skin : Irritating to skin. May cause sensitization by skin contact.
Inhalation : Moderately irritating to the respiratory system.
Ingestion : No known significant effects or critical hazards.

Potential chronic health effects : Carcinogenic effects: Classified A3 (Proven for animals.) by ACGIH [Distillates (Petroleum), Hydrotreated Light]. Classified A3 (Proven for animals.) by ACGIH [2-Butoxyethanol]. Classified 3 (Not classifiable for humans.) by IARC [2-Butoxyethanol].
 Mutagenic effects: Not available.
 Teratogens effects: Not available.

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation.

See toxicological information (section 11)

Section 3. Composition, Information on Ingredients

| | CAS number | % by weight |
|--|------------|-------------|
| United States | | |
| 1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated | 68649-12-7 | 15 - 30 |
| Distillates (Petroleum), Hydrotreated Light | 64742-47-8 | 15 - 30 |
| Distillates (petroleum), hydrotreated light naphthenic | 64742-53-6 | 10 - 13 |
| Calcium dinonylnaphthalene sulfonate | 57855-77-3 | 7 - 10 |
| Solvent naphtha (petroleum), medium aliph. | 64742-88-7 | 1 - 3 |
| Kerosine (petroleum) | 8008-20-6 | 1 - 3 |
| Oxirane, methyl-, polymer with oxirane | 9003-11-6 | 0.5 - 1 |

ROYCO 634**Canada**

| | | |
|--|------------|---------|
| 1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated | 68649-12-7 | 15 - 30 |
| Distillates (Petroleum), Hydrotreated Light | 64742-47-8 | 15 - 30 |
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Brazil

| | | |
|--|------------|---------|
| 1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated | 68649-12-7 | 15 - 30 |
| Distillates (Petroleum), Hydrotreated Light | 64742-47-8 | 15 - 30 |
| Distillates (petroleum), hydrotreated light naphthenic | 64742-53-6 | 10 - 13 |
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| Kerosine (petroleum) | 8008-20-6 | 1 - 3 |
| Oxirane, methyl-, polymer with oxirane | 9003-11-6 | 0.5 - 1 |

Mexico

| | UN number | IDLH | H | Classification | | | | |
|--|------------------|-------------|----------|-----------------------|----------|----------------|------------|---------|
| | | | | F | R | Special | | |
| 1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated | Not regulated. | - | 0 | 1 | 0 | | 68649-12-7 | 15 - 30 |
| Distillates (Petroleum), Hydrotreated Light | Not regulated. | - | 0 | 1 | 0 | | 64742-47-8 | 15 - 30 |
| Distillates (petroleum), hydrotreated light naphthenic | Not regulated. | - | 1 | 1 | 0 | | 64742-53-6 | 10 - 13 |
| Calcium dinonylnaphthalene sulfonate | Not regulated. | - | 1 | 0 | 0 | | 57855-77-3 | 7 - 10 |
| Solvent naphtha (petroleum), medium aliph. | UN1223 | - | 1 | 1 | 0 | | 64742-88-7 | 1 - 3 |
| Kerosine (petroleum) | UN1223 | - | 2 | 2 | 0 | | 8008-20-6 | 1 - 3 |
| Oxirane, methyl-, polymer with oxirane | Not regulated. | - | 1 | 1 | 0 | | 9003-11-6 | 0.5 - 1 |

This material is classified hazardous under OSHA regulations in the United States, the WHMIS Controlled Product Regulation in Canada, the NOM-018-STPS-2000 in Mexico and Brazil NBR 14725:2001.

See Chapters 8, 11 and 14 for details.

Section 4. First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Get medical attention if irritation occurs.
- Skin contact** : Wash with soap and water. Get medical attention if irritation occurs.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- Notes to physician** : Not available.

Section 5. Fire fighting measures

- Flammability of the product** : Combustible.
- Flash point** : Open cup: 100°C (212°F) (Cleveland.).
- Products of combustion** : The final products of combustion are carbon oxides and water. Nitrogen, sulfur and metal oxides may also be produced in some cases.
- Fire hazards in the presence of various substances** : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Slightly flammable in the presence of the following materials or conditions: heat.
- Fire-fighting media and instructions** : Use dry chemical, carbon dioxide, water spray (fog) or foam.

Combustible liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and storage

- Handling** : Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.
- Storage** : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure controls, personal protection

Engineering controls : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection
Eye protection : Safety glasses with side shields.



Respiratory protection : Not applicable.

Hand protection : Natural rubber (latex).



Skin protection/Body : Not applicable.

Personal protection in case of a large spill : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear MSHA/NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

Product name
United States

Exposure limits

ROYCO 634

1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated
Distillates (Petroleum), Hydrotreated Light

Distillates (petroleum), hydrotreated light naphthenic
Solvent naphtha (petroleum), medium aliph.

Kerosine (petroleum)

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours. Form: Mist

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours.

OSHA PEL (United States).

TWA: 500 ppm 8 hour/hours.

ACGIH TLV (United States).

TWA: 100 ppm 8 hour/hours.

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

NIOSH REL (United States, 12/2001).

TWA: 100 mg/m³ 10 hour/hours. Form: All forms.

Canada

1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated
Distillates (Petroleum), Hydrotreated Light

Distillates (petroleum), hydrotreated light naphthenic
Solvent naphtha (petroleum), medium aliph.

Kerosine (petroleum)

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours. Form: Mist

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours.

ACGIH TLV (United States).

TWA: 100 ppm 8 hour/hours.

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

Mexico

1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated
Distillates (Petroleum), Hydrotreated Light

Distillates (petroleum), hydrotreated light naphthenic
Solvent naphtha (petroleum), medium aliph.

