

Auto Klene AK10 FAST CUT PASTE

Auto Klene Solutions

Chemwatch Hazard Alert Code: 2

requirements S.GHS.AUS.EN Chemwatch: 5250-75F Issue Date: 18/04/2017 Version No: 2.1.1.1 Print Date: 01/05/2017 Safety Data Sheet according to WHS and ADG

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

Product Identifier

| | |
|-------------------------------|--------------------------------|
| Product name | Auto Klene AK10 FAST CUT PASTE |
| Synonyms | Not Available |
| Other means of identification | AK10-3 |

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

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

Details of the supplier of the safety data sheet

| | |
|-------------------------|---|
| Registered company name | Auto Klene Solutions |
| Address | 1/83 Merrindale Drive Croydon VIC 3136 Australia |
| Telephone | +61 3 8761 1900 |
| Fax | +61 3 8761 1955 |
| Website | https://www.autoklene.com/msds/ |
| Email | Not Available |

Emergency telephone number

| | |
|-----------------------------------|---|
| Association / Organisation | Not Available |
| Emergency telephone numbers | 131 126 (Poisons Information Centre) |
| Other emergency telephone numbers | 0800 764 766 (New Zealand Poisons Information Centre) |

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

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

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

Continued...

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| | |
|---------------------------|--|
| Poisons Schedule | Not Applicable |
| Classification [1] | Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation) |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |

Label elements

| | |
|----------------------------|---|
| Hazard pictogram(s) |  |
| SIGNAL WORD | WARNING |

Hazard statement(s)

| | |
|-------------|-----------------------------------|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

Precautionary statement(s) Prevention

| | |
|-------------|--|
| P271 | Use only outdoors or in a well-ventilated area. |
| P261 | Avoid breathing mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

Precautionary statement(s) Response

| | |
|-----------------------|--|
| P362 | Take off contaminated clothing and wash before reuse. |
| 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. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |

Precautionary statement(s) Storage

| | |
|------------------|--|
| P405 | Store locked up. |
| 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 |
|------------|-----------|--|
| 1344-28-1. | <50% | <u>aluminium oxide</u> |
| 8042-47-5 | <10 | <u>white mineral oil (petroleum)</u> |
| 56-81-5 | <10 | <u>glycerol</u> |
| 64742-47-8 | <10 | <u>distillates, petroleum, light, hydrotreated</u> |
| 8001-79-4 | <1 | <u>castor oil</u> |
| 102-71-6 | <1 | <u>triethanolamine</u> |
| 7732-18-5 | >50 | <u>water</u> |

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. ▶ 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, without delay. |
| 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.

- ▶ Manifestation of aluminium toxicity include hypercalcaemia, anaemia, Vitamin D refractory osteodystrophy and a progressive encephalopathy (mixed dysarthria-apraxia of speech, asterixis, tremulousness, myoclonus, dementia, focal seizures). Bone pain, pathological fractures and proximal myopathy can occur.
- ▶ Symptoms usually develop insidiously over months to years (in chronic renal failure patients) unless dietary aluminium loads are excessive.
- ▶ Serum aluminium levels above 60 ug/ml indicate increased absorption. Potential toxicity occurs above 100 ug/ml and clinical symptoms are present when levels exceed 200 ug/ml. ▶ Deferoxamine has been used to treat dialysis encephalopathy and osteomalacia. CaNa2EDTA is less effective in chelating aluminium. [Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider: foam. drychemical powder. ▶ carbon dioxide. **Special hazards arising from the substrate or mixture**

| | |
|--------------------------------|--|
| Fire Incompatibility | None known. |
| 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. |
| 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. Combustion products include: <ul style="list-style-type: none"> , carbon dioxide (CO2) , acrolein , hydrogen chloride , phosgene , hydrogen fluoride , other pyrolysis products typical of burning organic material. |
| 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"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment. ▶ Contain and absorb spill with sand, earth, inert material or vermiculite. ▶ Wipe up. ▶ Place in a suitable, labelled container for waste disposal. |
| Major Spills | <p>Moderate hazard.</p> <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. ▶ No smoking, naked lights or ignition sources. ▶ Increase ventilation. |

