



High Grade Cleaning Fluid #136-8537

RS Components

Chemwatch: 5316-77
Version No: 2.1.1.1
Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 4

Issue Date: 26/07/2018
Print Date: 27/07/2018
L.GHS.AUS.EN

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

Product Identifier

| | |
|-------------------------------|-------------------------------------|
| Product name | High Grade Cleaning Fluid #136-8537 |
| Synonyms | Not Available |
| Proper shipping name | AEROSOLS |
| Other means of identification | Not Available |

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

| | |
|--------------------------|--|
| Relevant identified uses | Application is by spray atomisation from a hand held aerosol pack Cleaning agent. |
|--------------------------|--|

Details of the supplier of the safety data sheet

| Registered company name | RS Components | RS Components |
|-------------------------|--|--|
| Address | 25 Pavese Street Smithfield NSW 2164 Australia | Level 6, Agility CIS Tower, 56 Cawley Street Ellerslie Auckland 1051 New Zealand |
| Telephone | +1 300 656 636 | +64 27 4747122 |
| Fax | +1 300 656 696 | +64 9 579 1700 |
| Website | Not Available | www.nz.rs-online.com |
| Email | Not Available | Not Available |

Emergency telephone number

| | | |
|-----------------------------------|--|---------------|
| Association / Organisation | Not Available | Not Available |
| Emergency telephone numbers | 1800 039 008 (24 hours), +61 3 9573 3112 | Not Available |
| Other emergency telephone numbers | Not Available | Not Available |

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

CHEMWATCH HAZARD RATINGS

| | Min | Max |
|--------------|-----|-----|
| Flammability | 4 | |
| Toxicity | 1 | |
| Body Contact | 2 | |
| Reactivity | 1 | |
| Chronic | 0 | |

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

| | |
|--------------------|---|
| Poisons Schedule | Not Applicable |
| Classification [1] | Aerosols Category 1, Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

Label elements

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

Continued...

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SIGNAL WORD

DANGER

Hazard statement(s)

| | |
|--------|--|
| H222 | Extremely flammable aerosol. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |
| AUH044 | Risk of explosion if heated under confinement. |
| AUH066 | Repeated exposure may cause skin dryness and cracking. |

Precautionary statement(s) Prevention

| | |
|------|--|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |
| P251 | Pressurized container: Do not pierce or burn, even after use. |
| P271 | Use only outdoors or in a well-ventilated area. |

Precautionary statement(s) Response

| | |
|----------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P391 | Collect spillage. |

Precautionary statement(s) Storage

| | |
|-----------|--|
| P405 | Store locked up. |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

Precautionary statement(s) Disposal

| | |
|------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
|------|---|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|----------|-----------|-----------------------|
| 109-66-0 | >60 | <u>n-pentane</u> |
| 67-63-0 | 10-30 | <u>isopropanol</u> |
| 124-38-9 | 1-5 | <u>carbon dioxide</u> |

SECTION 4 FIRST AID MEASURES

Description of first aid measures

| | |
|--------------|---|
| Eye Contact | <p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes 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. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> ▶ Flush skin and hair with running water (and soap if available). ▶ Remove any adhering solids with industrial skin cleansing cream. ▶ DO NOT use solvents. ▶ Seek medical attention in the event of irritation. |
| Inhalation | <p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> ▶ Remove to fresh air. ▶ 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. ▶ If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, 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"> ▶ Avoid giving milk or oils. ▶ Avoid giving alcohol. ▶ Not considered a normal route of entry. |

Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- ▶ Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.

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- ▶ Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ 50 mm Hg) should be intubated.
- ▶ Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- ▶ A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- ▶ Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- ▶ Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Treat symptomatically.

For acute or short term repeated exposures to isopropanol:

- ▶ Rapid onset respiratory depression and hypotension indicates serious ingestions that require careful cardiac and respiratory monitoring together with immediate intravenous access.
- ▶ Rapid absorption precludes the usefulness of emesis or lavage 2 hours post-ingestion. Activated charcoal and cathartics are not clinically useful. Ipecac is most useful when given 30 mins. post-ingestion.
- ▶ There are no antidotes.
- ▶ Management is supportive. Treat hypotension with fluids followed by vasopressors.
- ▶ Watch closely, within the first few hours for respiratory depression; follow arterial blood gases and tidal volumes.
- ▶ Ice water lavage and serial haemoglobin levels are indicated for those patients with evidence of gastrointestinal bleeding.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

SMALL FIRE:

- ▶ Water spray, dry chemical or CO₂

LARGE FIRE:

- ▶ Water spray or fog.

