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## Safety Data Sheet

### 1 IDENTIFICATION

#### Product identifier

**Trade name:** ARCAL Compound 302

**Other means of identification:** Pickling Paste

SDS # 0004

#### Recommended use and restriction on use

**Recommended use:** Compound 302 is a pickling paste for removal off oxidation colours and weld burn on stainless steel

**Restrictions on use:** No further relevant information available.

#### Manufacturer/Importer/Supplier/Distributor information

##### Importer:

Harris Products Group  
14 Queensland Rd  
Darra, QLD, Australia 4076  
(07) 33753670

**Safety Data Sheet Questions:** [sales@hgea.com.au](mailto:sales@hgea.com.au)

**Website:** <http://www.harrisproductsgroup.com.au>

**Poisons Information Centre/Helpline (24 hours) Australia 13 11 26**

### 2 HAZARD(S) IDENTIFICATION

#### GHS classification of the substance/mixture.

Classified according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

#### Classification of the substance or mixture

The product is classified as hazardous according to the Globally Harmonized System (GHS)

**EMERGENCY OVERVIEW.** Containing less than 10% hydrogen chloride the primary hazard is having prolonged contact with skin. Being a paste, spillage is limited and air contamination is limited. If the paste or clothing contaminated with the paste is allowed to remain in contact with skin for minutes or hours, serious injury may occur, such as irritation and blistering.

**GHS Classification(s)** Health – Eye Irritant: Category 1  
Skin corrosion/irritation: Category 1

#### Label elements

**Signal word** DANGER

#### Hazard pictograms



GHS05



GHS07

**Hazard Statement(s)**

<b>H302</b>	Harmful if swallowed.
<b>H317</b>	May cause an allergic skin reaction
<b>H318</b>	Causes serious eye damage

**Prevention Statement(s):**

<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.
<b>P271</b>	Use only outdoors or in a well ventilated area.
<b>P270</b>	Do not eat, drink or smoke when using this product.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
<b>P264</b>	Wash thoroughly after handling.

**Response statement(s):**

<b>P301 + P330 + P331</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
<b>P303 + P361 + P353</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF
<b>P304 + P340</b>	INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
<b>P305 + P351 + P338.</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P308 + P313.</b>	IF exposed or concerned: Get medical advice/ attention
<b>P310</b>	Immediately call a POISON CENTER or doctor/physician
<b>P321</b>	Specific treatment is advised - see first aid instructions.
<b>P363</b>	Wash contaminated clothing before reuse.

**Storage Statement(s):** Store Locked Up

**Disposal Statement(s):** Dispose of contents/container in accordance with relevant regulations.

**Other Hazards** No information provided

**Additional information:**

**Other hazards which do not result in GHS classification:** None established

**Hazard description:**

**WHMIS-symbols:** Not hazardous under WHMIS.

**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture: consisting of the following components.

Substances/Mixtures		
CAS	Ingredient	Proportion
7647-01-0	Hydrochloric Acid	<10
7705-08-0	Ferric Chloride	<3

**Additional information:**

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

**Composition comments:**

The term "Dangerous Components" should be interpreted as a term defined in Hazard Communication standards and does not necessarily imply the existence of a hazard. The product may contain additional nonhazardous ingredients or may form additional compounds under the condition of use. Refer to Sections 2 and 8 for more information.

## 4 First-aid measures

### Description of first aid measures

**General information: EMERGENCY OVERVIEW.** Containing less than 10% hydrogen chloride the primary hazard is having prolonged contact with skin. Being a paste, spillage is limited and air contamination is limited. If the paste or clothing contaminated with the paste is allowed to remain in contact with skin for minutes or hours, serious injury may occur, such as irritation and blistering.

### Inhalation:

Hydrogen chloride is evolved as Compound 302 dries. If an acidic odour becomes noticeable, proceed to fresh air until adequate ventilation is established.

### Skin contact:

Remove contaminated clothing and launder before reuse. Wash skin with soap and water.