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

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

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 | aluminium oxide | Aluminium oxide | 10 mg/m3 | Not Available | Not Available | Not Available |
| Australia Exposure Standards | white mineral oil (petroleum) | White spirits | 790 mg/m3 | Not Available | Not Available | Not Available |
| Australia Exposure Standards | glycerol | Glycerin mist | 10 mg/m3 | Not Available | Not Available | Not Available |
| Australia Exposure Standards | distillates, petroleum, light, hydrotreated | Oil mist, refined mineral | 5 mg/m3 | Not Available | Not Available | Not Available |
| Australia Exposure Standards | triethanolamine | Triethanolamine | 5 mg/m3 | Not Available | Not Available | Sen |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|-------------------------------|---|---------------|-------------|-------------|
| aluminium oxide | Aluminum oxide; (Alumina) | 5.7 mg/m3 | 15 mg/m3 | 25 mg/m3 |
| white mineral oil (petroleum) | Stoddard solvent; (Mineral spirits, 85% nonane and 15% trimethyl benzene) | 300 mg/m3 | 1,800 mg/m3 | 29500 mg/m3 |
| glycerol | Glycerine (mist); (Glycerol; Glycerin) | 45 mg/m3 | 860 mg/m3 | 2,500 mg/m3 |
| triethanolamine | Triethanolamine; (Trihydroxytriethylamine) | 15 mg/m3 | 240 mg/m3 | 1,500 mg/m3 |
| Ingredient | Original IDLH | Revised IDLH | | |
| aluminium oxide | Not Available | Not Available | | |

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| | | |
|---|---------------|---------------|
| white mineral oil (petroleum) | 29,500 mg/m3 | 20,000 mg/m3 |
| glycerol | Not Available | Not Available |
| distillates, petroleum, light, hydrotreated | Not Available | Not Available |
| castor oil | Not Available | Not Available |
| triethanolamine | Not Available | Not Available |
| water | Not Available | Not Available |

Exposure controls

| | |
|---|--|
| Appropriate engineering controls | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. 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.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> |
| 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. |
| 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>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where</p> |
| 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. |
| Thermal hazards | Not Available |

Recommended material(s)

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

GLOVE SELECTION INDEX

* Where the glove is to be used on a short term, casual or infrequent basis, factors

Glove selection is based on a modified presentation of the: such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves **"Forsberg Clothing Performance Index"**. which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted. The effect(s) of the following substance(s) are taken into account in the **computer generated** selection: Auto Klene AK10 LIQUID – CARBON CUT

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

| | |
|------------------|-----|
| BUTYL | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE | C |
| PVA | C |
| PVC | C |
| VITON | C |
| ##castor | oil |

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES
Respiratory protection

Type AK-P 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.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|--------------------------|
| up to 10 x ES | AK-AUS P2 | - | AK-PAPR-AUS / Class 1 P2 |
| up to 50 x ES | - | AK-AUS / Class P2 | - |
| up to 100 x ES | - | AK-2 P2 | AK-PAPR-2 P2 ^ |

^ - 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

* CPI - Chemwatch Performance Index

A: Best Selection dioxide(SO2), G =

B: Satisfactory; may degrade after 4 hours continuous immersion Agricultural

chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, C: Poor to

Dangerous Choice for other than short term immersion MB =

Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

| | |
|---------------------|---|
| Inhaled | <p>Not normally a hazard due to non-volatile nature of product The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. 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> |
| Ingestion | <p>Accidental ingestion of the material may be damaging to the health of the individual. Ingestion may result in nausea, abdominal irritation, pain and vomiting</p> |
| Skin Contact | <p>This material can cause inflammation of the skin on contact in some persons. The material may accentuate any preexisting dermatitis condition Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material any external damage is suitably protected.</p> |
| Eye | <p>This material can cause eye irritation and damage in some persons.</p> |

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| | | | |
|--|--|---|----------------|
| Reactivity | See section 7 | | |
| Information on basic physical and chemical properties | | | |
| Appearance | Off white, creamy thick paste with a little odour; mixes with water. Viscosity: 8500-9500 cps (20degC) | | |
| Physical state | Paste | Relative density (Water = 1) | 0.95-1.10 |
| Odour | Not Available | Partition coefficient noctanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | 8-9 | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | 0 | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | >95 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Applicable | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water (g/L) | Miscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---|--|
| 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 |

Continued...

