

SAFETY DATA SHEET

DEVCON ALUMINIUM PUTTY (F) HARDENER

Infosafe No.: AACGP
ISSUED Date : 10/03/2023
ISSUED by: ITW POLYMERS & FLUIDS

Section 1 - Identification

Product Identifier

DEVCON ALUMINIUM PUTTY (F) HARDENER

Product Code

D10610

Company Name

ITW POLYMERS & FLUIDS

Address

100 Hassall Street Wetherill Park
NSW 2164 AUSTRALIA

Telephone/Fax Number

Tel: +61 2 9757 8800

Fax: +61 2 9757 3855

Emergency Phone Number

CHEMWATCH EMERGENCYRESPONSE (24/7): +61 1800 951 288; +61 3 9573 3188

Recommended use of the chemical and restrictions on use

Relevant identified uses: Use according to manufacturer's directions.

Other Names

Name	Product Code
DEVCON ALUMINIUM PUTTY (F) HARDENER	D10610

Additional Information

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

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture

Skin corrosion/irritation: Category 1A

Sensitisation - skin: Category 1

Eye damage/irritation: Category 1

Specific target organ toxicity (single exposure): Category 3 (Respiratory tract irritation)

Germ cell mutagenicity: Category 2

Carcinogenicity: Category 1A

Specific target organ toxicity (repeated exposure): Category 2

Acute toxicity: Category 4 - Oral

Signal Word (s)

DANGER

Hazard Statement (s)

AUH019 May form explosive peroxides.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

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H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H302 Harmful if swallowed.

Pictogram (s)

Corrosion, Exclamation mark, Health hazard



Precautionary Statement – Prevention

P201 Obtain special instructions before use.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash all exposed external body areas thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

Precautionary Statement – Response

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

Precautionary Statement – Storage

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statement – Disposal

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

Precautionary Statement – General

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
Titanium dioxide	13463-67-7	34.8-38.5 %weight
Aliphatic amines	Not Available	23-25.4 %weight
Triethylenetetramine	112-24-3	11.5-12.7 %weight
Benzyl alcohol	100-51-6	11.5-12.7 %weight
Silica amorphous, fumed	68611-44-9	10-11 %weight
Silica amorphous	7631-86-9	2.3-2.5 %weight
Aluminium hydroxide	21645-51-2	1.7-1.9 %weight

Other Information

Substances:

See section below for composition of Mixtures

Section 4 - First Aid Measures

Inhalation

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.

Ingestion

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.

Skin

If skin or hair contact occurs:

Immediately flush body and clothes with large amounts of water, using safety shower if available.

Quickly remove all contaminated clothing, including footwear.

Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.

Transport to hospital, or doctor.

Eye

If this product comes in contact with the eyes:

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.

Indication of immediate medical attention and special treatment needed if necessary

Treat symptomatically.

For acute or short-term repeated exposures to highly alkaline materials:

Respiratory stress is uncommon but present occasionally because of soft tissue edema.

Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.

Oxygen is given as indicated.

The presence of shock suggests perforation and mandates an intravenous line and fluid administration.

Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

INGESTION:

Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

Neutralising agents should never be given since exothermic heat reaction may compound injury.

* Catharsis and emesis are absolutely contra-indicated.

* Activated charcoal does not absorb alkali.

* Gastric lavage should not be used.

Supportive care involves the following:

Withhold oral feedings initially.

If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.

Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.

Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:

Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

Section 5 - Firefighting Measures

Fire Fighting Measures

Foam.
Dry chemical powder.
BCF (where regulations permit).
Carbon dioxide.

Specific Methods

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.

Specific hazards arising from the chemical

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

Fire/Explosion Hazard:

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).
Combustion products include:
carbon monoxide (CO)
carbon dioxide (CO₂)
aldehydes
nitrogen oxides (NO_x)
silicon dioxide (SiO₂)
other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.
WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.

