

Rocol RTD Compound

Rocol

Chemwatch Hazard Alert Code: 2

Chemwatch: 6093549

Version No: 8.1

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Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

L.GHS.AUS.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

| | |
|-------------------------------|---|
| Product name | Rocol RTD Compound |
| Chemical Name | Not Applicable |
| Synonyms | Not Available |
| Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% and pine oil, concrete) |
| Chemical formula | Not Applicable |
| Other means of identification | Not Available |

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

| | |
|--------------------------|--|
| Relevant identified uses | Industrial and commercial application ,metalworking adjuvant ,lubricant. |
|--------------------------|--|

Details of the supplier of the safety data sheet

| | |
|-------------------------|---|
| Registered company name | Rocol |
| Address | ROCOL House, Swillington West Yorkshire Leeds LS26 8BS United Kingdom |
| Telephone | +44 113 232 2700 |
| Fax | +44 113 232 2740 |
| Website | http://www.rocol.com/ |
| Email | customer-service@rocol.com |

Emergency telephone number

| Association / Organisation | Rocol | CHEMWATCH EMERGENCY RESPONSE |
|-----------------------------------|----------------------|------------------------------|
| Emergency telephone numbers | +44 (0) 113 232 2600 | +61 1800 951 288 |
| Other emergency telephone numbers | Not Available | +61 3 9573 3188 |


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

SECTION 2 Hazards identification

Classification of the substance or mixture

| | |
|--------------------|---|
| Poisons Schedule | Not Applicable |
| Classification [1] | Reproductive Toxicity Effects on or via Lactation, Hazardous to the Aquatic Environment Acute Hazard Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 1 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

Label elements

| | |
|---------------------|---|
| Hazard pictogram(s) |  |
|---------------------|---|

Rocol RTD Compound

| | |
|-------------|----------------|
| Signal word | Warning |
|-------------|----------------|

Hazard statement(s)

| | |
|---------------|--|
| H362 | May cause harm to breast-fed children. |
| H402 | Harmful to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| AUH066 | Repeated exposure may cause skin dryness and cracking. |

Precautionary statement(s) Prevention

| | |
|-------------|---|
| P201 | Obtain special instructions before use. |
| P260 | Do not breathe dust/fume. |
| P263 | Avoid contact during pregnancy and while nursing. |
| P270 | Do not eat, drink or smoke when using this product. |
| P273 | Avoid release to the environment. |
| P264 | Wash all exposed external body areas thoroughly after handling. |

Precautionary statement(s) Response

| | |
|------------------|---|
| P308+P313 | IF exposed or concerned: Get medical advice/ attention. |
| P391 | Collect spillage. |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

| | |
|-------------|--|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|-------------|--|

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|------------|-----------|---|
| 85535-85-9 | 50-<80 | <u>C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58%</u> |
| 94266-48-5 | <1 | <u>pine oil, concrete</u> |

Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available

SECTION 4 First aid measures

Description of first aid measures

| | |
|---------------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ 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 | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ 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 | <ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. |

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| | <ul style="list-style-type: none"> ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor. |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

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

Special hazards arising from the substrate or mixture

| | |
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| 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 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 | <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). ▶ May emit acrid smoke. ▶ Mists containing combustible materials may be explosive. <p>Combustion products include: carbon monoxide (CO) carbon dioxide (CO₂) hydrogen chloride phosgene other pyrolysis products typical of burning organic material.</p> |
| HAZCHEM | 2Z |

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| | |
|---------------------|---|
| Minor Spills | <p>Environmental hazard - contain spillage. Slippery when spilt.</p> <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid contact with skin and eyes. |
|---------------------|---|

| | |
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| | <ul style="list-style-type: none"> ▶ 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 | <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water course. ▶ Stop leak if safe to do so. ▶ Contain spill with sand, earth or vermiculite. ▶ Collect recoverable product into labelled containers for recycling. ▶ Neutralise/decontaminate residue (see Section 13 for specific agent). ▶ Collect solid residues and seal in labelled drums for disposal. ▶ Wash area and prevent runoff into drains. ▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. ▶ If contamination of drains or waterways occurs, advise emergency services. <p>Environmental hazard - contain spillage. Slippery when spilt.</p> |