Hazardous decomposition products

See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

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| | | | |
|--|---|--|---|
| Chronic | Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Exposure to large doses of aluminium has been connected with the degenerative brain disease Alzheimer's Disease. | | |
| | TOXICITY | IRRITATION | |
| Auto Klene AK10 FAST CUT PASTE | [2] | | Dermal (Rabbit) LD50: >2000 mg/kg Not Available Oral (Rat) LD50: >5000 mg/kg[2] |
| | | | |
| aluminium oxide | TOXICITY | IRRITATION | |
| | [1] Oral (rat) LD50: >2000 mg/kg Not Available | | |
| white mineral oil (petroleum) | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >2000 mg/kg Not Available |
| | [1] | | Oral (rat) LD50: >5000 mg/kg[1] |
| glycerol | TOXICITY | IRRITATION | |
| | [2] Oral (rat) LD50: 12600 mg/kg Not Available | | |
| distillates, petroleum, light, hydrotreated | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >2000 mg/kg Not Available |
| | [1] | | Oral (rat) LD50: >5000 mg/kg[1] |
| castor oil | TOXICITY | IRRITATION | |
| | Not Available | Eye (rabbit): 500 mg mild | |
| | | Skin (human): 50 mg/48h mild Skin (rabbit): 100 mg/24h SEVERE | |

| triethanolamine | TOXICITY | IRRITATION |
|---|--|------------------------|
| | dermal (rat) LD50: >16000 mg/kg, ^[2] | Eye (rabbit): 0.1 ml - |
| Oral (rat) LD50: 5560 mg/kg(calc.) ^[2] . | Eye (rabbit): 10 mg - mild | |
| | Eye (rabbit): 5.62 mg - SEVERE minor conjunctival irritation | |
| | no irritation * | |
| | Skin (human): 15 mg/3d (int)-mild | |
| | Skin (rabbit): 4 h occluded | |

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Skin (rabbit): 560 mg/24 hr- mild

| | TOXICITY | IRRITATION |
|-------|---------------|---------------|
| water | Not Available | 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

| | |
|---|---|
| <p>WHITE MINERAL OIL (PETROLEUM)</p> | <p>The materials included in the Lubricating Base Oils category are related from both process and physical-chemical perspectives; The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has undergone, since:</p> <ul style="list-style-type: none"> • The adverse effects of these materials are associated with undesirable components, and • The levels of the undesirable components are inversely related to the degree of processing; • Distillate base oils receiving the same degree or extent of processing will have similar toxicities; • The potential toxicity of residual base oils is independent of the degree of processing the oil receives. • The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing. <p>Unrefined & mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential cancer-causing and mutation-causing activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components. In comparison to unrefined and mildly refined base oils, the highly and severely refined distillate base oils have a smaller range of hydrocarbon molecules and have demonstrated very low mammalian toxicity. Testing of residual oils for mutation-causing and cancer-causing potential has shown negative results, supporting the belief that these materials lack biologically active components or the components are largely non-bioavailable due to their molecular size. Toxicity testing has consistently shown that lubricating base oils have low acute toxicities. For highly and severely refined distillate base oils: In animal studies, the acute, oral, semilethal dose is >5g/kg body weight and the semilethal dose by skin contact is >2g/kg body weight. The semilethal concentration for inhalation is 2.18 to >4 mg/L. The materials have varied from "non-irritating" to "moderately irritating" when tested for skin and eye irritation. Testing for sensitisation has been negative. The effects of repeated exposure vary by species; in animals, effects to the testes and lung have been observed, as well as the formation of granulomas. In animals, these substances have not been found to cause reproductive toxicity or significant increases in birth defects. They are also not considered to cause cancer, mutations or chromosome aberrations. Oral (rat) TClO: 92000 mg/kg/92D-Cont. Generally the toxicity and irritation is of low order. White oils and highly/solvent refined oils have not shown the long term risk of skin cancer that follows persistent skin contamination with some other mineral oils, due in all probability to refining that produces low content of both polyaromatics (PAH) and benz-alpha-pyrenes (BaP)</p> |
| <p>GLYCEROL</p> | <p>At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity. There is no significant evidence to suggest that it causes cancer, genetic, reproductive or developmental toxicity.</p> |
| <p>DISTILLATES, PETROLEUM, LIGHT, HYDROTREATED</p> | <p>Kerosene may produce varying ranges of skin irritation, and a reversible eye irritation (if eyes are washed). Skin may be cracked or flaky and/or leathery, with crusts and/or hair loss. It may worsen skin cancers. There may also be loss of weight, discharge from the nose, excessive tiredness, and wheezing. The individual may be pale. There may be increase in the weight of body organs. There was no evidence of harm to pregnancy.</p> |
| <p>CASTOR OIL</p> | <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. Some tumorigenic effects have been reported in animal studies The castor seed contains ricin, a toxic protein. Heating during the oil extraction process denatures and inactivates the protein. However, harvesting castor beans may not be without risk. Allergenic compounds found on the plant surface can cause permanent nerve damage, making the harvest of castor beans a human health risk. The United States Food and Drug Administration (FDA) has categorized castor oil as "generally recognized as safe and effective" (GRASE) for over-the-counter use as a laxative with its major site of action the small intestine where it is digested into ricinoleic acid. Despite castor oil being widely used to start labor in pregnant women, to date there is not enough research to show whether it is effective to ripen the cervix or induce labour Due to its foul taste a heavy dose of castor oil was formerly used as a humiliating punishment for children and adults. Victims of this treatment did sometimes die, as the dehydrating effects of the oil-induced diarrhea; however, even those victims who survived had to bear the humiliation of the laxative effects resulting from excessive consumption of the oil.</p> |
| <p>TRIETHANOLAMINE</p> | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>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. Overexposure to most of these materials may cause adverse health effects.</p> <p>Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient.</p> <p>There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing.</p> <p>Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the lungs. Higher concentrations of certain amines can produce severe respiratory irritation, characterized by discharge from the nose, coughing, difficulty in breathing and chest pain. Chronic exposure via inhalation may cause headache, nausea, vomiting, drowsiness, sore throat, inflammation of the bronchi and lungs, and possible lung damage. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>Studies done show that triethanolamine is of low toxicity following high dose exposure by swallowing, skin contact or inhalation. It has not been shown to cause cancer, genetic defects, reproductive or developmental toxicity.</p> <p>NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. Lachrymation, diarrhoea, convulsions, urinary tract changes, changes in bladder weight, changes in testicular weight, changes in thymus weight, changes in liver weight, dermatitis after systemic exposure, kidney, ureter, bladder tumours recorded. Equivocal tumourigen by RTECS criteria. Dermal rabbit value quoted above is for occluded patch in male or female animals * Union Carbide</p> |

