according to the Hazardous Products Regulations



CHAIN AND WIRE ROPE LUBRICANT, 454 g

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|--------------|----------|------------------------------|------|---|--|--|--|--|--|
| SECT | TION 1 | DENTIFICATION | | | | | | | |
| I | Produc | t name | : | : CHAIN AND WIRE ROPE LUBRICANT, 454 g | | | | | |
| I | Produc | t code | : | 893.105800 | | | | | |
| (| Other n | neans of identification | : | No data available | | | | | |
| I | Manufa | acturer or supplier's o | deta | ails | | | | | |
| (| Compa | ny name of supplier | : | Würth Canada Limited/Limitée | | | | | |
| , | Address | | : | 345 Hanlon Creek Blvd GUELPH, ON N1C 0A1 | | | | | |
| - | Telepho | one | : | 1-800-263-5002 | | | | | |
| - | Telefax | | : | 1-905-564-3671 | | | | | |
| I | Emerge | ency telephone | : | | olving a spill, fire, explosion or exposure: 7): 1-800-424-9300 | | | | |
| | | | | | ant un déversement, incendie, explosion ou ITREC (24/7): 1-800-424-9300 | | | | |
| I | E-mail a | address | : | prodsafe@wurth. | ca | | | | |
| I | Recom | mended use of the cl | hen | nical and restriction | ons on use | | | | |
| I | Recom | mended use | : | Lubricant | | | | | |
| I | Restric | ions on use | : | Not applicable | | | | | |

SECTION 2. HAZARDS IDENTIFICATION

| GHS classification in accord Aerosols | an : | ce with the Hazardous Products Regulations Category 1 |
|--|---------|---|
| Reproductive toxicity | : | Category 2 |
| GHS label elements | | |
| Hazard pictograms | : | |
| Signal Word | : | Danger |
| Hazard Statements | : | H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated. |

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| II | | H361 Suspected | of damaging fertility or the unborn child. |
| Preca | utionary Statements | P202 Do not han and understood. P210 Keep away and other ignitior P211 Do not spra P251 Do not pier | cial instructions before use. Idle until all safety precautions have been read of from heat, hot surfaces, sparks, open flames in sources. No smoking. ay on an open flame or other ignition source. The or burn, even after use. Active gloves, protective clothing, eye protection on. |
| | | Response: P308 + P313 IF (| exposed or concerned: Get medical attention. |
| | | Storage: P405 Store locke P410 + P412 Pro tures exceeding | otect from sunlight. Do not expose to tempera- |
| | | Disposal: P501 Dispose of disposal plant. | contents and container to an approved waste |
| Other | hazards | | |

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

| Chemical name | Common Name/Synonym | CAS-No. | Concentration (% w/w) |
|---|-----------------------------|------------|-----------------------|
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | No data availa- ble | 64742-65-0 | >= 80 - <= 100 * |
| Petroleum gases, liq- uefied, sweetened | No data availa- ble | 68476-86-8 | >= 10 - < 30 * |
| ,,, | No data availa- ble | 68153-57-1 | >= 1 - < 5 * |
| 2,2'-Iminodiethanol | Ethanol, 2,2'- iminobis- | 111-42-2 | >= 0.1 - < 1 * |

* Actual concentration or concentration range is withheld as a trade secret

:

SECTION 4. FIRST AID MEASURES

General advice

In the case of accident or if you feel unwell, seek medical advice immediately.



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| lf inh | If inhaled | | When symptoms persist or in all cases of doubt seek med advice. If inhaled, remove to fresh air. Get medical attention. | | | | | |
| In ca | In case of skin contact | | In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse. | | | | | |
| In ca | In case of eye contact | | Flush eyes with water as a precaution. Get medical attention if irritation develops and persists. | | | | | |
| lf sw | If swallowed | | If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. | | | | | |
| and | Most important symptoms and effects, both acute and delayed | | Suspected of damaging fertility or the unborn child. | | | | | |
| Prote | Protection of first-aiders | | First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8). | | | | | |
| Note | Notes to physician | | Treat symptomati | cally and supportively. | | | | |