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

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. ▶ 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. ▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use. ▶ Use good occupational work practice. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. ▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. |
| 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. ▶ 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. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|--|
| Suitable container | <ul style="list-style-type: none"> ▶ DO NOT use aluminium or galvanised containers ▶ 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"> ▶ In general chlorinated paraffins are thermally unstable, tending to eliminate hydrogen chloride. ▶ Long term storage/ processing at 70 deg C. or short term heating at 200 deg C. will produce highly irritant and corrosive, acidic hydrogen chloride gas. ▶ In the absence of an inhibitor (usually a material which readily reacts with traces of hydrogen chloride) they soon turn black or brown at ambient temperatures. ▶ Epoxides or glycols are often used as inhibitors at 1% concentration; chlorinated paraffins, stabilised with propane-1,2-diol or epoxidised soya oil may be heated to 100 C with little change for limited periods as the inhibitor may become depleted with time. ▶ Haloalkanes are highly reactive. ▶ Some of the more lightly substituted lower members are highly flammable. ▶ Reaction with the lighter divalent metals may produce more reactive compounds analogous to Grignard reagents. ▶ Prolonged contact with metallic or other azides may produce explosive compounds. <p>BREThERICKS HANDBOOK OF REACTIVE CHEMICAL HAZARDS, 4th Ed.</p> <ul style="list-style-type: none"> ▶ Reacts vigorously with alkali metals ▶ Avoid reaction with oxidising agents |

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

| Ingredient | TEEL-1 | TEEL-2 | TEEL-3 |
|--------------------|---------------|---------------|---------------|
| Rocol RTD Compound | Not Available | Not Available | Not Available |

| Ingredient | Original IDLH | Revised IDLH |
|--|---------------|---------------|
| C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% | Not Available | Not Available |
| pine oil, concrete | Not Available | Not Available |

Occupational Exposure Banding

| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|--------------------|-----------------------------------|----------------------------------|
| pine oil, concrete | E | ≤ 0.1 ppm |

Notes:


Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

MATERIAL DATA

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> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> <p>Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.</p> <p>An approved self contained breathing apparatus (SCBA) may be required in some situations.</p> <p>Provide adequate ventilation in warehouse or closed storage area. 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.</p> | |
| | 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.) |
| | Within each range the appropriate value depends on: | |
| | Lower end of the range | Upper end of the range |
| | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents |
| | 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity |
| 3: Intermittent, low production. | 3: High production, heavy use | |
| 4: Large hood or large air mass in motion | 4: Small hood-local control only | |
| Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity | | |

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|--------------------------------|---|
| | generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used. |
| 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. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▸ Overalls. ▸ P.V.C apron. ▸ Barrier cream. ▸ Skin cleansing cream. ▸ Eye wash unit. |

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES | A P1 Air-line* | - - | A PAPR-P1 - |
| up to 50 x ES | Air-line** | A P2 | A PAPR-P2 |
| up to 100 x ES | - | A P3 Air-line* | - |
| 100+ x ES | - | Air-line** | A PAPR-P3 |

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties**Information on basic physical and chemical properties**

| | | | |
|-----------------------|---|-------------------------------------|------|
| Appearance | Brown solid with characteristic odour; does not mix with water. | | |
| Physical state | Solid | Relative density (Water = 1) | 1.17 |

Continued...