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| | |
|--|--|
| ALUMINIUM OXIDE & DISTILLATES, PETROLEUM, LIGHT, HYDROTREATED & WATER | No significant acute toxicological data identified in literature search. |
| WHITE MINERAL OIL (PETROLEUM) & TRIETHANOLAMINE | The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. |

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) follows 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.

| | | | |
|--|---|---------------------------------|---|
| 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

| | | | | | |
|---------------------------------------|-----------------|---------------------------|--------------------------------|--------------|---------------|
| Auto Klene AK10 FAST CUT PASTE | | | | | |
| | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | NotApplicable | NotApplicable | ApplicableApplicableApplicable | | |
| aluminium oxide | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |

Continued...

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| | | | | | |
|-------------------------------|------|-----|-------------------------------|-------------|---|
| white mineral oil (petroleum) | LC50 | 96 | Fish | 0.0029mg/L | 2 |
| | EC50 | 96 | Algae or other aquatic plants | 0.0054mg/L | 2 |
| | EC50 | 48 | Crustacea | 0.7364mg/L | 2 |
| | EC50 | 168 | Crustacea | 0.0076mg/L | 2 |
| | NOEC | 72 | Algae or other aquatic plants | >=0.004mg/L | 2 |

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|-----------|--------------------|---------|-------|--------|
| NotNotNot | Not Applicable | | | |

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|----------|--------------------|-------------------------------|--------------|--------|
| LC50 | 96 | Fish | >11mg/L | 2 |
| EC50 | 96 | Algae or other aquatic plants | 77712.03mg/L | 3 |
| EC0 | 24 | Crustacea | >500mg/L | 1 |

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|-------------------|--------------------|---------|---------|--------|
| LC50 96 NOEC 3072 | | Fish | 2.2mg/L | 4 |
| | | Fish | =1mg/L | 1 |

Continued...

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castor oil

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|-----------|------------------------------|--------------------------------|-------|--------|
| NotNotNot | Not ApplicableNot Applicable | ApplicableApplicableApplicable | | |

triethanolamine

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|----------|--------------------|-------------------------------|-----------|--------|
| LC50 | 96 | Fish | 11800mg/L | 4 |
| EC50 | 96 | Algae or other aquatic plants | 169mg/L | 1 |
| EC10 | 96 | Algae or other aquatic plants | 7.1mg/L | 1 |
| NOEC | 504 | Crustacea | 16mg/L | 1 |

water

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|-----------|------------------------------|--------------------------------|-------|--------|
| NotNotNot | Not ApplicableNot Applicable | ApplicableApplicableApplicable | | |

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

for lubricating oil base stocks:

Continued...