SECTION 5. FIRE-FIGHTING MEASURES

| | Suitable extinguishing media | : | Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical |
|---|---------------------------------------|---|--|
| | Unsuitable extinguishing media | : | None known. |
| | Specific hazards during fire fighting | : | Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. |
| I | Hazardous combustion prod- ucts | : | Carbon oxides Nitrogen oxides (NOx) |
| | Specific extinguishing meth- ods | : | Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do |

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| | | | so. Evacuate area. | |
| | cial protective equipment ire-fighters | : | | e, wear self-contained breathing apparatus. tective equipment. |
| SECTIO | N 6. ACCIDENTAL RELE | ASI | EMEASURES | |
| tive | sonal precautions, protec- equipment and emer- cy procedures | : | Follow safe handl | es of ignition. tective equipment. ing advice (see section 7) and personal pro- recommendations (see section 8). |
| Env | ironmental precautions | : | Prevent spreading oil barriers). Retain and dispos | akage or spillage if safe to do so. g over a wide area (e.g., by containment or se of contaminated wash water. should be advised if significant spillages |
| | Methods and materials for containment and cleaning up | | Soak up with inerd Suppress (knock jet. For large spills, pr ment to keep mat pumped, store red Clean up remainin bent. Local or national r sal of this materia ployed in the clea which regulations Sections 13 and 1 | s should be used. t absorbent material. down) gases/vapors/mists with a water spray rovide diking or other appropriate contain- erial from spreading. If diked material can be covered material in appropriate container. ng materials from spill with suitable absor- regulations may apply to releases and dispo- I, as well as those materials and items em- nup of releases. You will need to determine are applicable. 15 of this SDS provide information regarding tional requirements. |

SECTION 7. HANDLING AND STORAGE

| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
|-------------------------|---|---|
| Local/Total ventilation | : | Use only with adequate ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventila- tion. |
| Advice on safe handling | : | Do not get on skin or clothing. Avoid inhalation of vapor or mist. |

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| | Conditio | ons for safe storage | : | practice, based or sessment Keep away from H other ignition sour Take precautiona Take care to prev environment. Do not spray on a Keep in a cool, we Store in accordan | ance with good industrial hygiene and safety in the results of the workplace exposure as- meat, hot surfaces, sparks, open flames and rces. No smoking. ry measures against static discharges. ent spills, waste and minimize release to the in open flame or other ignition source. ell-ventilated place. ce with the particular national regulations. |
| | | | | Do not pierce or b Keep cool. Protec | ourn, even after use. t from sunlight. |
| 1 | Materia | ls to avoid | : | Self-reactive subs Organic peroxides Oxidizing agents Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating subs | |
| | Recom peratur | mended storage tem- e | : | < 48 °C | |
| | Further age sta | information on stor- bility | : | Keep container tig ce. | phtly closed in a dry and well-ventilated pla- |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parame- ters / Permissible concentration | Basis |
|---|------------|--|--|-----------|
| Distillates (petroleum), solvent- dewaxed heavy paraffinic | 64742-65-0 | TWA (Mist) | 5 mg/m³ | CA AB OEL |
| | | STEL (Mist) | 10 mg/m ³ | CA AB OEL |
| | | TWAEV (Mist - Inhalable dust) | 5 mg/m³ | CA QC OEL |
| | | TWA (Mist) | 1 mg/m ³ | CA BC OEL |
| | | TWA (Inha- lable particu- late matter) | 5 mg/m³ | ACGIH |