Rocol RTD Compound

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|---|----------------|--|-----------------------------|
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | >350 (ignition temperature) |
| pH (as supplied) | Not Applicable | Decomposition temperature (°C) | >350 |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | >300 | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | >150 | 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 Applicable |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water | Immiscible | pH as a solution (Not Available%) | Not Applicable |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 Stability and reactivity

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|---|--|
| Reactivity | See section 7 |
| 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>The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>A vapour/ mist containing chlorinated paraffins of more than 10 carbon atoms and a chlorine content ranging between 40 and 70% may produce a sore throat, coughing and shortness of breath.</p> <p>Inhalation hazard is increased at higher temperatures.</p> |
| Ingestion | <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Short chain chlorinated paraffins produced liver damage and myocardial atrophy when fed to rats for 14 days. Large quantities may produce gastrointestinal disturbances including abdominal pain, nausea and vomiting. Rats fed 13600 mg/kg and mice fed 27200 mg/kg of C12, 60% chlorinated paraffin exhibited inactivity, ataxia and diarrhoea possibly related to the large amounts administered rather than to any underlying toxic mechanism elicited by the material.</p> |
| Skin Contact | <p>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.</p> <p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>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.</p> <p>Chlorinated paraffins of more than 10 carbon atoms and with a chlorine content ranging between 40 and 70% may be absorbed</p> |

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| | <p>by the skin and produce areas of localised reddening.</p> <p>Exposure to material may result in a dermatitis, described as chloracne, a persistent acneform (resembling common acne in appearance) characterised by comedones (white-, and black-heads), keratin cysts, and inflamed papules with hyperpigmentation and an anatomical distribution frequently involving the skin under the eyes and behind the ears. Other areas affected are the face, neck, shoulders, arms, chest, and abdomen (especially around the umbilicus and scrotum). The most sensitive areas appear to be below and to the outer side of the eye and behind the ear. This condition may be accompanied by intense itching. It occurs after acute or chronic exposure to a variety of chlorinated aromatic compounds by skin contact, ingestion or inhalation and may appear within days to months following the first exposure. Other dermatological alterations include hypertrichosis (the growth of excess hair), and increased incidence of actinic or solar elastosis (the degeneration of elastic tissue within muscles or loss of dermal elasticity produced by the effects of sunlight), and Peyronie's disease (a rare progressive scarring of the penile membrane).</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material.</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> |
| Eye | <p>Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).</p> |
| Chronic | <p>Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.</p> <p>Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive.</p> <p>Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers.</p> <p>Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive.</p> <p>Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Prolonged or repeated exposure to chlorinated paraffins may produce liver and kidney disorders as shown in animal studies. Chronic administration of high doses of chlorinated paraffins to rats produced piloerection, muscle incoordination and urinary and faecal incontinence. Administration of the C12, 60% chlorinated paraffin produced lymphohistiocytic inflammation of the liver and pancreatic and mesenteric lymph nodes, with secondary congestion of the spleen and liver damage. An exacerbation of severe nephropathy that occurs in aging rats was also reported. Chronic feeding with chlorinated paraffins (C12, 60% chlorine and C23, 43% chlorine) produced inflammation and lesions of the stomach, particularly in male rats. Gavage studies show an increased incidence of liver, kidney and thyroid neoplasms, alveolar/ bronchiolar carcinomas and leukaemia. Chlorinated paraffins as a group are generally not regarded as genotoxic and are unlikely to present a carcinogenic hazard to humans under normal conditions of handling and use. Rats fed on a diet containing 6250 ppm chlorinated paraffins (C14-17, 52% chlorine) produced offspring which did not survive to weaning. Neonates showed subcutaneous haematoma, pale discoloration, bloody orifices, haemorrhage in the cranial cavity and pale livers, kidneys and spleens.</p> <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> |