### Eye contact:

Flush with clean water for 15 minutes or until irritation subsides. If irritation persists, seek medical advice.

### Ingestion:

For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. In case of this unlikely event, administer antacids (not sodium bicarbonate). Do not induce vomiting (to avoid getting material into the lungs) and obtain medical help immediately.

**Information for doctor:** Treat Symptomatically

### Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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## 5 Fire-fighting measures

### Extinguishing media

Water, dry chemicals, foam, use self container breathing apparatus when involved in fire.

### Special hazards arising from the substance or mixture

Acidic product reacts with metals to produce hydrogen

### Advice for firefighters

Keep container cool

### Additional information:

Compound 302 contains less than 5% flammable material and is unlikely to burn. If Compound 302 is heated by nearby fire or heat, vapours of hydrochloric acid will be produced and should be avoided. Granulated limestone (agricultural lime) may be used to neutralize acid runoff from containers which are punctured or overfilled with water spray.

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## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

In case Compound 302 is spilled, treat the area with an alkaline material like agricultural lime, carefully scoop up the result and dispose in a plastic container with hazardous waste. Lime will neutralize acid. Ventilate the area to remove hydrogen chloride gas.

### Environmental precautions:

Avoid discharge into drains, water courses or onto the ground.

### Methods and material for containment and cleaning up:

Flush small amounts to drain, collect and treat large amounts with sodium bicarbonate to counteract acidity and dispose to solid waster.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## 7 Handling and storage

### Handling:

#### Precautions for safe handling

Provide adequate ventilation. Do not ingest. Do not breathe mist or vapour. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using do not eat or drink. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Observe good industrial hygiene practices. Read and understand the manufacturer's instruction and the precautionary label on the product. See the Australian Standard - AS 1674.1 – 1997 – Reconfirmed 2016. Safety in Welding and Allied Processes Australia.

#### Conditions for safe storage, including any incompatibilities

##### Storage:

Store Compound 302 in a cool dry place where moisture will not collect on containers and where heat from equipment or the sun will not expose the product to temperature extremes.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

### Control parameters

#### Exposure Guidelines:

Refer to the Safe Environments risk management document – Welding Fume - <http://www.safeenvironments.com.au/welding-fume/> The exposure standard refers to the publication by Work Safe Australia “Workplace Exposure Standard for Airborne Contaminants” with the Date of Effect being 22 December 2011. Work Safe Australia note that “exposure standards do not represent a fine dividing line between a healthy and unhealthy work environment. Natural biological variation and the range of individual susceptibilities mean that a small number of people might experience adverse health effects below the exposure standard.

Exposure Standards					
CAS	Ingredient	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>
7647-01-0	Hydrochloric Acid		5		
7705-08-0	Ferric Chloride		2		

Reference: ACGIH Biological Exposure Indices

Refer to Worksafe Australia for standards:

[http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/639/Workplace\\_Exposure\\_Standards\\_for\\_Airborne\\_Contaminants.pdf](http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/639/Workplace_Exposure_Standards_for_Airborne_Contaminants.pdf)

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Engineering controls:** No further relevant information available.

**Ventilation**

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

**Breathing equipment:**



Where an inhalation risk exists, wear a Class P2 (Metal fume) respirator. If using product in a confined area, wear an Air-line respirator.

**Protection of hands:**



Wear nitrile or neoprene gloves for routine industrial use. Use triple gloves for spill response.

**Eye protection:**



Wear safety glasses with side shields (or goggles). When these products are used in conjunction with soldering, it is recommended that safety glasses, goggles, or face-shield with filter lens of appropriate shade number (per ANSI Z49.1-1988, "Safety in Welding and Cutting") be worn.