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|----------------|---------------------------------|---|---|--|---|--|
| | leum gases, liquefied, tened | | 68476-86-8 | TWAEV | 800 ppm 1,900 mg/m³ | CA QC OEL |
| | | | | TWA | 1,000 ppm | CA AB OEL |
| | | | | STEL | 1,000 ppm | CA BC OEL |
| | | | | STEL | 1,000 ppm | ACGIH |
| 2,2'-l | minodiethanol | | 111-42-2 | TWA | 2 mg/m ³ | CA AB OEL |
| | | | | TWA | 2 mg/m ³ | CA BC OEL |
| | | | | TWAEV (in- | 1 mg/m³ | CA QC OEL |
| | | | | halable frac- | | |
| | | | | tion and va- | | |
| | | | | pour) | | |
| | | | | TWA (Inha- | 1 mg/m³ | ACGIH |
| | | | | lable fraction | | |
| | | | | and vapor) | | |
| Engi | neering measures | : | Minimize work If advised by a | place exposure assessment of th | especially in confined concentrations. ne local exposure po explosion-proof exha | tential, use |
| Pers | onal protective equipm | nent | | | | |
| Resp | iratory protection | : If adequate local exhaust ventilation is not available or expo sure assessment demonstrates exposures outside the re- commended guidelines, use respiratory protection. | | | the re- | |
| Fi | lter type | : | Self-contained | d breathing appa | aratus | |
| | l protection aterial | : | Nitrile rubber | | | |
| Μ | aterial | : | Neoprene | | | |
| R | emarks | : | on the concer applications, we micals of the a manufacturer. | atration specific t we recommend of aforementioned Wash hands be akthrough time is | ds against chemicals to place of work. For clarifying the resistan protective gloves wit fore breaks and at the s not determined for | special nee to che- h the glove he end of |
| Eye p | protection | : | Wear the follo Safety glasse | • • • | rotective equipment: | |
| Skin : | and body protection | : | resistance dat potential. Wear the follo If assessment | a and an assess wing personal p demonstrates to or flash fires, us | clothing based on ch sment of the local ex rotective equipment: hat there is a risk of e flame retardant and | posure explosive |



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| | | | | be avoided by using impervious protective aprons, boots, etc). | | | | |
| Hygie | ne measures | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the wor- king place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. | | | | | |
| SECTION | 9. PHYSICAL AND CHE | ЕМІС | | 3 | | | | |
| Appea | arance | : | Aerosol containing a compressed gas | | | | | |
| Prope | llant | : | Petroleum gases | , liquefied, sweetened | | | | |
| Color | olor : gray, green, opaque | | | | | | | |
| Odor | | : | : hydrocarbon-like | | | | | |
| Odor ⁻ | Threshold | : | No data available | | | | | |
| рН | | : | Solvent mixture; aqueous solution | pH value determination not possible, no | | | | |
| Meltin | g point/freezing point | : | No data available | 9 | | | | |
| Initial range | boiling point and boiling | : | > 177.78 °C | | | | | |
| Flash | point | : | 55.56 °C | | | | | |
| | | | | Martens closed cup y valid for liquid portion in the aerosol can. | | | | |
| Evapo | pration rate | : | < 1 (Butyl Acetate=1 | 0) | | | | |
| Flamn | nability (solid, gas) | : | : Extremely flammable aerosol. | | | | | |
| | r explosion limit / Upper nability limit | : | : 18 %(V) | | | | | |
| | r explosion limit / Lower nability limit | : | 3.4 %(V) | | | | | |
| Vapor | r pressure | : | > 2,068.43 hPa (| 20 °C) | | | | |

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|---------------|--|-------------------------------|---|--|--|--|--|
| R | elative vapor density | : > 1 Heavier than a | r. | | | | |
| D | ensity | : 0.785 - 0.795 g | : 0.785 - 0.795 g/cm³ (25 °C) | | | | |
| "s ∥ | olubility(ies) Water solubility | : insoluble | : insoluble | | | | |
| - | artition coefficient: n- ctanol/water | : Not applicable | Not applicable | | | | |
| А | utoignition temperature | : No data available | | | | | |
| D | ecomposition temperature | : No data availal | No data available | | | | |
| V | iscosity Viscosity, kinematic | : Not applicable | | | | | |
| E | xplosive properties | : Not explosive | | | | | |
| С | oxidizing properties | : The substance | or mixture is not classified as oxidizing. | | | | |
| - | article characteristics article size | : Not applicable | | | | | |

SECTION 10. STABILITY AND REACTIVITY

| Reactivity | : | Not classified as a reactivity hazard. | |
|---|---|---|--|
| Chemical stability | : | Stable under normal conditions. | |
| Possibility of hazardous reac- tions | | Extremely flammable aerosol. Vapors may form explosive mixture with air. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Can react with strong oxidizing agents. | |
| Conditions to avoid | : | Heat, flames and sparks. | |
| Incompatible materials | : | Oxidizing agents | |
| Hazardous decomposition products | | No hazardous decomposition products are known. | |