Hazchem Code

Not Applicable

Decomposition Temperature

Not Available

Section 6 - Accidental Release Measures

Personal Precautions

See section 8(Exposure Controls/Personal Protection)

Clean-up Methods - Small Spillages

Clean up all spills immediately.
Avoid contact with skin and eyes.
Wear impervious gloves and safety goggles.
Trowel up/scrape up.

Clean-up Methods - Large Spillages

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.

Environmental Precautions

See section 12(Ecological Information)

Other Information

Personal Protective Equipment advice is contained in Section 8(Exposure Controls/Personal Protection) of the SDS.

Section 7 - Handling and Storage

Precautions for Safe Handling

Safe handling:

The substance accumulates peroxides which may become hazardous only if it evaporates or is distilled or otherwise treated to concentrate the peroxides. The substance may concentrate around the container opening for example.

Purchases of peroxidisable chemicals should be restricted to ensure that the chemical is used completely before it can become peroxidised.

A responsible person should maintain an inventory of peroxidisable chemicals or annotate the general chemical inventory to indicate which chemicals are subject to peroxidation.

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.

Other information:

Store in original containers.

Keep containers securely sealed.

Store in a cool, dry, well-ventilated area.

Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container:

Metal can or drum

Packaging as recommended by manufacturer.

Check all containers are clearly labelled and free from leaks.

Storage incompatibility:

Avoid reaction with oxidising agents

Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values

INGREDIENT DATA

Source: Australia Exposure Standards

Ingredient: titanium dioxide

Material name: Titanium dioxide

TWA: 10 mg/m³

STEL: Not Available

Peak: Not Available

Notes: (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica

Source: Australia Exposure Standards

Ingredient: silica amorphous

Material name: Silica - Amorphous: Silica gel

TWA: 10 mg/m³

STEL: Not Available

Peak: Not Available

Notes: (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.

Source: Australia Exposure Standards

Ingredient: silica amorphous

Material name: Silica, fused

TWA: 0.05 mg/m³

STEL: Not Available

Peak: Not Available

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Notes: Not Available

Source: Australia Exposure Standards

Ingredient: silica amorphous

Material name: Silica - Amorphous: Fume(thermally generated)(respirable dust)

TWA: 2 mg/m³

STEL: Not Available

Peak: Not Available

Notes: (e) Containing no asbestos and <1% crystalline silica.

Source: Australia Exposure Standards

Ingredient: silica amorphous

Material name: Silica - Amorphous: Fumed silica (respirable dust)

TWA: 2 mg/m³

STEL: Not Available

Peak: Not Available

Notes: Not Available

Source: Australia Exposure Standards

Ingredient: silica amorphous

Material name: Silica - Amorphous: Precipitated silica

TWA: 10 mg/m³

STEL: Not Available

Peak: Not Available

Notes: (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.

Source: Australia Exposure Standards

Ingredient: silica amorphous

Material name: Silica - Amorphous: Diatomaceous earth (uncalcined)

TWA: 10 mg/m³

STEL: Not Available

Peak: Not Available

Notes: (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.

EMERGENCY LIMITS

Ingredient: titanium dioxide

Material name: Not Available

TEEL-1: 30 mg/m³

TEEL-2: 330 mg/m³

TEEL-3: 2,000 mg/m³

Ingredient: triethylenetetramine

Material name: Not Available

TEEL-1: 3 ppm

TEEL-2: 14 ppm

TEEL-3: 83 ppm

Ingredient: benzyl alcohol

Material name: Not Available

TEEL-1: 30 ppm

TEEL-2: 52 ppm

TEEL-3: 740 ppm

Ingredient: silica amorphous, fumed

Material name: Not Available

TEEL-1: 18 mg/m³

TEEL-2: 100 mg/m³

TEEL-3: 630 mg/m³

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Ingredient: silica amorphous
Material name: Not Available
TEEL-1: 18 mg/m³
TEEL-2: 200 mg/m³
TEEL-3: 1,200 mg/m³