| | TOXICITY | IRRITATION |
|---|---|---|
| Rocol RTD Compound | Inhalation (Rat) LC50: >5100 mg/m ³ /4h* ^[2] Oral (Rat) LD50: >2000 mg/kg* ^[2] | Not Available |
| C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% | dermal (rat) LD50: >3125 mg/kg ^[1] Inhalation(Rat) LC50; >12.043 mg/L4h ^[1] Oral (Rat) LD50; 2000-4000 mg/kg ^[2] | Eye: adverse effect observed (irritating) ^[1] Skin: adverse effect observed (irritating) ^[1] Skin: no adverse effect observed (not irritating) ^[1] |
| pine oil, concrete | Dermal (rabbit) LD50: 5000 mg/kg ^[2] Oral (Rat) LD50; 3200 mg/kg ^[2] | Skin (rabbit): 500 mg/24h-SEVERE |

Legend:

1. 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

**C14-17 ALKANES,
CHLORINATED-,
CHLORINATED PARAFFIN
52, 58%**

NOTE: C12, 60% chlorinated paraffin [CAS RN 108171-26-2] is classified by IARC as Group 2B. Possibly carcinogenic to humans.

Studies using the C12, 59% chlorinated variant (in combination with corn oil) caused tumors when force fed at very high doses over long periods of time. Pregnant rats fed C16, 52% chlorinated paraffin had offspring which died during weaning.

High molecular weight liquid chloroparaffins are considered to be practically non-harmful. Special consideration should be given to solid grades of the material (eg Cereclor 70) because of relatively high levels of carbon tetrachloride remaining as a residual reactant. Vapours are readily absorbed through intact skin, requiring additional precautions in handling.

Lifetime studies have been carried out with two grades of chlorinated paraffins. A short-chain grade with 58% chlorine caused tumours in rats and mice. Male mice exposed to long-chain grades with 40% chlorine showed an excess of tumours at one site. It has been shown that the mechanisms by which short-term paraffins cause tumours are specific to rodents and may not have relevance to human health. Furthermore, chlorinated paraffins have been shown to non-genotoxic.

The Regulatory regime in various countries differs with respected to chlorinated paraffins.

In the USA, the short-chain (C12), 58% chlorine product has been classified and labelled as a carcinogen.

In Germany the MAK Commission has classified most chlorinated paraffins as Category IIIB (suspect carcinogens). They are not however included in the list of substances (TRGS 905) required to be labelled.

All EU Member States are required to classify short chain chlorinated paraffins as Category 3 carcinogens.

PINE OIL, CONCRETE

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

No significant acute toxicological data identified in literature search.

For terpenoid tertiary alcohols and their related esters:

Substances assigned to this category, as part of the HPV Challenge Program, possess close structural relationships, similar physicochemical properties and participate in the same pathways of metabolic detoxification and have similar toxicologic potential.

Acute Toxicity: Oral and dermal LD50 values for members of this chemical category indicate a low order of both oral and dermal toxicity. All rabbit dermal, and mouse and rat oral LD50 values exceed 2000 mg/kg with the majority of values greater than 5000 mg/kg

Repeat dose toxicity: In a safety evaluation study, a 50/50 mixture of linalool and citronellol was fed to male and female rats (number and strain not specified) in the diet. The daily intake was calculated to be 50 mg/kg bw of each. Measurements of haematology, clinical chemistry, and urinalysis at weeks 6 and 12 showed no statistically significant differences between test and control groups. Histopathology revealed no dose-related lesions. A slight retardation of growth was observed in males only, but was concluded by the authors to be biologically insignificant

Reproductive toxicity: Four groups of 10 virgin CrI CD rats were administered 0,250,500, or 1000 mg/kg bw of an essential oil (coriander oil) known to contain 73% linalool by mass. The test material was given by gavage once daily, 7 days prior to cohabitation, through cohabitation (maximum of 7 days), gestation, delivery, and a 4-day post-parturition period. The duration of the study was 39 days. Maternal effects reported included increased body weight and increased food consumption at 250 mg/kg/d, a non-statistically significant decrease in body weight and food consumption and decreased gestation index and decreased length of gestation at 500 mg/kg/d, and a statistically significant decrease in body weight and food consumption, statistically significant decrease in gestation index, length of gestation, and litter size at 1000 mg/kg/d. The only effect on pups was a decrease in viability of pups at the highest dose level. The authors concluded that there were no effects observed in the dams at the low dose of 250 mg/kg bw/d or in the offspring at the 250 and 500 mg/kg bw/d levels. The authors concluded that the maternal NOAEL was 250 mg/kg/d and the developmental NOAEL was 500 mg/kg/d.