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

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Acute toxicity

Not classified based on available information.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

| Acute oral toxicity | : | LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials |
|---------------------------|---|---|
| Acute inhalation toxicity | : | LC50 (Rat): > 5.53 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhala- tion toxicity Remarks: Based on data from similar materials |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg Method: OECD Test Guideline 402 Remarks: Based on data from similar materials |

Petroleum gases, liquefied, sweetened:

| Acute inhalation toxicity | : LC50 (Rat): > 800000 ppm |
|---------------------------|---|
| | Exposure time: 15 min |
| | Test atmosphere: gas |
| | Remarks: Based on data from similar materials |
| | |

Fatty acids, tall-oil, reaction products with diethanolamine:

| Acute oral toxicity | LD50 (Rat): > 3,000 mg/kg Method: OECD Test Guideline 401 Remarks: The test was conducted according to guid Based on data from similar materials | deline |
|---------------------------|---|--------|
| Acute dermal toxicity | LD50 (Rabbit): > 2,000 mg/kg Method: OECD Test Guideline 402 Remarks: The test was conducted according to guidelin Based on data from similar materials | |
| 2,2'-Iminodiethanol: | | |
| Acute oral toxicity | : LD50 (Rat): 1,600 mg/kg | |
| Acute inhalation toxicity | LC50 (Rat, male): > 3.35 mg/l Exposure time: 4 h Test atmosphere: dust/mist | |

Skin corrosion/irritation

Not classified based on available information.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

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|----------------|------------------------------|---------|--|---|--|--|
| Resu | Species Result Remarks | | Rabbit No skin irritation Based on data from similar materials | | | |
| Fatty | acids, tall-oil, reactio | n pro | ducts with dietha | anolamine: | | |
| Spec | ies | : | Rabbit | | | |
| Metho | | : | OECD Test Guid | eline 404 | | |
| Resu Rema | | : | Skin irritation The test was conducted according to guideline | | | |
| | | • | Based on data from similar materials | | | |
| 2,2'-li | minodiethanol: | | | | | |
| Spec | ies | : | Rabbit | | | |
| Resu | lt | : | Skin irritation | | | |
| Serio | ous eye damage/eye ir | ritatio | on | | | |
| Not c | lassified based on avail | able i | nformation. | | | |
| Com | ponents: | | | | | |
| Distil | lates (petroleum), sol | vent- | dewaxed heavy p | paraffinic: | | |
| Spec | | : | Rabbit | | | |
| Resu | | | No eye irritation OECD Test Guid | alian 405 | | |
| Metho Rema | | | | om similar materials | | |
| Fatty | acids, tall-oil, reactio | n nro | ducts with diath | analamina | | |
| Speci | | | Rabbit | | | |
| Resu | | ÷ | | reversing within 21 days | | |
| Metho | | : | OECD Test Guid | | | |
| Rema | arks | : | | ducted according to guideline | | |
| | | | | | | |
| | minodiethanol: | | | | | |
| Speci Resu | | : | Rabbit Irreversible effect | ts on the eve | | |
| I Kesu | it. | • | | | | |
| Resp | iratory or skin sensiti | zatio | ı | | | |
| | sensitization | | | | | |
| Not c | lassified based on avail | able i | nformation. | | | |
| Resp | iratory sensitization | | | | | |
| | lassified based on avail | able i | nformation. | | | |
| Com | ponents: | | | | | |
| Distil | lates (petroleum), sol | vent- | dewaxed heavy p | paraffinic: | | |
| Test | | : | Buehler Test | | | |
| | es of exposure | : | Skin contact | | | |
| Spec | ies | ÷ | Guinea pig | | | |