Ingredient: silica amorphous
Material name: Not Available
TEEL-1: 18 mg/m³
TEEL-2: 100 mg/m³
TEEL-3: 630 mg/m³

Ingredient: silica amorphous
Material name: Not Available
TEEL-1: 120 mg/m³
TEEL-2: 1,300 mg/m³
TEEL-3: 7,900 mg/m³

Ingredient: silica amorphous
Material name: Not Available
TEEL-1: 45 mg/m³
TEEL-2: 500 mg/m³
TEEL-3: 3,000 mg/m³

Ingredient: silica amorphous
Material name: Not Available
TEEL-1: 18 mg/m³
TEEL-2: 740 mg/m³
TEEL-3: 4,500 mg/m³

Ingredient: aluminium hydroxide
Material name: Not Available
TEEL-1: 8.7 mg/m³
TEEL-2: 73 mg/m³
TEEL-3: 440 mg/m³

Ingredient: titanium dioxide
Original IDLH: 5,000 mg/m³
Revised IDLH: Not Available

Ingredient: triethylenetetramine
Original IDLH: Not Available
Revised IDLH: Not Available

Ingredient: benzyl alcohol
Original IDLH: Not Available
Revised IDLH: Not Available

Ingredient: silica amorphous, fumed
Original IDLH: Not Available
Revised IDLH: Not Available

Ingredient: silica amorphous
Original IDLH: 3,000 mg/m³
Revised IDLH: Not Available

Ingredient: aluminium hydroxide
Original IDLH: Not Available
Revised IDLH: Not Available

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Occupational Exposure Banding

Ingredient / Occupational Exposure Band Rating / Occupational Exposure Band Limit

triethylenetetramine / E / = 0.1 ppm

benzyl alcohol / . E // = 0.1 ppm

aluminium hydroxide / . E / = 0.01 mg/m³

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.

Engineering Controls

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:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

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.

Respiratory Protection

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

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.

Eye and Face Protection

Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]

Full face shield may be required for supplementary but never for primary protection of eyes.

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.

Hand Protection

NOTE:

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

Other protection:

Overalls.

P.V.C. apron.

Barrier cream.

Skin cleansing cream.

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Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Paste	Appearance	White paste with mild ammonia-like odour; mixes with water.
Odour	Not Available	Melting/Freezing Point	Not Available
Boiling Point	>232.2°C	Decomposition Temperature	Not Available
Solubility in Water	Partly miscible	pH	8 (as supplied) Not Available as a solution (1%)
Vapour Pressure	<1.333 kPa @21.1	Relative Vapour Density (Air=1)	>1
Evaporation Rate	<1	Physical State	Non Slump Paste
Odour Threshold	Not Available	Viscosity	Not Available
Volatile Component	Negligible	Partition Coefficient: n-octanol/water (log value)	Not Available
Surface Tension	Not Available	Flash Point	>93.3°C (Tag Closed Cup)
Flammability	Not Applicable	Auto-Ignition Temperature	Not Available
Explosion Limit - Upper	Not Applicable	Explosion Limit - Lower	Not Applicable
Explosion Properties	Not Available	Molecular Weight	Not Applicable
Oxidising Properties	Not Available	Initial boiling point and boiling range	>232.2 °C
Relative Density	0.98 (Water = 1)		

Other Information

Taste: Not Available

Gas group: Not Available

VOC g/L: Not Available

Section 10 - Stability and Reactivity

Reactivity

See section 7(Handling and Storage)

Chemical Stability

Product is considered stable and hazardous polymerisation will not occur.