Four groups of 10 virgin CrI CD rats were administered 0,375,750, or 1500 mg/kg bw of an essential oil (cardamom oil) known to contain greater than 65 % tertiary terpenoid alcohols with 5 1% alpha-terpineol acetate by mass. Maternal observations included a non-statistically significant decrease in body weight gain and food consumption at 375 mg/kg/d.

Mortality, clinical signs, a statistically significant decrease in body weight gain and food consumption, and gross lesions at necropsy were seen at 750 and 1500 mg/kg/d. The only effects on pups were a reduced body weight gain in pups at 750 and 1500 mg/kg/d and increased mortality at 1500 mg/kg/d. The authors concluded that there were no significant adverse effects in the dams or offspring at the 375 mg/kg/d dose. A maternal NOEL was reported to be less than 375 mg/kg/d based on reduced body weight gain and food consumption at 375 mg/kg/d and a developmental NOAEL was reported to be 375 mg/kg/d

Developmental toxicity: A range finding study and follow-up teratology study was performed with pine oil. Pregnant CrI:CD(SD) BR rats were given 0, 50, 100, 500,750,or 1000 mg/kg/d by gavage in corn oil on days 6 to 20 of gestation. Laparotomies were performed, corpora lutea were counted, and the uterus of each rat was removed, weighed and then examined for number, placement and viability of implantations. Live foetuses were weighed, sexed and gross external alternations were identified.

There were no deaths or abortions during the course of this study. Necropsy revealed no gross lesions. Maternal effects included local alopecia, decreased body weight gain and food consumption for the 3 highest dose levels. At 750 and 1000 mg/kg, average gravid uterine weight was reduced. In foetuses, decreased body weight was observed at dose levels of 100 mg/kg and above, and at dose levels of 500 and above there was a slight increase in average number of resorptions/litter.

In the follow-up teratology study, pregnant CrI:CD(SD) BR rats were given 0, 50, 600, or 1200 mg/kg/d by gavage in corn oil on days 6 to 20 of gestation. Six of the 25 rats in 1200 mg/kg dose group died and necropsies revealed that adrenal weights were significantly increased in these rats. At 1200 mg/kg/d, foetuses exhibited increased incidences of delayed ossification, delayed brain development, decreased weights, increased embryo -foetal mortality, and sunken eye bulge with associated soft and hard tissue findings, a dose that also resulted in maternal death and a low incidence of embryo-foetal death (resorption). The maternal and developmental NOEL for pine oil was greater than 50 mg/kg/d but less than 600 mg/kg/d

Genotoxicity: Mutagenicity/genotoxicity testing has been performed on six members of this chemical category, including a complete battery of in vitro genotoxicity tests using linalool. In nineteen separate in vitro tests on the mutagenicity and genotoxicity of terpenoid tertiary alcohols and related esters, all but two were negative. One of the positive results for linalool was observed in a rec assay using differences in growth rates in two strains of *Bacillus subtilis* as a measure of DNA changes. In contrast, no evidence of mutagenicity was observed in the same test at a higher concentrations nor was DNA damage observed in a rat hepatocyte UDS assay. The authors of the mouse lymphoma assay which gave a weak positive result for linalool, emphasized that positive results in this assay are commonly observed for polar substances in the absence of S-9 and may be associated with changes in physiologic culture conditions (pH and osmolality).