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| Metho Resu Rema | lt arks | : negative : Based on data | : OECD Test Guideline 406 : negative : Based on data from similar materials | | |
| Test | Type es of exposure ies od It | : Maximization : Skin contact : Guinea pig : OECD Test G : negative : The test was | Maximization Test Skin contact Guinea pig OECD Test Guideline 406 | | |
| 2,2'-lı | minodiethanol: | | | | |
| Test Route Speci Metho Resu | es of exposure ies od | : Maximization : Skin contact : Guinea pig : OECD Test G : negative | | | |
| | n cell mutagenicity lassified based on ava | ailable information. | | | |
| _ | ponents: | | | | |

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Remarks: Based on data from similar materials |
|------------------------|---|---|
| Genotoxicity in vivo : | | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative Remarks: Based on data from similar materials |

Petroleum gases, liquefied, sweetened:

| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on data from similar materials |
|-----------------------|---|--|
| | | Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) |

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| | | Species: Rat Application Route: inhalation (gas) Method: OECD Test Guideline 474 Result: negative Remarks: Based on data from similar materials |
| Fatty | v acids, tall-oil, react | on products with diethanolamine: |
| Genotoxicity in vitro | | Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: No test guideline followed Based on data from similar materials |
| | | Test Type: In vitro mammalian cell gene mutation test Result: negative Remarks: No test guideline followed Based on data from similar materials |
| | | Test Type: Chromosome aberration test in vitro Result: negative Remarks: No test guideline followed Based on data from similar materials |
| Geno | otoxicity in vivo | : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Skin contact Result: negative Remarks: Based on data from similar materials |
| 2.2'-1 | minodiethanol: | |
| | otoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES) Result: negative |
| | | Test Type: In vitro mammalian cell gene mutation test Result: negative |
| | | Test Type: Chromosome aberration test in vitro Result: negative |
| | | Test Type: In vitro sister chromatid exchange assay in mam- malian cells Result: negative |
| Geno | otoxicity in vivo | : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Skin contact Result: negative |

Carcinogenicity

Not classified based on available information.

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|---|--------------------------------|---|---|--|--|--|--|--|
| Comp | <u>Components:</u> | | | | | | | |
| Distil | lates (petroleum), sol | vent-dewaxed heavy | y paraffinic: | | | | | |
| Species Application Route Exposure time Method Result | | : Mouse : Skin contact : 78 weeks : OECD Test Gu : negative | Skin contact 78 weeks OECD Test Guideline 451 | | | | | |
| 2,2'-Ir | ninodiethanol: | | | | | | | |
| | cation Route sure time t | Mouse Skin contact 103 weeks positive The mechanisr mans. | n or mode of action may not be relevant in hu- | | | | | |
| | cation Route sure time | : Rat : Skin contact : 103 weeks : negative | | | | | | |
| Carcir ment | nogenicity - Assess- | : Weight of evide cinogen | ence does not support classification as a car- | | | | | |

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

Petroleum gases, liquefied, sweetened:

| Effects on fertility | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: inhalation (gas) Method: OECD Test Guideline 422 Result: negative Remarks: Based on data from similar materials |
|------------------------------|---|--|
| Effects on fetal development | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: inhalation (gas) Method: OECD Test Guideline 422 Result: negative Remarks: Based on data from similar materials |

Fatty acids, tall-oil, reaction products with diethanolamine:

| Effects on fetal development | : | Test Type: Embryo-fetal development |
|------------------------------|---|-------------------------------------|
| | | Species: Rat |
| | | Application Route: Ingestion |
| | | Method: OECD Test Guideline 414 |

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| | | | | t was conducted according to guideline om similar materials | |
| 2,2'-lı | minodiethanol: | | | | |
| ' | s on fertility | : | Test Type: One-g Species: Rat Application Route Method: OECD To Result: positive | | |
| Effect | s on fetal development | : | Test Type: One-g Species: Rat Application Route Method: OECD To Result: positive | | |
| Repro sessn | oductive toxicity - As- nent | : | | f adverse effects on sexual function and development, based on animal experiments. | |
| Not cl | -single exposure assified based on availa conents: leum gases, liquefied, | | | | |
| | ssment | : | May cause drows | iness or dizziness. om similar materials | |
| | STOT-repeated exposure Not classified based on available information. | | | | |
| Com | oonents: | | | | |
| 2,2'-lı | ninodiethanol: | | | | |
| Targe | es of exposure et Organs ssment | : | Shown to produce | ver, Nervous system e significant health effects in animals at con-) to 100 mg/kg bw. | |
| Targe | es of exposure et Organs ssment | : | | ist/fume) e significant health effects in animals at con- 02 to 0.2 mg/l/6h/d. | |
| Targe | es of exposure et Organs ssment | : | | ey e significant health effects in animals at con-) to 200 mg/kg bw. | |