Possibility of hazardous reactions

See section 7(Handling and Storage)

Conditions to Avoid

See section 7(Handling and Storage)

Incompatible Materials

See section 7(Handling and Storage)

Hazardous Decomposition Products

See section 5(Fire Fighting Measures)

Section 11 - Toxicological Information

Toxicology Information

Devcon Aluminium Putty (F) Hardener

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TOXICITY: Oral (Rat) LD50: 2000 mg/kg

IRRITATION: Not Available

titanium dioxide

TOXICITY / IRRITATION

dermal (hamster) LD50: ≥ 10000 mg/kg[2] / Eye: no adverse effect observed (not irritating)[1]

Inhalation(Rat) LC50: >2.28 mg/l4h[1] / Skin (human): 0.3 mg /3D (int)-mild *

Oral (Rat) LD50: ≥ 2000 mg/kg[1] / Skin: no adverse effect observed (not irritating)[1]

triethylenetetramine

TOXICITY / IRRITATION

Dermal (rabbit) LD50: 805 mg/kg[2] / Eye (rabbit):20 mg/24 h - moderate

Oral (Rat) LD50: 1591.4 mg/kg[1] / Eye (rabbit); 49 mg - SEVERE

Skin (rabbit): 490 mg open SEVERE

Skin (rabbit): 5 mg/24 SEVERE

benzyl alcohol

TOXICITY / IRRITATION

Dermal (rabbit) LD50: 2000 mg/kg[2] / Eye (rabbit): 0.75 mg open SEVERE

Inhalation(Rat) LC50: >4.178 mg/L4h[1] / Eye: adverse effect observed (irritating)[1]

Oral (Rat) LD50: 1230 mg/kg[2] / Skin (man): 16 mg/48h-mild

Skin (rabbit):10 mg/24h open-mild

Skin: no adverse effect observed (not irritating)[1]

silica amorphous, fumed

TOXICITY / IRRITATION

Inhalation(Rat) LC50: 0.45 mg/L4h[2] / Not Available

Oral (Rat) LD50: >5000 mg/kg[2]

silica amorphous

TOXICITY / IRRITATION

dermal (rat) LD50: >2000 mg/kg[1] / Eye (rabbit): non-irritating ** [Grace]

Inhalation(Rat) LC50: $>0.09<0.84$ mg/l4h[1] / Eye: no adverse effect observed (not irritating)[1]

Oral (Rat) LD50: >1000 mg/kg[1] / Skin (rabbit): non-irritating *

Skin: no adverse effect observed (not irritating)[1]

aluminium hydroxide

TOXICITY / IRRITATION

Inhalation(Rat) LC50: >2.3 mg/l4h[1] / Eye: no adverse effect observed (not irritating)[1]

Oral (Rat) LD50: >2000 mg/kg[1] / Skin: no adverse effect observed (not irritating)[1]

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

TITANIUM DIOXIDE

* IUCLID

Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects,with the possibility of producing mutation.

WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.

TRIETHYLENETETRAMINE

The material may produce severe irritation to the eye causing pronounced 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.

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

BENZYL ALCOHOL

Unlike benzylic alcohols, the beta-hydroxyl group of the members of benzyl alkyl alcohols contributes to break down reactions but do not undergo phase II metabolic activation. Though structurally similar to cancer causing ethyl benzene, phenethyl alcohol is only

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of negligible concern due to limited similarity in their pattern of activity.

For benzoates:

Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmed and of low acute toxicity. They may cause slight irritation by oral, dermal or inhalation exposure except sodium benzoate which doesn't irritate the skin. Studies showed increased mortality, reduced weight gain, liver and kidney effects at higher doses, also, lesions of the brains, thymus and skeletal muscles may occur with benzyl alcohol.

This is a member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS), based partly on their self-limiting properties as flavouring substances in food. In humans and other animals, they are rapidly absorbed, broken down and excreted, with a wide safety margin. They also lack significant potential to cause genetic toxicity and mutations.

The intake of benzyl derivatives as natural components of traditional foods is actually higher than the intake as intentionally added flavouring substances.

The aryl alkyl alcohol (AAA) fragrance ingredients have diverse chemical structures, with similar metabolic and toxicity profiles.

The AAA fragrances demonstrate low acute and subchronic toxicity by skin contact and swallowing. At concentrations likely to be encountered by consumers, AAA fragrance ingredients are non-irritating to the skin. The potential for eye irritation is minimal.