Kerosine (petroleum)

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours. Form: Mist

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours.

ACGIH TLV (United States).

TWA: 100 ppm 8 hour/hours.

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

Brazil

1-Decene, tetramer, mixed with 1-Decene trimer, hydrogenated
Distillates (Petroleum), Hydrotreated Light

Distillates (petroleum), hydrotreated light naphthenic
Solvent naphtha (petroleum), medium aliph.

Kerosine (petroleum)

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours. Form: Mist

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hour/hours.

ACGIH TLV (United States).

TWA: 100 ppm 8 hour/hours.

ACGIH TLV (United States, 1/2004). Skin

TWA: 200 mg/m³ 8 hour/hours. Form: All forms.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

| | |
|-------------------------|--------------------|
| Physical state | : Liquid. (Clear.) |
| Color | : Amber. |
| Odor | : Fruity. |
| Specific gravity | : 0.87 (Water = 1) |

Section 10. Stability and reactivity

- Stability and reactivity** : The product is stable.
- Incompatibility with various substances** : Reactive with oxidizing materials.
- Hazardous polymerization** : Will not occur.

Section 11. Toxicological information

Toxicity data

| Ingredient name | Test | Result | Route | Species |
|--|------|-------------|--------|---------|
| Solvent naphtha (petroleum), medium aliph. | LD50 | >5000 mg/kg | Oral | Rat |
| Kerosine (petroleum) | LD50 | >2000 mg/kg | Dermal | Rabbit |
| | LD50 | 2835 mg/kg | Oral | Rabbit |

Acute Effects

- Eyes** : Irritating to eyes.
- Skin** : Irritating to skin. May cause sensitization by skin contact.
- Inhalation** : Moderately irritating to the respiratory system.
- Ingestion** : No known significant effects or critical hazards.
- Potential chronic health effects** : Carcinogenic effects: Classified A3 (Proven for animals.) by ACGIH [Distillates (Petroleum), Hydrotreated Light]. Classified A3 (Proven for animals.) by ACGIH [2-Butoxyethanol]. Classified 3 (Not classifiable for humans.) by IARC [2-Butoxyethanol].
Mutagenic effects: Not available.
Teratogens effects: Not available.

Section 12. Ecological information

Ecotoxicity data

| Ingredient name | Species | Period | Result |
|---|----------------------------|---------------|----------|
| Distillates (Petroleum), Hydrotreated Light | Oncorhynchus mykiss (LC50) | 96 hour/hours | 2.9 mg/l |

- Products of degradation** : The final products of biodegradation are carbon oxides and water. Nitrogen and sulfur oxides and metal salts may also be produced in some cases.

Section 13. Disposal considerations

- Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

Classification

Brazil/Mexico/TDG/DOT/IMDG/IATA: Not regulated.

| DOT | NA1993 | COMBUSTIBLE LIQUID, N.O.S. (Distillates (Petroleum), Hydrotreated Light) | 3 | III |
|-----|--------|---|---|-----|
|-----|--------|---|---|-----|

Label

Not applicable.

Additional information

Not applicable.

Section 15. Regulatory information

United States

- HCS Classification** : Combustible liquid
Irritating material
Sensitizing material
- U.S. Federal regulations** : TSCA : All components listed.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Distillates (Petroleum), Hydrotreated Light; Kerosine (petroleum)
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Distillates (Petroleum), Hydrotreated Light: Delayed (chronic) health hazard; Kerosine (petroleum): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

- State regulations** : Pennsylvania RTK: Kerosine (petroleum): (generic environmental hazard); 2-Butoxyethanol: (environmental hazard, generic environmental hazard); N,N-Bis(2-Ethylhexy)-((1,2,4-Triazol-1-yl)Methyl)amine
Massachusetts RTK: Distillates (petroleum), hydrotreated light naphthenic; Kerosine (petroleum); Distillates (Petroleum), Solvent-Refined Light Paraffinic; 2-Butoxyethanol; N,N-Bis(2-Ethylhexy)-((1,2,4-Triazol-1-yl)Methyl)amine
New Jersey: Kerosine (petroleum); 2-Butoxyethanol; N,N-Bis(2-Ethylhexy)-((1,2,4-Triazol-1-yl)Methyl)amine
California prop. 65: No products were found.

Canada

- WHMIS (Canada)** : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
Class D-2B: Material causing other toxic effects (Toxic).
DSL : All components listed.

Mexico

- Classification** :
- 
- The diagram is a diamond-shaped hazard label divided into four quadrants. The top quadrant is red with the number '1' and the label 'Flammability'. The left quadrant is blue with the number '1' and the label 'Health'. The right quadrant is yellow with the number '0' and the label 'Reactivity'. The bottom quadrant is white with the label 'Special'.

International regulations

- International lists** : Australia (NICNAS); CHINA INVENTORY (IECS); JAPAN INVENTORY (ENCS); KOREA INVENTORY (ECL); PHILIPPINE INVENTORY (PICCS): All components listed.

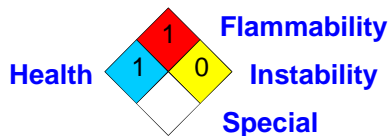
Section 16. Other information

- Label requirements** : CAUSES EYE AND SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.

Hazardous Material Information System (U.S.A.) :

| | |
|---------------------|---|
| Health | 1 |
| Fire hazard | 1 |
| Reactivity | 0 |
| Personal protection | C |

National Fire Protection Association (U.S.A.) :



References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2002. - Official Mexican Standards NOM-018-STPS-2000 and NOM-004-SCT2-1994. Brazil NBR 14725:2001.

Responsible name : Mr. Max Naggar

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Version : 3

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Authored by **KEMIKA**

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