according to the Hazardous Products Regulations



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Repeated dose toxicity

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

| Species NOAEL Application Route Exposure time Method Remarks | Rabbit 1,000 mg/kg Skin contact 4 Weeks OECD Test Guideline 410 Based on data from similar materials |
|---|---|
| Species NOAEL Application Route Exposure time Remarks | Rat > 980 mg/m³ inhalation (dust/mist/fume) 4 Weeks Based on data from similar materials |

Petroleum gases, liquefied, sweetened:

2 2'-Iminodiethanol

| Species : | Rat |
|---|--------------------------------------|
| NOAEL : | >=10000 ppm |
| Application Route : | inhalation (gas) |
| Exposure time : | 13 Weeks |
| Method : | OECD Test Guideline 413 |
| Species:NOAEL:Application Route:Exposure time:Method:Remarks: | Based on data from similar materials |

Fatty acids, tall-oil, reaction products with diethanolamine:

| Species NOAEL Application Route Exposure time Remarks | : Rat : > 100 mg/kg : Ingestion : 90 Days |
|---|--|
| Exposure time | : 90 Days |
| Remarks | : Based on data from similar materials |

| Species LOAEL Application Route Exposure time | : | Rat, female 14 mg/kg Ingestion 13 Weeks |
|--|---|--|
| Species NOAEL Application Route Exposure time Method | | Rat 0.015 mg/l inhalation (dust/mist/fume) 90 Days OECD Test Guideline 413 |
| Species LOAEL Application Route Exposure time | | Rat 32 mg/kg Skin contact 13 Weeks |

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Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials |
|---|---|--|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity) | : | NOEC (Daphnia magna (Water flea)): 10 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | NOEC: > 1.93 mg/l Exposure time: 10 min Method: DIN 38 412 Part 8 Remarks: Based on data from similar materials |

Fatty acids, tall-oil, reaction products with diethanolamine:

| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)): > 1 - 10 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: The test was conducted according to guideline Based on data from similar materials |
|---|--|
| Toxicity to daphnia and other aquatic invertebrates | EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: The test was conducted according to guideline Based on data from similar materials |
| 2,2'-Iminodiethanol: | |

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 460 mg/l Exposure time: 96 h

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|------------------|---|-----|--|---|
| | ty to daphnia and other c invertebrates | : | EC50 (Ceriodaphi Exposure time: 48 | nia dubia (water flea)): 30.1 mg/l 8 h |
| Toxici plants | ty to algae/aquatic | : | ErC50 (Pseudokir mg/l Exposure time: 72 | chneriella subcapitata (green algae)): 9.5 ? h |
| | | | EC10 (Pseudokiro mg/l Exposure time: 72 | chneriella subcapitata (green algae)): 1.1 ? h |
| | ty to daphnia and other c invertebrates (Chron- city) | : | EC10 (Daphnia m Exposure time: 21 | agna (Water flea)): 1.05 mg/l d |
| Toxici | ty to microorganisms | : | EC10 (activated s Exposure time: 30 Method: OECD Te | |
| II Persis | stence and degradabili | ity | | |
| Comp | onents: | | | |
| Distill | ates (petroleum), solve | ent | dewaxed heavy p | araffinic: |
| Biode | gradability | : | Result: Not readily Biodegradation: 2 Exposure time: 28 Method: OECD Te | 2 - 8 % |
| II Petrol | leum gases, liquefied, | swe | eetened: | |
| Biode | gradability | : | Result: Readily bio Remarks: Based o | odegradable. on data from similar materials |
| | acids, tall-oil, reaction | pro | oducts with dietha | nolamine: |
| Biode | gradability | : | Remarks: The tes | odegradable. est Guideline 301D t was conducted according to guideline m similar materials |
| 2,2'-In | ninodiethanol: | | | |
| Biode | gradability | : | Result: Readily bio Biodegradation: 9 Exposure time: 28 Method: OECD Te | 93 % |
| Bioac | cumulative potential | | | |
| <u>Comp</u> | oonents: | | | |