SILICA AMORPHOUS, FUMED

For silane, dichloro-methyl-, reaction products with silica: Acute oral toxicity is very low for treated silica. Animals who inhaled these substances recovered from inflammatory changes in the airway when exposure ended. Repeated inhalation in animals caused inflammation and scarring of the lungs with enlarged lymph nodes. Treated silica does not cause mutations or genetic damage and has not been shown to cause cancer.

SILICA AMORPHOUS

Reports indicate high/prolonged exposures to amorphous silicas induced lung fibrosis in experimental animals; in some experiments these effects were reversible. [PATTYS]

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.

Devcon Aluminium Putty(F) Hardener & TRIETHYLENETETRAMINE & BENZYL ALCOHOL

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.

Devcon Aluminium Putty(F) Hardener & BENZYL ALCOHOL

Adverse reactions to fragrances in perfumes and fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, sensitivity to light, immediate contact reactions, and pigmented contact dermatitis. Airborne and conjugal contact dermatitis occurs. Contact allergy is a lifelong condition, so symptoms may occur on re-exposure. Allergic contact dermatitis can be severe and widespread, with significant impairment of quality of life and potential consequences for fitness for work.

If the perfume contains a sensitizing component, intolerance to perfumes by inhalation may occur.

Fragrance allergens act as haptens, low molecular weight chemicals that cause an immune response only when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but require previous activation. A pre-hapten is a chemical that itself causes little or no sensitization, but is transformed into a hapten in the skin (bioactivation), usually via enzyme catalysis. It is not always possible to know whether a particular allergen that is not directly reactive acts as a pre-hapten or a prohapten, or both.

Devcon Aluminium Putty(F) Hardener & TITANIUM DIOXIDE & ALUMINIUM HYDROXIDE

No significant acute toxicological data identified in literature search.

Devcon Aluminium Putty(F) Hardener & TRIETHYLENETETRAMINE

Ethyleneamines are very reactive and can cause chemical burns, skin rashes and asthma-like symptoms. It is readily absorbed through the skin and may cause eye blindness and irreparable damage. As such, they require careful handling. In general, the low-molecular weight polyamines have been positive in the Ames assay (for genetic damage); however, this is probably due to their ability to chelate copper.

For alkyl polyamines:

The alkyl polyamines cluster consists of two terminal primary and at least one secondary amine groups and are derivatives of low molecular weight ethylenediamine, propylenediamine or hexanediamine. Toxicity depends on route of exposure. Cluster members have been shown to cause skin irritation or sensitisation, eye irritation and genetic defects, but have not been shown to cause cancer.

Triethylenetetramine is a severe irritant to skin and eyes and may induce skin sensitisation. Acute exposure to saturated vapour via

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inhalation was tolerated without impairment but exposure to aerosol may lead to reversible irritations of the mucous membranes in the airways. Studies done on experimental animals showed that it does not cause cancer or foetal developmental defects.

Devcon Aluminium Putty(F) Hardener & TITANIUMDIOXIDE

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Exposure to titanium dioxide is via inhalation, swallowing or skin contact. When inhaled, it may deposit in lung tissue and lymph nodes causing dysfunction of the lungs and immune system. Absorption by the stomach and intestines depends on the size of the particle. It penetrates only the outermost layer of the skin, suggesting that healthy skin may be an effective barrier.

Devcon Aluminium Putty(F) Hardener & TITANIUMDIOXIDE & BENZYLALCOHOL

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.

Devcon Aluminium Putty(F) Hardener & TITANIUMDIOXIDE & TRIETHYLENETETRAMINE

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 a 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.

