

D.S. Horne Brown Pack Commercial Kit Aluminium Sulphate

D.S. Horne Pty Ltd

Chemwatch: 5164-75
Version No: 2.1.1.1
Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 3

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Initial Date: Not Available
S.GHS.AUS.EN

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

Product Identifier

| | |
|-------------------------------|---|
| Product name | D.S. Horne Brown Pack Commercial Kit Aluminium Sulphate |
| Synonyms | Not Available |
| Other means of identification | Not Available |

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

| | |
|--------------------------|--------------------------------|
| Relevant identified uses | Used for the tanning of skins. |
|--------------------------|--------------------------------|

Details of the manufacturer/importer

| | |
|-------------------------|---|
| Registered company name | D.S. Horne Pty Ltd |
| Address | 113 Muller Road Hampstead Gardens 5086 SA Australia |
| Telephone | +61 8 8261 7377 |
| Fax | +61 8 8261 9739 |
| Website | http://www.dshome.com.au |
| Email | info@dshome.com.au |

Emergency telephone number

| | |
|-----------------------------------|---------------|
| Association / Organisation | Not Available |
| Emergency telephone numbers | 0433117432 |
| Other emergency telephone numbers | Not Available |


SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

| | |
|------------------------|--|
| Poisons Schedule | Not Applicable |
| GHS Classification [1] | Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, STOT - SE (Resp. Irr.) Category 3 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |

Label elements

| | |
|--------------------|---|
| GHS label elements |  |
|--------------------|---|

SIGNAL WORD **DANGER**

Hazard statement(s)

| | |
|------|----------------------------------|
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H335 | May cause respiratory irritation |

Precautionary statement(s) Prevention

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

Precautionary statement(s) Response

Continued...

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| | |
|-----------------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor/physician/first aider |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |

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 to authorised chemical landfill or if organic to high temperature incineration |
|-------------|--|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-----------|-----------|---|
| 7784-31-8 | >60 | aluminium sulfate, hydrated |

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 dust is inhaled, remove from contaminated area. ▶ Encourage patient to blow nose to ensure clear passage of breathing. ▶ If irritation or discomfort persists seek medical attention. |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

| | |
|--|--|
| | <ul style="list-style-type: none"> ▶ There is no restriction on the type of extinguisher which may be used. ▶ Use extinguishing media suitable for surrounding area. |
|--|--|

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 in the event of a fire. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use fire fighting procedures suitable for surrounding area. ▶ DO NOT approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ If safe to do so, remove containers from path of fire. ▶ Equipment should be thoroughly decontaminated after use. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Non combustible. ▶ Not considered a significant fire risk, however containers may burn. <p>Decomposition may produce toxic fumes of; sulfur oxides (SOx) metal oxides May emit corrosive fumes.</p> |

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| | |
|---------------------|---|
| Minor Spills | <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid contact with skin and eyes. ▶ Wear impervious gloves and safety glasses. ▶ Use dry clean up procedures and avoid generating dust. ▶ Vacuum up (consider explosion-proof machines designed to be grounded during storage and use). ▶ Do NOT use air hoses for cleaning ▶ Place spilled material in clean, dry, sealable, labelled container. |
| 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. ▶ Control personal contact with the substance, by using protective equipment and dust respirator. ▶ Prevent spillage from entering drains, sewers or water courses. ▶ Recover product wherever possible. Avoid generating dust. ▶ Sweep / shovel up. ▶ If required, wet with water to prevent dusting. ▶ Put residues in labelled plastic bags or other containers for disposal. ▶ Wash area down with large quantity of water and prevent runoff into drains. ▶ If contamination of drains or waterways occurs, advise emergency services. |

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| | |
|--------------------------|---|
| Safe handling | <ul style="list-style-type: none"> ▶ Limit all unnecessary personal contact. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ When handling DO NOT eat, drink or smoke. ▶ Always wash hands with soap and water after handling. ▶ Avoid physical damage to containers. ▶ Use good occupational work practice. ▶ Observe manufacturer's storage and handling recommendations contained within this MSDS. |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ 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 MSDS. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|--|
| Suitable container | Carton containing plastic bag. |
| Storage incompatibility | Aluminium sulfate <ul style="list-style-type: none"> ▶ forms sulfuric acid in water ▶ reacts violently with bases and many other materials ▶ dry material is weakly corrosive to carbon steel; aqueous solution attacks aluminium and other metals forming hydrogen gas |

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

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 sulfate, hydrated | Aluminium, soluble salts (as Al) | 2 mg/m3 | Not Available | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|-----------------------------|------------------|----------|----------|----------|
| aluminium sulfate, hydrated | Aluminum sulfate | 13 mg/m3 | 13 mg/m3 | 41 mg/m3 |






| Ingredient | Original IDLH | Revised IDLH |
|-----------------------------|---------------|---------------|
| aluminium sulfate, hydrated | Not Available | Not Available |

Exposure controls

| | |
|---|--|
| Appropriate engineering controls | General exhaust is adequate under normal operating conditions. |
|---|--|

Continued...