Petroleum gases, liquefied, sweetened:

according to the Hazardous Products Regulations



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| Partition coefficient: n- octanol/water | | : log Pow: <= 2 | .8 | |
| Fatty | acids, tall-oil, reactio | n products with die | ethanolamine: | |
| Partition coefficient: n- octanol/water | | : log Pow: > 4 Remarks: Exp | pert judgment | |
| 2,2'-lr | minodiethanol: | | | |
| | ion coefficient: n- ol/water | : log Pow: -2.46 Method: OEC | 6 D Test Guideline 107 | |
| Mobil | lity in soil | | | |
| No da | ata available | | | |
| Other | r adverse effects | | | |
| No da | ata available | | | |
| SECTION 13. DISPOSAL CONSIDERATIONS | | | | |
| Dispo | osal methods | | | |
| - | e from residues | · Do not dispos | e of waste into sewer | |

| Waste from residues | : | Do not dispose of waste into sewer. | | |
|------------------------|---|--|--|--|
| | | Dispose of in accordance with local regulations. | | |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or ex- pose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product. Please ensure aerosol cans are sprayed completely empty (including propellant) | | |

SECTION 14. TRANSPORT INFORMATION

International Regulations

| UNRTDG UN number Proper shipping name Class Packing group Labels Environmentally hazardous | : | UN 1950 AEROSOLS 2.1 Not assigned by regulation 2.1 yes |
|---|---|--|
| IATA-DGR UN/ID No. Proper shipping name Class Packing group | : | UN 1950 Aerosols, flammable 2.1 Not assigned by regulation |

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| Labels Packing instruction (cargo aircraft) Packing instruction (passen- ger aircraft) | | Flammable Gas 203 203 | | |
| IMDG-Code UN number Proper shipping name Class Packing group Labels EmS Code Marine pollutant | | UN 1950 AEROSOLS (4-Nonylphenol, branched, ethoxylated, Fatty acids, tall-oil, reaction products with diethanolamine) 2.1 Not assigned by regulation 2.1 F-D, S-U yes | | |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied. | | | | |
| Dome | estic regulation | | | |
| | umber er shipping name | UN 1950 AFROSOLS | | |

| Proper shipping name | : AEROSOLS | |
|--|---|--------------|
| Class Packing group Labels ERG Code Marine pollutant | 2.1 Not assigned by regulation 2.1 126 yes(4-Nonylphenol, branched, ethoxylated, Fatty acids reaction products with diethanolamine) | s, tall-oil, |
| | | |

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

| Volatile organic compounds (VOC) content | Canada - Volatile Organic Compound Concentration Limits for Certain Products Regulations VOC content: 20.1 % |
|---|--|
| The ingredients of this product | t are reported in the following inventories: |
| DSL : | All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL). |

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

according to the Hazardous Products Regulations



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| ACGI | | | | eshold Limit Values (TLV) | |
| CA AB OEL | | : | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) | | |
| CA BO | OEL | : | Canada. British Columbia OEL | | |
| CA QC OEL | | : | Québec. Regulation respecting occupational health and safe- ty, Schedule 1, Part 1: Permissible exposure values for air- borne contaminants | | |
| ACGIH / TWA | | : | 8-hour, time-weighted average | | |
| ACGIH / STEL | | : | Short-term exposure limit | | |
| CA AB OEL / TWA | | : | 8-hour Occupational exposure limit | | |
| CA AB OEL / STEL | | : | 15-minute occupational exposure limit | | |
| CA BC OEL / TWA | | : | 8-hour time weighted average | | |
| CA BC OEL / STEL | | : | short-term exposure limit | | |
| CA QC OEL / TWAEV | | : | Time-weighted av | verage exposure value | |

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

| Sources of key data used to compile the Material Safety Data Sheet | : | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/ |
|--|---|--|
| Revision Date Date format | - | 01/22/2025 mm/dd/yyyy |

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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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