Based on a weight of evidence evaluation of the available in vitro and in vivo mutagenicity and genotoxicity assays on terpenoid tertiary alcohols and related esters, this group of flavouring substances would not be expected to exhibit a low genotoxic potential in vivo

Metabolic fate: Based on the results of hydrolysis, the reactivity of linalool in aqueous media, and data on metabolism it is concluded that members of this chemical category exhibit similar chemical and biochemical fate. The esters are readily hydrolyzed to the corresponding alcohols, linalool and alpha-terpineol. Linalool is then partial converted to alpha-terpineol mainly under acidic conditions. Alicyclic and aliphatic tertiary alcohols are efficiently detoxicated by two principal pathways: conjugation primarily with glucuronic acid and excretion primarily in urine, and omega-oxidation to eventually yield diacids and their reduced or hydrated analogs. These polar metabolites will be efficiently excreted primarily in the urine either unchanged or as the glucuronic acid conjugates. The physicochemical and toxicological properties of these substances are consistent with their known reactivity and common metabolic fate.

Esters belonging to this category can be hydrolysed to their corresponding terpenoid alcohol and organic acid. Hydrolysis can also be catalysed by a class of esters known as carboxylesterases or B-type esterases that predominated in hepatocytes.

Esters of tertiary terpenoid alcohols are readily hydrolyzed in animals, including fish. Once hydrolysed, the resulting alcohols undergo excretion unchanged or as the glucuronic acid conjugate. To a minor extent, CYP-450 mediated oxidation at the omega or omega-1 position yields polar oxidized metabolites capable of excretion primarily in the urine. Terpenoid alcohols formed in the gastrointestinal tract are readily absorbed. During hydrolysis under acidic condition cyclisation may occur.

In humans and animals, terpenoid tertiary alcohols primarily conjugate with glucuronic acid and are excreted in the urine and feces. Terpenoid alcohols with unsaturation may also undergo allylic oxidation to form polar diol metabolites that may be excreted either free or conjugated. If the diol contains a primary alcohol function, it may undergo further oxidation to the corresponding carboxylic acid. In a minor pathway, the endocyclic alkene of alpha-terpineol is epoxidised and then hydrolyzed to yield a triol metabolite 1,2,8-trihydroxy-p-menthane which also has been reported in humans following inadvertent oral ingestion of a pine oil disinfectant containing alpha-terpineol.

Bicyclic tertiary alcohols are conjugated with glucuronic acid and excreted primarily in the urine. In rabbits the structurally related bicyclic tertiary alcohols thujyl alcohol (4-methyl-1-(1-methylethyl)bicyclo[3.1.0]-hexan-3-ol) and beta-santenol (2,3,7-trimethylbicyclo[2.2.1]-heptan-2-ol) are conjugated with glucuronic acid. In a metabolism study using the terpenoid tertiary alcohol trans-sobrerol, in humans, dogs, and rats, ten metabolites were isolated in urine, eight of which were characterised in humans. Two principle modes of metabolism were observed, allylic oxidation of the ring positions and alkyl substituents, and conjugation of the tertiary alcohol fractions with glucuronic acid. These metabolic patterns are common modes of converting tertiary and secondary terpenoid alcohols to polar metabolites, which are easily excreted in the urine and faeces. Menthol forms similar conjugation products in rats

Camphor appears to have moderate acute oral toxicity, with an LD50 of 1310 mg/kg in mice. It demonstrated moderate to high toxicity in acute inhalation studies (450 mg/m³ (72 ppm) in mice and 500 mg/m³ (80 ppm) in rats). In subchronic studies, inhaled camphor resulted in emphysema in mice at 210 mg/m³ (33 ppm) and rabbits at 33 mg/m³ (5 ppm). In 13-week subchronic dermal studies, camphor had NOAELs of 1000 mg/kg bw/day in mice and 250 mg/kg bw/day in rats. IPCS reported negative results in carcinogenicity tests for camphor. In addition, camphor was negative for genotoxicity in a microsome mutagenesis test, and a peripheral blood micronucleus assay. Reproductive toxicity studies were not available for camphor, however, in developmental toxicity studies, camphor demonstrated no foetal toxicity (with NOAELs 800 mg/kg bw/day in rats) at dose levels that resulted in maternal toxicity

| | | | |
|-----------------------------------|---|--------------------------|---|
| 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 either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