**Body protection:** Protective work clothing



## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

<b>Appearance</b>	Yellow Paste	<b>Physical State</b>	Paste
<b>Odour</b>	Acidic	<b>Flammability</b>	Not Available
<b>Odour Threshold</b>	Not Available	<b>Flash Point</b>	Not Available
<b>pH</b>	-0.5	<b>Auto Igniting</b>	Not Available
<b>Melting point/range</b>	Not Available	<b>Solubility water</b>	60%
<b>Vapour Pressure, mmHg@980°C</b>	Not Available	<b>Flash Point</b>	Non-flammable
<b>Vapour Density</b>	Not Available	<b>Density at 20°C (68°F)</b>	Not Available
<b>Boiling Point &amp; boiling range</b>	100°C	<b>Evaporation Rate</b>	Not Available
<b>Freezing/Melting Point</b>	Not Available	<b>Specific Gravity @200C (water = 1)</b>	Not Available

## 10 Stability and reactivity

**Reactivity:** The product is stable.

**Chemical stability:** Stable under normal temperatures and pressures and conditions of storage.

**Possibility of hazardous reactions:** Polymerization is not expected to occur.

**Conditions to avoid:** Avoid inadvertent contact with metals.

**Incompatible materials:** Concentrated alkalis and metals. The major hazard is the corrosive action of hydrogen chloride, so use and store Compound 302 away from materials which could be affected by exposure to corrosive vapours.

**Hazardous decomposition products:** Hydrogen chloride and chlorine with incomplete combustion

## 11 Toxicological information

Toxicity – Animal and Human Species				
CAS	Ingredient	Oral Toxicity LC50 – Animal LDLo - Human	Intraperitoneal Toxicity LC50	Inhalation Toxicity LC50 – Animal LDLo - Human
7647-01-0	Hydrochloric Acid	900mg/kg Rabbit 0.42mL/kg Women 2.857 mg/kg Man	40.142mg/kg Mouse	3124ppm/1H Rat 3000ppm/5H
7705-08-0	Ferric Chloride	895mg/kg Mouse 450mg/kg Rat 4mL/kg Women	Intravenous 58mg/kg Mouse	No Data Available

### Information on toxicological effects:

#### Acute toxicity:

Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Prolonged inhalation may be harmful. Liver and kidney effects are only expected to occur if exposure concentrations are very high.

#### Skin Contact:

Causes severe skin burns, irritation on skin.

#### Eye Contact:

Causes eye damage on contact.

#### Respiratory sensitisation:

This product is expected to cause skin/respiratory tract sensitisation.

#### Aspiration:

Not a respiratory sensitiser.

#### Inhalation:

Harmful if inhaled. May cause respiratory tract irritation. Prolonged inhalation may be harmful.

#### Carcinogenicity:

Not applicable

#### STOT – single exposure:

Not classified

#### STOT – repeated exposure:

Not classified

## 12 Ecological information

CAS#	Ingredient	Result – LC50	Species	Exposure
7647-01-0	Hydrochloric Acid	282mg/L 3.6mg/L	Mosquito Fish Bluegill Fish	96 Hours 48 Hours
7705-08-0	Ferric Chloride	No Data Available		

**Ecotoxicity:** Do not allow product to reach ground water, water course or sewer. Because of the low pH of this product, it would be expected produce significant ecotoxicity upon exposure to aquatic organisms and aquatic

systems. Ensure appropriate measures are taken to prevent this product from entering the environment.

**Persistence and Degradability:** Not biodegradable. Hydrochloric acid will likely be neutralized to chloride by alkalinity present in natural environment.

**Bioaccumulative Potential:** No data is available on the degradability of this product

**Mobility in soil:** Hydrochloric acid will be neutralized by naturally occurring alkalinity. The acid will permeate soil, dissolving some soil material and will then neutralize.

**Other adverse effects:** No data is available on the degradability of this product

### 13 Disposal considerations

**Waste treatment methods**

**Recommendation:**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Uncleaned packagings:** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

**Recommendation:** Disposal must be made according to official regulations.

### 14 Transport Information

Compound 302 is sold in limited quantities:

49CFR173.154, Exceptions for Class 8 (Corrosive materials). Limited Quantities may be classified as a "Consumer Commodity" ORM-D

**Other than limited quantities the following would apply:**

UN-Number DOT, ADR, ADN, IMDG, IATA	UN 1789
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Hydrochloric Acid Solution 10%
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	8 Corrosive Substances 
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards: Marine pollutant:	No
Special precautions for user Hazard Identification # Hazchem code ADG	Not applicable. 80 2R
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not regulated.

