Reviewed on 11/03/2022

Safety Data Sheet

1 IDENTIFICATION

Product identifier

Trade name: Stay Clean® Paste Soldering Flux Petroleum Gel
Other means of identification: Paste Flux

SDS # 0137

Recommended use and restriction on use
Recommended use: Metal Soldering Operations
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
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. This product is an opaque, odorless, tan/gold gel. This product can be slightly irritating to contaminated tissue. This product must be substantially pre-heated before ignition can occur. This product is not reactive. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

GHS Classification(s) Acute Toxicity - Oral: Category 4
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 1
Specific target organ toxicity, single exposure: Category 2 (optic nerve)

Hazard-determining components of labelling:
zinc chloride
ethanediol
ammonium chloride

Signal word **Danger**

Hazard pictograms

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Hazard Statement(s)

H302	Harmful if swallowed.
H315	Causes Skin Irritation
H318	Causes serious eye damage
H373	May cause damage to organs through prolonged or repeated exposure

Prevention Statement(s):

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response statement(s):

P305 + P351 + P338.	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330	Rinse mouth
P314	Get medical attention is you feel unwell
P362 + P364	Take off contaminated clothing and was it before use
P501	Dispose of contents/container in accordance with relevant regulations..

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:
Heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to brazing fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product.
Hazard description:
WHMIS-symbols: Not hazardous under WHMIS.

3 Composition/information on ingredients

Chemical characterization: Mixtures
Description: Mixture: consisting of the following components.

Sustances/Mixtures		
CAS	Ingredient	Proportion
8009-03-8	Petrolatum	<80%
7646-85-7	Zinc Chloride	<40%
107-21-1	Ethylene Glycol	<15%
12125-02-9	Ammonium Chloride	<10%
7732-18-5	Water	Balance

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.

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4 First-aid measures

Description of first aid measures
Victims of chemical exposure must be taken for medical attention, if adverse health effects occur. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with victim.
SKIN EXPOSURE: In the event of skin-over-exposure, rinse affected area with a soap and water solution. If skin contact results in irritation, the minimum flushing is for 15 minutes. Victim must seek medical attention if adverse health effects occur, or if skin contact has resulted in a thermal burn.
EYE EXPOSURE: If this product enters the eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek medical attention if adverse health effects occur, or if eye contact has resulted in a thermal burn.
INHALATION: If this product is inhaled, remove victim to fresh air. Have victim blow nose.
INGESTION: If swallowed call physician immediately! Do not induce vomiting unless directed by medical personnel. Rinse mouth with water if person is conscious. Never give fluids or induce vomiting if person is unconscious, having convulsions, or not breathing.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin disorders may be aggravated by prolonged over-exposures to this product.
RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5 Fire-fighting measures

Extinguishing media
FLASH POINT (ASTM D-92): > 198°C (>390°F) [for Petrolatum]
AUTOIGNITION TEMPERATURE: Not determined.
FLAMMABLE LIMITS (in air by volume, %):
Lower (LEL): Not applicable.
Upper (UEL): Not applicable.
FIRE EXTINGUISHING MATERIALS:
Water Spray: YES (for cooling) Carbon Dioxide: YES
Halon: YES Foam: YES
Dry Chemical: YES Other: Any “B” Class
Special hazards arising from the substance or mixture
This product must be substantially preheated before ignition can occur. This product can float on water and may travel to distant locations. During a fire, irritating and toxic gases (i.e. carbon monoxide, carbon dioxide, and hydrogen chloride) may be generated.
Advice for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Move containers from fire area if you can do so without risk.
Use standard firefighting procedures and consider the hazards of other involved materials.
No unusual fire or explosion hazards noted.
Additional information:
Read and understand the Work Safe Australia Code of Practice on Welding Processes and “Standard for Fire Prevention During Welding, Cutting and Other Hot Work” before using this product. Section 274 of the Work Health and Safety Act (the WHS Act.)