Rocol RTD Compound

Toxicity

| Rocol RTD Compound | Endpoint | Test Duration (hr) | Species | Value | Source |
|--|--|--------------------|-------------------------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50(ECx) | 48h | Crustacea | 0.006mg/l | 2 |
| | EC50 | 72h | Algae or other aquatic plants | >3.2mg/l | 2 |
| | EC50 | 48h | Crustacea | 0.006mg/l | 2 |
| | LC50 | 96h | Fish | >5000mg/l | 2 |
| | EC50 | 96h | Algae or other aquatic plants | >3.2mg/l | 2 |
| pine oil, concrete | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50(ECx) | 48h | Crustacea | 12mg/l | Not Available |
| | EC50 | 48h | Crustacea | 12mg/l | Not Available |
| | LC50 | 96h | Fish | 62mg/l | Not Available |
| Legend: | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data | | | | |

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

The term chlorinated paraffins is usually taken to encompass a wide range of liquids and solids from C10 to >C24 and containing 30-72% chlorine content.

Properties differ significantly across this range and for this reason they are considered in three separate groups.

1. The C10-13 liquid products from 40-72% Cl₂ content
2. The C14-17, C18-20 and chlorinated paraffin wax liquids (average C₂₅) from 40-60% Cl₂ content
3. The powdered chlorinated paraffin waxes of >69% Cl₂ content

Liquid grades of chlorinated paraffin are produced from paraffins and waxes while solid grades are produced from waxes with a 70-72% chlorine content.

Increasing chlorine content results in higher viscosity and density.

- ▶ Chlorinated paraffins have very low vapour pressure with the most volatile (C10-13 types) < 10-3 mbar. They are chemically stable but dehydrochlorinated on heating at high temperatures (for prolonged periods). Dehydrochlorination also occurs on prolonged exposure to light.
- ▶ All have low solubility in water but C10-13 types are significantly more soluble than other classes which show decreased solubility with increasing chain length.
- ▶ Studies confirm that they adsorb strongly onto suspended materials or sediments in an aqueous environment. True solutions (at the low solubility limit) do degrade without added reagents.
- ▶ Laboratory studies often fail to indicate biodegradation occurring, but longer term studies in biological effluent treatment plants do reveal substantial degradation and the undegraded residue is removed by adsorption onto biological sludge.
- ▶ The short chain grades have been shown in laboratory tests, to have toxic effects on fish and other forms of aquatic life after long-term exposure to concentrations close to their water solubility, and significantly higher than those found typically in the environment.
- ▶ Mid-chain forms show a significantly reduced spectrum of toxicity compared to short-chain grades, as would be expected from their lower bioaccumulation. No measurable short or long term toxicity has been found in studies with numerous species of fish. Only one of several aquatic invertebrate species that has been tested showed any sensitivity but at levels higher than those found in the environment. Similarly, certain soil and sediment organisms are affected at levels of hundreds of parts per million (ppm) whilst others are affected at 1000s of ppm.
- ▶ Long chain grades, because of their large molecular size and their very low solubility, have shown no toxicity to fish and other forms of aquatic life at and above their solubility limit.

DO NOT discharge into sewer or waterways.

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

Continued...