Devcon Aluminium Putty(F) Hardener & SILICA AMORPHOUS, FUMED & SILICA AMORPHOUS

For silica amorphous:

Derived No Adverse Effects Level (NOAEL) in the range of 1000 mg/kg/d. In humans, synthetic amorphous silica (SAS) is essentially non-toxic by mouth, skin or eyes, and by inhalation. Epidemiological studies show little evidence of adverse health effects due to SAS. Repeated exposure (without personal protection) may cause mechanical irritation of the eye and drying/cracking of the skin. When experimental animals inhale synthetic amorphous silica (SAS) dust, it dissolves in the lung fluid and is rapidly eliminated. If swallowed, the vast majority of SAS is excreted in the faeces and there is little accumulation in the body.

Acute Toxicity: Data available to make classification

Ingestion

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

Inhalation

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.

Skin

Skin contact with the material may be harmful; systemic effects may result following absorption.

The material can produce chemical burns following direct contact with the skin.

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 and ensure that any external damage is suitably protected.

There is some evidence to suggest that the material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.

Skin Corrosion/Irritation

Data available to make classification

Eye

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

If applied to the eyes, this material causes severe eye damage.

The vapour when concentrated has pronounced eye irritation effects and this gives some warning of high vapour concentrations.

If eye irritation occurs seek to reduce exposure with available control measures, or evacuate area.

Serious Eye Damage/Irritation

Data available to make classification

Respiratory Sensitisation

Data available to make classification

Skin Sensitisation

Data available to make classification

Carcinogenicity

Data available to make classification

Reproductive Toxicity

Data either not available or does not fill the criteria for classification

STOT - Single Exposure

Data available to make classification

STOT - Repeated Exposure

Data available to make classification

Aspiration Hazard

Data either not available or does not fill the criteria for classification

Mutagenicity

Data available to make classification

Chronic Effects

Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.

Section 12 - Ecological Information

Ecotoxicity

Toxicity

Devcon Aluminium Putty(F) Hardener

Endpoint / Test Duration (hr) / Species / Value / Source

Not Available Not Available Not Available Not Available Not Available

titanium dioxide

Endpoint / Test Duration (hr) / Species / Value / Source

BCF 1008h Fish <1.1-9.6 7

EC50 72h Algae or other aquatic plants 3.75-7.58mg/l 4

EC50 48h Crustacea 1.9mg/l 2

EC50 96h Algae or other aquatic plants 179.05mg/l 2

LC50 96h Fish 1.85-3.06mg/l 4

NOEC(ECx) 672h Fish >=0.004mg/L 2

triethylenetetramine

Endpoint / Test Duration (hr) / Species / Value / Source

BCF 1008h Fish <0.5 7

EC50 72h Algae or other aquatic plants 2.5mg/l 1

EC50 48h Crustacea 31.1mg/l 1

EC50 96h Algae or other aquatic plants 3.7mg/l 4

ErC50 72h Algae or other aquatic plants 2.5mg/l 1

LC50 96h Fish 180mg/l 1

EC10(ECx) 72h Algae or other aquatic plants 0.67mg/l 1

benzyl alcohol

Endpoint / Test Duration (hr) / Species / Value / Source

EC50 96h Algae or other aquatic plants 76.828mg/l 2

EC50 72h Algae or other aquatic plants 500mg/l 2

EC50 48h Crustacea 230mg/l 2

LC50 96h Fish 10mg/l 4

NOEC(ECx) 336h Fish 5.1mg/l 2

silica amorphous, fumed

Endpoint / Test Duration (hr) / Species / Value / Source

NOEC(ECx) 24h Crustacea >=10000mg/l 1

silica amorphous

Endpoint / Test Duration (hr) / Species / Value / Source

EC50 72h Algae or other aquatic plants 14.1mg/l 2

EC50 48h Crustacea >86mg/l 2

EC50 96h Algae or other aquatic plants 217.576mg/l 2

LC50 96h Fish 1033.016mg/l 2

EC0(ECx) 24h Crustacea >=10000mg/l 1

aluminium hydroxide

Endpoint / Test Duration (hr) / Species / Value / Source

EC50 72h Algae or other aquatic plants 0.017mg/L 2

EC50 48h Crustacea >0.065mg/l 4

EC50 96h Algae or other aquatic plants 0.005mg/L 2

NOEC(ECx) 72h Algae or other aquatic plants >100mg/l 1

LC50 96h Fish 0.57mg/l 2

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

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DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient: titanium dioxide