6 Accidental release measures

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a large, uncontrolled release, clear the affected area and protect people. In the event of a non-incidental release of this product, minimum Personal Protective Equipment should be **Level D: gloves (rubber gloves over latex gloves), safety goggles, and appropriate body protection. Level B Protection (which includes Self-Contained Breathing Apparatus) during spill response situations in which the oxygen level is below 19.5% or is unknown.**
Absorb spilled paste flux with polypads or other suitable absorbent. Rinse area with soap and water solution. If

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the heated product has been spilled, allow the material to cool before clean-up procedures begin. Decontaminate the area thoroughly. Place all spilled residues in a suitable container and seal.

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.

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.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Standard safety practices associated with welding, brazing and soldering operations should be followed when using this product.

STORAGE AND HANDLING PRACTICES: Open containers slowly, on a stable surface. Avoid the accidental exposure of this material to open flames, hot surfaces, or other sources of ignition. Store this product in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible chemicals (see Section 10, Stability and Reactivity). Keep container tightly closed when not in use. Inspect all incoming containers before storage to ensure they are properly labeled and not damaged.

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.

The American Governmental Congress of Industrial Hygienists (ACGIH) however recommends a Threshold Limit Value (TLV) Time Weighted Average (TWA) of 5 mg/m^3 for welding fume, on the assumption that there are no highly toxic constituents.; However, in Australia, there is no specific exposure standard for welding fume This is due to the fume being a combination of the metals and filler material being molten together along with cleaning and fluxing agents present. Each metal or material within the process of welding will generally have its own exposure standard.

Exposure Standards					
CAS	Ingredient	TWA ppm	TWA mg/m^3	STEL ppm	STEL mg/m^3
8009-03-8	Petrolatum	NE	NE	NE	NE
7646-85-7	Zinc Chloride (Fumes)		1		2
107-21-1	Ethylene Glycol	NE	100 (ceiling aerosol)	NE	NE
12125-02-9	Ammonium Chloride		10		20
7732-18-5	Water	NE	NE	NE	NE

Reference: ACGIH Biological Exposure Indices

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Refer to Worksafe Australia for standards:
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:
The most significant routes of over-exposure for this product are by contact with skin, eye contact, or inhalation of mists or sprays generated by this product.
Engineering controls and ventilation: No special ventilation systems or engineering controls are normally required when using this product. Prudent practice is to ensure eyewash/safety shower stations are available near areas where this product is used. Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in Section 2 (Composition and Information on Ingredients). Exhaust directly to the outside, taking necessary precautions for environmental protection. Prudent practice is to ensure eyewash/safety shower stations are available near areas where this product is used.

Breathing equipment:

Dust, mist, and fume respirator

Protection of hands:
Wear neoprene or rubber gloves for routine industrial use.
Eye protection:

Safety glasses or goggles. Face shields may be needed if operations generate splashes or sprays.

Body protection: None needed for normal circumstances of use. Use body protection appropriate for task (i.e., apron, coveralls, and chemically resistant boots).



9 Physical and chemical properties

Information on basic physical and chemical properties
General Information

Appearance, Odour, Colour	Opaque, odourless, tan/gold gel	**Physical State**	Gel
Odour Threshold	Not Applicable	**Relative Vapor Density**	Not Applicable
pH	Not Applicable	**Evaporation Rate**	(nBuAc=1): 1.5
Specific Gravity (Water = 1):	0.815 – 0.88	**Freezing Melting Point**	37-60°C (100-140°F)
Vapour Pressure	Not Applicable	**Boiling Point**	Not Applicable

10 Stability and reactivity

STABILITY: Stable
DECOMPOSITION PRODUCTS: Carbon oxides, a variety organic molecules, hydrogen chloride, zinc oxides, nitrogen oxides and ammonia.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is not compatible with strong oxidizing agents.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Avoid exposing this product to incompatible materials.

Brazing fumes and gases cannot be classified simply. The composition and products: quantity of both are dependent upon the metal being joined, the process, procedure and filler metals and flux used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed

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include: coatings on the metal being joined (such as paint, plating, or galvanizing), the number of operators and the volume of the worker area, the quality and amount of ventilation, the position of the operator's head with respect to the fume and fumes from chemical fluxes used in some brazing operations.
W hen the wire or rod is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 3, plus those from the base metal and coating, etc., as noted above.