## 15 Regulatory information

**Product Name:** ARCAL Compound 302

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

**Poison Schedule:**

Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Classifications:**

Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Refer to the Australian Inventory of Chemical Substances – AICS at <https://www.nicnas.gov.au/chemicals-on-AICS#main>

**Poison schedule:** Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). <https://www.legislation.gov.au/Details/F2016L01638>

**Classifications:** Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

## 16 Other information

### References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice

Standard for the Uniform Scheduling of Medicines and Poisons

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Modell Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work, Australia

American Conference of Industrial Hygienists (ACGIH)

Globally Harmonised System of classification and labelling of chemicals.

**WELDING (1):** Due to the diversity of welding techniques, processes, materials used, nature of the surface being welded and the presence of contaminants, the fumes & gases associated with welding will vary in composition and quantity. When assessing a welding process, the toxic fumes generated may not only be associated with the parent metal, filler wire or electrode. The welding/cutting arc may generate nitrogen oxides, carbon monoxide & other gases, whilst UV radiation emitted from some arcs generates ozone. Ozone may irritate mucous membranes and cause pulmonary oedema & haemorrhage. Shielding gases (e.g. carbon dioxide and inert gases i.e. argon and helium) in high concentrations, in confined spaces, may reduce oxygen in the atmosphere to dangerous levels, resulting in possible asphyxiation.

**WELDING (2):** In addition to complying with individual exposure standards for specific contaminants, where current manual welding processes are used, the fume concentration inside the welder's helmet should not exceed 5 mg/m<sup>3</sup> ( unless otherwise classified) when collected in accordance with Australian Standard AS 3853.1: Fume from welding and allied processes - Guide to methods for the sampling and analysis of particulate matter and AS 3853.2: Fume from welding and allied processes - Guide to methods for the sampling and analysis of gases. Airway irritation and metal fume fever are the most common acute effects from welding fumes. Reported to cause reduced sperm quality in welders.

**WELDING (3):** Other gases and fumes associated with welding processes include: Inert shielding gases (e.g. argon, carbon dioxide, helium) which may reduce the atmospheric oxygen content in poorly ventilated areas. UV-radiation and Infra-Red radiation may decompose chlorinated degreasing agents to form highly toxic and irritating phosgene gas. This may occur if a metal has been degreased but inadequately dried or when vapours from a nearby degreasing bath enter the welding zone.

**WELDING (4):** Welding fumes may contain a wide variety of chemical contaminants, including oxides and salts of metals and other compounds which may be generated from electrodes, filler wire, flux materials and from the welded material (e.g. painted surfaces). Welding stainless-steel and its alloys generates nickel and chromium (VI) compounds. Welding fumes are retained in the lungs. Sparingly soluble compounds may be released slowly from the lungs. Welding fume is classified as possibly carcinogenic to humans (IARC Group 2B).

#### **PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

#### **Disclaimer:**

We urge each end user and recipient of this SDS to study it carefully. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from potential hazards associated with the handling or use of this product. Harris Products Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

#### **WARNING: PRODUCT COMPONENTS PRESENT HEALTH AND SAFETY HAZARDS. READ AND UNDERSTAND THIS SAFETY DATA SHEET (S.D.S.). ALSO, FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.**

The information contained herein relates only to the specific product. If the product is combined with other materials, all component properties must be considered. **BE SURE TO CONSULT THE LATEST VERSION OF THE SDS. SAFETY DATA SHEETS ARE AVAILABLE FROM HARRIS PRODUCTS GROUP** Harris Products Group, HGE PTY LTD, Brisbane | Melbourne | Perth | New Zealand, 14 Queensland Rd, Darra, QLD 4076, Phone: (07) 3375 3670 | Fax: (07) 3375 3620, Email: sales@hgea.com.au, www.harrisproductsgroup.com.au,

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