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| | |
|--------------------------------|---|
| Personal protection |      |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] |
| Skin protection | See Hand protection below |
| Hands/feet protection | Wear general protective gloves, eg. light weight rubber gloves. |
| 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)

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

* 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.

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

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

* - Negative pressure demand ** - Continuous flow

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | White granules; soluble in water forming acidic solutions. | | |
|---|--|--|----------------|
| Physical state | Divided Solid | Relative density (Water = 1) | 1.60 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Applicable |
| pH (as supplied) | Not Applicable | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | >120 | Viscosity (cSt) | Not Applicable |
| Initial boiling point and boiling range (°C) | Not available. | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | Not Applicable | Taste | Not Available |
| Evaporation rate | Not Applicable | Explosive properties | Not Available |
| Flammability | Not Applicable | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Applicable | Surface Tension (dyn/cm or mN/m) | Not Applicable |
| Lower Explosive Limit (%) | Not Applicable | Volatile Component (%vol) | Not Applicable |
| Vapour pressure (kPa) | Not Applicable | Gas group | Not Available |
| Solubility in water (g/L) | Miscible | pH as a solution(1%) | Not available. |
| Vapour density (Air = 1) | Not Applicable | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

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| | |
|---|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur. |
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

| | |
|---------------------|---|
| Inhaled | <p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Levels above 10 ug/m³ of suspended inorganic sulfates in the air may cause an excess risk of asthmatic attacks in susceptible persons. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.</p> <p>Not normally a hazard due to non-volatile nature of product The dust may cause sore throat, coughing.</p> |
| Ingestion | <p>Accidental ingestion of the material may be damaging to the health of the individual. Acute toxic responses to aluminium are confined to the more soluble forms. Sulfates are not well absorbed orally, but can cause diarrhoea. Concentrated solutions (over 20%) can cause burns to the mouth, bleeding stomach, loss of coordination, muscle spasms and kidney injury.</p> |
| Skin Contact | <p>This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing 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 and ensure that any external damage is suitably protected.</p> |
| Eye | If applied to the eyes, this material causes severe eye damage. |
| Chronic | <p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.</p> <p> Repeated minor skin contact may result in numbing of fingers. Repeated minor ingestion may cause phosphate deficiency; weakening bones.</p> |

| | | |
|--|---|-------------------|
| D.S. Horne Brown Pack Commercial Kit Aluminium Sulphate | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| aluminium sulfate, hydrated | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >5000 mg/kg ^[1] | Not Available |
| | Oral (rat) LD50: >370<5000 mg/kg ^[2] | |
| Legend: | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's msds unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances | |

| | |
|------------------------------------|--|
| ALUMINIUM SULFATE, HYDRATED | No significant acute toxicological data identified in literature search. |
|------------------------------------|--|

| | | | |
|--|---|---------------------------------|---|
| 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 required to make classification available
 ✘ – Data available but does not fill the criteria for classification
 ☹ – Data Not Available to make classification

CMR STATUS

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Prevent, by any means available, spillage from entering drains or water courses.

DO NOT discharge into sewer or waterways.

Continued...

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|-----------------------------|-------------------------|------------------|
| aluminium sulfate, hydrated | HIGH | HIGH |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|-----------------------------|------------------------|
| aluminium sulfate, hydrated | LOW (LogKOW = -2.2002) |

Mobility in soil

| Ingredient | Mobility |
|-----------------------------|-------------------|
| aluminium sulfate, hydrated | LOW (KOC = 6.124) |

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

| Product / Packaging disposal | |
|------------------------------|--|
| | <ul style="list-style-type: none"> ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Management Authority for disposal. ▶ Bury residue in an authorised landfill. ▶ 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 73 / 78 and the IBC code

| Source | Ingredient | Pollution Category |
|---|-----------------------------|--------------------|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | aluminium sulfate, hydrated | Y |

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture**

| | |
|---|---|
| aluminium sulfate, hydrated(7784-31-8) is found on the following regulatory lists | "Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists" |
|---|---|

SECTION 16 OTHER INFORMATION**Other information****Ingredients with multiple cas numbers**

| Name | CAS No |
|-----------------------------|---|
| aluminium sulfate, hydrated | 10043-01-3, 16828-11-8, 17927-65-0, 25102-19-6, 57292-32-7, 7784-31-8 |

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)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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