Persistence: Water/Soil: HIGH

Persistence: Air: HIGH

Ingredient: triethylenetetramine

Persistence: Water/Soil: LOW

Persistence: Air: LOW

Ingredient: benzyl alcohol

Persistence: Water/Soil: LOW

Persistence: Air: LOW

Ingredient: silica amorphous

Persistence: Water/Soil: LOW

Persistence: Air: LOW

Mobility

Ingredient: titanium dioxide

Mobility: LOW (KOC = 23.74)

Ingredient: triethylenetetramine

Mobility: LOW (KOC = 309.9)

Ingredient: benzyl alcohol

Mobility: LOW (KOC = 15.66)

Ingredient: silica amorphous

Mobility: LOW (KOC = 23.74)

Bioaccumulative Potential

Ingredient: titanium dioxide

Bioaccumulation: LOW (BCF = 10)

Ingredient: triethylenetetramine

Bioaccumulation: LOW (BCF = 5)

Ingredient: benzyl alcohol

Bioaccumulation: LOW (LogKOW = 1.1)

Ingredient: silica amorphous

Bioaccumulation: LOW (LogKOW = 0.5294)

Section 13 - Disposal Considerations

Waste Disposal

Product / Packaging disposal:

Containers may still present a chemical hazard/ danger when empty.

Return to supplier for reuse/ recycling if possible.

Otherwise:

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 Management Authority for disposal.

Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.

Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.

Section 14 - Transport Information

UN Number

None Allocated

Proper Shipping Name

None Allocated

Transport Hazard Class

None Allocated

Hazchem Code

Not Applicable

IATA UN Number

NCAD

IATA Proper Shipping Name

Not dangerous for conveyance under IATA code

IMDG UN Number

NCAD

IMDG Proper Shipping Name

Not dangerous for conveyance under IMO/IMDG code

Additional 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

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

Product name / Group

titanium dioxide / Not Available

triethylenetetramine / Not Available

benzyl alcohol / Not Available

silica amorphous, fumed / Not Available

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silica amorphous / Not Available
aluminium hydroxide / Not Available

Transport in bulk in accordance with the IGC Code

Product name / Ship Type

titanium dioxide / Not Available

triethylenetetramine / Not Available

benzyl alcohol / Not Available

silica amorphous, fumed / Not Available

silica amorphous / Not Available

aluminium hydroxide / Not Available

Section 15 - Regulatory Information

Regulatory Information

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

titanium dioxide(13463-67-7) is found on the following regulatory lists

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

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

triethylenetetramine(112-24-3) is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

benzyl alcohol(100-51-6) is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

silica amorphous, fumed(68611-44-9) is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

silica amorphous(7631-86-9) is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Model Work Health and Safety Regulations - Hazardous chemicals (other than lead) requiring health monitoring

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 - Not Classified as Carcinogenic

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

aluminium hydroxide(21645-51-2) is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

National Inventory / Status

Australia - AIIC / AustraliaNon-Industrial Use Yes

Canada - DSL Yes

Canada - NDSL No (triethylenetetramine; benzyl alcohol; silica amorphous, fumed; aluminium hydroxide)

China - IECSC Yes

Europe - EINEC / ELINCS /NLP Yes

Japan - ENCS Yes

Korea - KECI Yes

New Zealand - NZIoC Yes

Philippines - PICCS Yes

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USA - TSCA Yes
Taiwan - TCSI Yes
Mexico - INSQ Yes
Vietnam - NCI Yes
Russia - FBEPH Yes

Legend:

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.

Poisons Schedule

S5

Section 16 - Any Other Relevant Information

User Codes

User Title Label	User Codes
Wis Numbers	04124908

Other Information

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

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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END OF SDS

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