Special hazards arising from the substrate or mixture

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

Advice for firefighters

| | |
|------------------------------|--|
| Fire Fighting | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ May be violently or explosively reactive. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water course. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Liquid and vapour are highly flammable. ▶ Severe fire hazard when exposed to heat or flame. ▶ Vapour forms an explosive mixture with air. ▶ Severe explosion hazard, in the form of vapour, when exposed to flame or spark. <p>Combustion products include:</p> <ul style="list-style-type: none"> carbon dioxide (CO₂) other pyrolysis products typical of burning organic material. <p>Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.</p> |
| HAZCHEM | Not Applicable |

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 | <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Wear protective clothing, impervious gloves and safety glasses. ▶ Shut off all possible sources of ignition and increase ventilation. |
| 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. ▶ May be violently or explosively reactive. ▶ Wear breathing apparatus plus protective gloves. |

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"> ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ 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. |
|----------------------|---|

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Other information

- ▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can
- ▶ Store in original containers in approved flammable liquid storage area.
- ▶ **DO NOT store in pits, depressions, basements or areas where vapours may be trapped.**
- ▶ No smoking, naked lights, heat or ignition sources.
- ▶ Keep containers securely sealed.

Conditions for safe storage, including any incompatibilities

Suitable container

- ▶ Aerosol dispenser.
- ▶ Check that containers are clearly labelled.

Storage incompatibility

- ▶ Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|------------------------------|----------------|------------------------------|-------------------------|-------------------------|---------------|---------------|
| Australia Exposure Standards | n-pentane | Pentane | 600 ppm / 1770 mg/m3 | 2210 mg/m3 / 750 ppm | Not Available | Not Available |
| Australia Exposure Standards | isopropanol | Isopropyl alcohol | 400 ppm / 983 mg/m3 | 1230 mg/m3 / 500 ppm | Not Available | Not Available |
| Australia Exposure Standards | carbon dioxide | Carbon dioxide in coal mines | 12500 ppm / 22500 mg/m3 | 54000 mg/m3 / 30000 ppm | Not Available | Not Available |
| Australia Exposure Standards | carbon dioxide | Carbon dioxide | 5000 ppm / 9000 mg/m3 | 54000 mg/m3 / 30000 ppm | Not Available | Not Available |


EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|----------------|-------------------|------------|------------|------------|
| n-pentane | Pentane, n- | 3000 ppm | 33000 ppm | 200000 ppm |
| isopropanol | Isopropyl alcohol | 400 ppm | 2000 ppm | 12000 ppm |
| carbon dioxide | Carbon dioxide | 30,000 ppm | 40,000 ppm | 50,000 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|----------------|-----------------|---------------|
| n-pentane | 1,500 [LEL] ppm | Not Available |
| isopropanol | 2,000 [LEL] ppm | Not Available |
| carbon dioxide | 40000 ppm | Not Available |

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.</p> |
| Personal protection |  |
| Eye and face protection | <p>No special equipment for minor exposure i.e. when handling small quantities.</p> <p>OTHERWISE: For potentially moderate or heavy exposures:</p> <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ No special equipment needed when handling small quantities. ▶ OTHERWISE: ▶ For potentially moderate exposures: ▶ Wear general protective gloves, eg. light weight rubber gloves. ▶ For potentially heavy exposures: ▶ Wear chemical protective gloves, eg. PVC. and safety footwear. |
| Body protection | See Other protection below |
| Other protection | <p>No special equipment needed when handling small quantities.</p> <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ Overalls. ▶ Skin cleansing cream. ▶ Eyewash unit. |

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

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

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Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

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| Material | CPI |
|-------------------|-----|
| NITRILE | B |
| NAT+NEOPR+NITRILE | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE+PVC | C |
| PE/EVAL/PE | C |
| PVA | C |
| PVC | C |
| VITON | C |

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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

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

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES | Air-line* | AX-2 | AX-PAPR-2 ^ |
| up to 20 x ES | - | AX-3 | - |
| 20+ x ES | - | Air-line** | - |

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

^ - Full-face

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)