Rocol RTD Compound

| Ingredient | Mobility |
|------------|---------------------------------------|
| | No Data available for all ingredients |



SECTION 13 Disposal considerations

Waste treatment methods

| | |
|-------------------------------------|--|
| Product / Packaging disposal | <ul style="list-style-type: none"> ▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none"> ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product. ▸ DO NOT allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Where in doubt contact the responsible authority. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Authority for disposal. ▸ Bury or incinerate residue at an approved site. ▸ Recycle containers if possible, or dispose of in an authorised landfill. |
|-------------------------------------|--|

SECTION 14 Transport information

Labels Required

| | |
|-------------------------|---|
| |  |
| Marine Pollutant |  |
| HAZCHEM | 2Z |

Land transport (ADG)

| | | |
|-------------------------------------|---|----------------------|
| UN number | 3077 | |
| UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% and pine oil, concrete) | |
| Transport hazard class(es) | Class | 9 |
| | Subrisk | Not Applicable |
| Packing group | III | |
| Environmental hazard | Environmentally hazardous | |
| Special precautions for user | Special provisions | 274 331 335 375 AU01 |
| | Limited quantity | 5 kg |

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

(a) packagings;

(b) IBCs; or

(c) any other receptacle not exceeding 500 kg(L).

- Australian Special Provisions (SP AU01) - ADG Code 7th Ed.

Air transport (ICAO-IATA / DGR)

| | |
|--------------------------------|---|
| UN number | 3077 |
| UN proper shipping name | Environmentally hazardous substance, solid, n.o.s. * (contains C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% and pine oil, concrete) |

Rocol RTD Compound

| | | |
|-------------------------------------|---|-------------------------|
| Transport hazard class(es) | ICAO/IATA Class | 9 |
| | ICAO / IATA Subrisk | Not Applicable |
| | ERG Code | 9L |
| Packing group | III | |
| Environmental hazard | Environmentally hazardous | |
| Special precautions for user | Special provisions | A97 A158 A179 A197 A215 |
| | Cargo Only Packing Instructions | 956 |
| | Cargo Only Maximum Qty / Pack | 400 kg |
| | Passenger and Cargo Packing Instructions | 956 |
| | Passenger and Cargo Maximum Qty / Pack | 400 kg |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y956 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 30 kg G |

Sea transport (IMDG-Code / GGVSee)

| | | |
|-------------------------------------|---|---------------------|
| UN number | 3077 | |
| UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% and pine oil, concrete) | |
| Transport hazard class(es) | IMDG Class | 9 |
| | IMDG Subrisk | Not Applicable |
| Packing group | III | |
| Environmental hazard | Marine Pollutant | |
| Special precautions for user | EMS Number | F-A, S-F |
| | Special provisions | 274 335 966 967 969 |
| | Limited Quantities | 5 kg |

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

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name | Group |
|--|---------------|
| C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% | Not Available |
| pine oil, concrete | Not Available |

Transport in bulk in accordance with the ICG Code

| Product name | Ship Type |
|--|---------------|
| C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% | Not Available |
| pine oil, concrete | Not Available |

SECTION 15 Regulatory information

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

C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58% is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

pine oil, concrete is found on the following regulatory lists

Continued...

Rocol RTD Compound

Australian Inventory of Industrial Chemicals (AIIC)

National Inventory Status

| National Inventory | Status |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (C14-17 alkanes, chlorinated-, chlorinated paraffin 52, 58%; pine oil, concrete) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | No (pine oil, concrete) |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | No (pine oil, concrete) |
| Vietnam - NCI | Yes |
| Russia - FBEPH | No (pine oil, concrete) |
| Legend: | <i>Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.</i> |

SECTION 16 Other information

| | |
|---------------|------------|
| Revision Date | 15/04/2021 |
| Initial Date | 23/01/2019 |

SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|----------------|--|
| 7.1 | 01/11/2019 | One-off system update. NOTE: This may or may not change the GHS classification |
| 8.1 | 15/04/2021 | Classification change due to full database hazard calculation/update. |

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
ES: Exposure Standard
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

Continued...

AIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European Inventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.