Vapor Pressure Vapor pressures of lubricating base oils are reported to be negligible. In one study, the experimentally measured vapour pressure of a solvent-dewaxed heavy paraffinic distillate base oil was 1.7×10^{-4} Pa. Since base oils are mixtures of C15 to C50 paraffinic, naphthenic, and aromatic hydrocarbon isomers, representative components of those structures were selected to calculate a range of vapor pressures. The estimated vapor pressure values for these selected components of base oils ranged from 4.5×10^{-1} Pa to 2×10^{-13} Pa. Based on Dalton's Law the expected total vapour pressure for base oils would fall well below minimum levels (10^{-5} Pa) of recommended experimental procedures.

Partition Coefficient (log Kow): In mixtures such as the base oils, the percent distribution of the hydrocarbon groups (i.e., paraffins, naphthenes, and aromatics) and the carbon chain lengths determines in-part the partitioning characteristics of the mixture. Generally, hydrocarbon chains with fewer carbon atoms tend to have lower partition coefficients than those with higher carbon numbers. However, due to their complex composition, unequivocal determination of the log Kow of these hydrocarbon mixtures cannot be made.

For Glycerol: Log Kow: -2.66 to -2.47, Atmospheric Fate: Glycerol is broken down in the air by hydroxyl radicals the half-life for this process is 6.8 hours. However, only a negligible amount of the substance will move to the atmospheric compartment. Terrestrial Fate: Only a negligible amount of glycerol will move into the soil compartment, if released into the environment. Aquatic Fate: Glycerol is considered to be readily biodegradable in the aquatic environment. Pre-adapted microorganisms can break glycerol down rapidly in oxygenated/low oxygen waters. The substance is not expected to react with water. When released to water, 100% of the substance will remain in the water compartment - only negligible amounts will be distributed to sediment. Drinking Water Standards: hydrocarbon total: 10 ug/l (UK max.). For Aluminium and its Compounds and Salts: Environmental Fate - As an element, aluminium cannot be degraded in the environment, but may undergo various precipitation or ligand exchange reactions. Aluminium in compounds has only one oxidation state (+3), and would not undergo oxidation-reduction reactions under environmental conditions. Aluminium can be complexed by various ligands present in the environment (e.g., fulvic and humic acids). The solubility of aluminium in the environment will depend on the ligands present and the pH. Atmospheric Fate: Air Quality Standards: none available. Aquatic Fate: The hydrated aluminium ion undergoes hydrolysis. The speciation of aluminium in water is pH dependent. **DO NOT discharge into sewer or waterways.**

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|-----------------|-------------------------|------------------|
| glycerol | LOW | LOW |
| triethanolamine | LOW | LOW |
| water | LOW | LOW |

Bioaccumulative potential

| | |
|---|----------------------|
| glycerol | LOW (LogKOW = -1.76) |
| distillates, petroleum, light, hydrotreated | LOW (BCF = 159) |
| triethanolamine | LOW (BCF = 3.9) |
| water | LOW (LogKOW = -1.38) |

Mobility in soil

| Ingredient | Mobility |
|-----------------|------------------|
| glycerol | HIGH (KOC = 1) |
| triethanolamine | LOW (KOC = 10) |
| water | LOW (KOC = 14.3) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------------|--|
| Product / Packaging disposal | <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate: ▶</p> <ul style="list-style-type: none"> Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.</p> <p>Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none"> ▶ 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 | NO |
| HAZCHEM | Not Applicable |

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

| Ingredient | Bioaccumulation |
|------------|-----------------|
|------------|-----------------|

SECTION 15 REGULATORY INFORMATION

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

ALUMINIUM OXIDE(1344- 28 1.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

Australia Exposure Standards

Name

CAS No

Auto Klene AK10 FAST CUT-PASTE

| | |
|----------|--|
| glycerol | 56-81-5, 29796-42-7, 30049-52-6, 37228-54-9, 75398-78-6, 78630-16-7, 8013-25-0 |
|----------|--|

WHITE MINERAL OIL (PETROLEUM)(8042 - 47 - 5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

GLYCEROL(56-81-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

DISTILLATES, PETROLEUM, LIGHT, HYDROTREATED(64742-47-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

Monographs

CASTOR OIL(8001-79-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

TRIETHANOLAMINE(102-71-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

| National Inventory | Status |
|-------------------------------|---|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (glycerol; triethanolamine; water; distillates, petroleum, light, hydrotreated; aluminium oxide; castor oil; white mineral oil (petroleum)) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | N (glycerol; triethanolamine; water; distillates, petroleum, light, hydrotreated; aluminium oxide; castor oil; white mineral oil (petroleum)) |
| 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

Other information

Ingredients with multiple cas numbers



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castor oil

8001-79-4, 64147-40-6, 8006-52-8, 8013-56-7, 8015-57-4, 8021-37-2, 8036-08-6, 8041-95-0, 89958-32-7

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.

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