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | Colourless extremely flammable liquid (aerosol) with characteristic odour; mixes with water. | | |
|--|--|---|---------------------|
| Physical state | Liquid | Relative density (Water = 1) | 0.63 (bulk density) |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | <-45 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | HIGHLY FLAMMABLE. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water (g/L) | Miscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

| Reactivity | See section 7 |
|------------------------------------|--|
| Chemical stability | <ul style="list-style-type: none"> ▶ Elevated temperatures. ▶ Presence of open flame. ▶ 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>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.</p> <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> |
|---------|---|
|---------|---|

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| | |
|--------------|---|
| | <p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.</p> <p>Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination</p> <p>Central nervous system (CNS) depression may include nonspecific discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p> <p>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.</p> <p>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</p> |
| Ingestion | <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Not normally a hazard due to physical form of product.</p> |
| Skin Contact | <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>Spray mist may produce discomfort</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Material on the skin evaporates rapidly and may cause tingling, chilling and even temporary numbness</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>Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.</p> <p>Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.</p> |
| Chronic | <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p> <p>Chronic exposure to pentanes may result in chemical pneumonitis, pulmonary oedema or peripheral neuropathy. Prolonged or repeated inhalation may cause dizziness, weakness, weight loss, anaemia, nervousness, pain in the limbs and peripheral numbness ("pins and needles")</p> <p>Long term or repeated ingestion exposure of isopropanol may produce incoordination, lethargy and reduced weight gain.</p> <p>Repeated inhalation exposure to isopropanol may produce narcosis, incoordination and liver degeneration. Animal data show developmental effects only at exposure levels that produce toxic effects in the adult animals. Isopropanol does not cause genetic damage in bacterial or mammalian cell cultures or in animals.</p> <p>WARNING: Aerosol containers may present pressure related hazards.</p> |

| | | |
|-------------------------------------|---|-----------------------------------|
| High Grade Cleaning Fluid #136-8537 | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| n-pentane | TOXICITY | IRRITATION |
| | Inhalation (rat) LC50: 364 mg/l/4h ^[2] | Not Available |
| | Oral (rat) LD50: >2000 mg/kg ^[2] | |
| isopropanol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 12800 mg/kg ^[2] | Eye (rabbit): 10 mg - moderate |
| | Inhalation (rat) LC50: 72.6 mg/l/4h ^[2] | Eye (rabbit): 100 mg - SEVERE |
| | Oral (rat) LD50: 5000 mg/kg ^[2] | Eye (rabbit): 100mg/24hr-moderate |
| | | Skin (rabbit): 500 mg - mild |
| carbon dioxide | TOXICITY | IRRITATION |
| | Inhalation (mouse) LC50: 180.5 mg/l/2h ^[2] | Not Available |

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

| | |
|-------------|---|
| N-PENTANE | [GENIUM and CCINFO, V.W.&R.] |
| ISOPROPANOL | <p>For isopropanol (IPA):</p> <p>Acute toxicity: Isopropanol has a low order of acute toxicity. It is irritating to the eyes, but not to the skin. Very high vapor concentrations are irritating to the eyes, nose, and throat, and prolonged exposure may produce central nervous system depression and narcosis. Human volunteers reported that exposure to 400 ppm isopropanol vapors for 3 to 5 min.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.</p> <p>The substance is classified by IARC as Group 3:</p> <p>NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> |

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| | | | |
|-----------------------------------|---|--------------------------|---|
| 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 available but does not fill the criteria for classification

✓ – Data available to make classification

☐ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| High Grade Cleaning Fluid #136-8537 | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--|---------------|--------------------|-------------------------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| n-pentane | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | 4.26mg/L | 2 |
| | EC50 | 48 | Crustacea | 2.7mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | 1.26mg/L | 2 |
| | NOEC | 72 | Algae or other aquatic plants | 7.51mg/L | 2 |
| isopropanol | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | >1400mg/L | 4 |
| | EC50 | 48 | Crustacea | 12500mg/L | 5 |
| | EC50 | 72 | Algae or other aquatic plants | >1000mg/L | 1 |
| | EC29 | 504 | Crustacea | =100mg/L | 1 |
| | NOEC | 5760 | Fish | 0.02mg/L | 4 |
| carbon dioxide | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | Not Available | Not Available | Not Available | Not Available | Not Available |

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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