11 Toxicological information

Toxicity				
CAS	Ingredient	Oral Toxicity LD50	Intravenous Toxicity LD50	Inhalation Toxicity LD50
8009-03-8	Petrolatum	Not Available	Not Available	
7646-85-7	Zinc Chloride	350mg/kg Rat		
107-21-1	Ethylene Glycol	4,700 mg/kg Rat		
12125-02-9	Ammonium Chloride	1650mg/kg Rat		

Information on toxicological effects:
TOXICITY DATA: The following human toxicological data are available for the components of this product. Other data for animals are available but are not presented in this Material Safety Data Sheet.
SUSPECTED CANCER AGENT: Components of this product are listed as follows:
ETHYLENE GLYCOL (Aerosol) ACGIH TLV-A4 (Not Classifiable as to Human Carcinogenicity)
ZINC CHLORIDE: EPA-D (Not Classifiable as to Human Carcinogenicity (inadequate human and animal evidence of carcinogenicity or no data available)
IRRITANCY OF PRODUCT: This product may be slightly irritating to contaminated tissue.
SENSITIZATION TO THE PRODUCT: Petrolatum (the main component of this product) may cause allergic skin reactions in hypersensitive individuals**.**
REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components are on the human reproductive system.
Mutagenicity: This product is not reported to produce mutagenic effects in humans. Animal mutation data are available for Ammonium Chloride, Ethylene Glycol, and Zinc Chloride (components of this product) and was obtained during clinical studies on specific animal tissues exposed to high doses of these compounds.
Embryotoxicity This product is not reported to produce embryotoxic effects in humans. Animal embryotoxic data are available for Ethylene Glycol and Zinc Chloride (components of this product).
Teratogenicity: This product is not reported to cause teratogenic effects in humans. Studies on test animals exposed to relatively high doses of Ethylene Glycol and Zinc Chloride (components of this product) indicate teratogenic effects.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans. Studies on test animals exposed to relatively high doses of Ethylene Glycol and Zinc Chloride (components of this product) indicate adverse reproductive effects.
Carcinogenicity:
Welding fume is classified as possibly carcinogenic to humans (IARC Group 2B).
STOT – single exposure:
Causes damage to organs (optic nerve). May cause respiratory irritation.

STOT – repeated exposure:
Not classified

12 Ecological information

Ingredient	Result	Species	Exposure
8009-03-8 Petrolatum	Not Available		
7646-85-7 Zinc Chloride (Fume)	0.4-2.2 mg/l	Fish	96 Hours
107-21-1 Ethylene Glycol	18,500 mg/l	Fish	96 Hours

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107-21-1 Ethylene Glycol	74,000 mg/l	Daphnia	48 Hours
12125-02-9 Ammonium Chloride	209.00 mg/l 161 mg/l	Carp Daphnia	96 Hours 48 Hours

Ecotoxicity: Very toxic to aquatic life with long lasting effects.
Persistence and Degradability: No data is available on the degradability of this product
Bioaccumulative Potential: Methanol (CAS 67-56-1) = -0.77
Mobility in soil: No data is available on the degradability of this product
Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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

This product is not classed as a 'Hazardous chemical' or Corrosive.

	LAND TRANSPORT ADG	SEA TRANSPORT IMDG/IMO	AIR TRANSPORT IATA/ICAO
UN-Number ADG, IMDG/IMO, IATA/ICAO	3082	3082	3082
UN proper shipping name ADG, IMDG/IMO, IATA/ICAO	Environmentally Hazardous Substance, Liquid N.O.S Zinc Chloride	Environmentally Hazardous Substance, Liquid N.O.S Zinc Chloride	Environmentally Hazardous Substance, Liquid N.O.S Zinc Chloride
Transport hazard class(es) ADG, IMDG/IMO, IATA/ICAO	 9	9	9
Packing group ADG, IMDG/IMO, IATA/ICAO	Not Regulated III	III	III
Environmental hazards: Marine pollutant:	NO		
Special precautions for user	Transport labelling is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of maximum capacity of greater than 450L for a liquid and a maximum net mass greater than 400kg for a solid.		
Additional Information			
Hazchem code.			

15 Regulatory information

Product Name: Stay Clean® Paste Soldering Flux

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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 Codie 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 (ACGIIH)

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/m³ (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

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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 MATERIAL SAFETY DATA SHEET (M.S.DS.). 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 MSDS. MATERIAL 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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[End of SDS]