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

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|----------------|---------------------------|--------------------------|
| n-pentane | LOW | LOW |
| isopropanol | LOW (Half-life = 14 days) | LOW (Half-life = 3 days) |
| carbon dioxide | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|----------------|---------------------|
| n-pentane | LOW (BCF = 2.35) |
| isopropanol | LOW (LogKOW = 0.05) |
| carbon dioxide | LOW (LogKOW = 0.83) |

Mobility in soil

| Ingredient | Mobility |
|----------------|--------------------|
| n-pentane | LOW (KOC = 80.77) |
| isopropanol | HIGH (KOC = 1.06) |
| carbon dioxide | HIGH (KOC = 1.498) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|------------------------------|--|
| Product / Packaging disposal | ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. |
|------------------------------|--|



Continued...

High Grade Cleaning Fluid #136-8537

- ▶ 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.
- ▶ Consult State Land Waste Management Authority for disposal.
- ▶ Discharge contents of damaged aerosol cans at an approved site.
- ▶ Allow small quantities to evaporate.
- ▶ **DO NOT** incinerate or puncture aerosol cans.

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|------------------|---|
| |  |
| Marine Pollutant |  |
| HAZCHEM | Not Applicable |

Land transport (ADG)

| | |
|------------------------------|--|
| UN number | 1950 |
| UN proper shipping name | AEROSOLS |
| Transport hazard class(es) | Class : 2.1 Subrisk : Not Applicable |
| Packing group | Not Applicable |
| Environmental hazard | Environmentally hazardous |
| Special precautions for user | Special provisions : 63 190 277 327 344 Limited quantity : 1000ml |

Air transport (ICAO-IATA / DGR)

| | |
|------------------------------|--|
| UN number | 1950 |
| UN proper shipping name | Aerosols, flammable |
| Transport hazard class(es) | ICAO/IATA Class : 2.1 ICAO / IATA Subrisk : Not Applicable ERG Code : 10L |
| Packing group | Not Applicable |
| Environmental hazard | Environmentally hazardous |
| Special precautions for user | Special provisions : A145 A167 A802 Cargo Only Packing Instructions : 203 Cargo Only Maximum Qty / Pack : 150 kg Passenger and Cargo Packing Instructions : 203 Passenger and Cargo Maximum Qty / Pack : 75 kg Passenger and Cargo Limited Quantity Packing Instructions : Y203 Passenger and Cargo Limited Maximum Qty / Pack : 30 kg G |

Sea transport (IMDG-Code / GGVSee)

| | |
|------------------------------|---|
| UN number | 1950 |
| UN proper shipping name | AEROSOLS |
| Transport hazard class(es) | IMDG Class : 2.1 IMDG Subrisk : Not Applicable |
| Packing group | Not Applicable |
| Environmental hazard | Marine Pollutant |
| Special precautions for user | EMS Number : F-D, S-U Special provisions : 63 190 277 327 344 381 959 Limited Quantities : 1000ml |

High Grade Cleaning Fluid #136-8537

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

N-PENTANE(109-66-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|--|
| Australia Exposure Standards | Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2) |
| Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals | Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4 |
| Australia Inventory of Chemical Substances (AICS) | Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5 |

ISOPROPANOL(67-63-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals | International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |

CARBON DIOXIDE(124-38-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|------------------------------|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
|------------------------------|---|

National Inventory Status

| National Inventory | Status |
|-------------------------------|--|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (carbon dioxide; n-pentane; isopropanol) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| Legend: | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

| | |
|----------------------|------------|
| Revision Date | 26/07/2018 |
| Initial Date | 26/07/2018 |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC — TWA: Permissible Concentration-Time Weighted Average
 PC — STEL: Permissible Concentration-Short Term Exposure Limit
 IARC: International Agency for Research on Cancer
 ACGIH: American Conference of Governmental Industrial Hygienists
 STEL: Short Term Exposure Limit
 TEEL: Temporary Emergency Exposure Limit,
 IDLH: Immediately Dangerous to Life or Health Concentrations
 OSF: Odour Safety Factor
 NOAEL :No Observed Adverse Effect Level
 LOAEL: Lowest Observed Adverse Effect Level
 TLV: Threshold Limit Value
 LOD: Limit Of Detection
 OTV: Odour Threshold Value
 BCF: BioConcentration Factors
 BEI: Biological Exposure Index

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