SAFETY DATA SHEET

ADVANTAGE P2-MD-SS

SDS according to the Work Health and Safety Regulations (WHS)

Section 1. Identification

Product name : ADVANTAGE P2-MD-SS

Product code : 42072637-02

Other means of identification : Not available.

UN number : Not regulated.

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

Relevant uses : Metalworking fluid

Uses advised against : Any other purpose.

Supplier : Quaker Houghton Australia Pty Ltd.
287 Wickham Road
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MT Pleasant, Victoria
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T: +61 3 5335 3400

ProductStewardship@quakerhoughton.com
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Emergency telephone number (with hours of operation) : CHEMTREC Australia: +(61)-290372994

Section 2. Hazard(s) identification

This product is considered hazardous under the Work Health and Safety Regulations.

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Hazard pictograms :

Corrosion

Signal word : **DANGER**

Section 2. Hazard(s) identification

Hazard statements : **Causes skin irritation.**
Causes serious eye damage.

Precautionary statements

Prevention : Wear eye or face protection. Wash thoroughly after handling.

Response : Immediately call a POISON CENTER or doctor. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Not applicable.

Other hazards which do not result in classification : None known.

Section 3. Composition and ingredient information

Substance/mixture : Mixture

Ingredient name	% (w/w)	CAS number
Mineral oil	≥10 - ≤30	**
Amine neutralized carboxylic Acid	≤8.6	-
Amine neutralized with fatty acid	≤5	-
Amine neutralized carboxylic Acid	≤4.7	-
ammonium dihydrogenorthophosphate	≤4.7	7722-76-1
1-aminopropan-2-ol	≤3	78-96-6
Poly(oxy-1,2-ethanediyl), .alpha.-(carboxymethyl)-.omega.-hydroxy-, C10-16 and C12-20-unsatd. alkyl ethers	≤3	68954-89-2
Alcohols, C10-12, ethoxylated propoxylated	≤3	68154-97-2
Amine neutralized carboxylic Acid	≤2.5	-
Amine neutralized carboxylic Acid	≤2.2	-
2,2',2''-nitrilotriethanol	≤3	102-71-6
Amine neutralized substituted triazole	≤1	-

**** May contain** : 64742-52-5

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346.

The remaining composition is a mixture of non-classified ingredients or additives below the threshold for disclosure.

Section 4. First aid measures

Description of necessary first aid measures

General advice : Get medical attention immediately. If medical advice is needed, have product container or label at hand. Use personal protective equipment as required. Remove contaminated clothing and wash it before reuse. Wash skin surfaces thoroughly after contact.

Inhalation : Move affected person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and wash it before reuse. Get medical attention if symptoms occur.

Eye contact : Get medical attention immediately. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do.

Section 4. First aid measures

Ingestion : Ingestion may cause gastrointestinal irritation and diarrhea. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Inhalation : Not expected under normal use.

Skin contact : pain or irritation,redness

Eye contact : pain,redness,watering,burns

Ingestion : Not expected under normal use.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Use personal protective equipment as required.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : In a fire, hazardous decomposition products may be produced. carbon oxides (CO, CO_2) nitrogen oxides phosphorus oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment (see Section 8). Keep unnecessary personnel away. Avoid breathing vapor or mist. Provide adequate ventilation.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". Evacuate area.

Environmental precautions : Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Do not allow any potentially contaminated water, including rain water, runoff from fire fighting or spills, to enter any waterway, sewer or drain.

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Mineral oil	**ACGIH TLV (United States).** TWA: 5 mg/m³ 8 hours. STEL: 10 mg/m³ 15 minutes.
2,2',2''-nitrilotriethanol	**Safe Work Australia (Australia, 4/2018).** **Skin sensitizer.** TWA: 5 mg/m³ 8 hours.

Biological Exposure Indices (BEI)

None.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls and personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Keep equipment clean.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.

Other skin protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : A respirator is not needed under normal and intended conditions of product use. Use appropriate respiratory protection if there is a risk of exceeding any exposure limits.

Thermal hazards : Not expected under normal use. Not relevant/applicable due to nature of the product.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Clear., Amber.

Odor : Mild.

Odor threshold : Not available.

pH : 9.6 [Conc. (% w/w): 5%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Open cup: Not applicable. [Cleveland.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.98

Solubility : Emulsifies.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): 0.57 cm^2/s (57 cSt)

Section 9. Physical and chemical properties

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific measures identified.

Incompatible materials : Strong oxidizing materials. strong acids. strong alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Oral	2997.44 mg/kg
Dermal	7975.79 mg/kg

Numerical measures of toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ammonium dihydrogenorthophosphate	LD50 Dermal	Rabbit	5000 mg/kg	-
	LD50 Oral	Rat	2000 mg/kg	-
1-aminopropan-2-ol	LD50 Dermal	Rabbit	1851 mg/kg	-
	LD50 Oral	Rat	1715 mg/kg	-
Poly(oxy-1,2-ethanediyl), . alpha.-(carboxymethyl)-. omega.-hydroxy-, C10-16 and C12-20-unsatd. alkyl ethers	LD50 Oral	Rat	>2000 mg/kg	-
Alcohols, C10-12, ethoxylated propoxylated	LD50 Dermal	Rabbit	>2000 mg/kg	-
2,2',2"-nitrilotriethanol	LD50 Oral	Rat	7.39 g/kg	-

Irritation/Corrosion : Causes serious eye damage. Causes skin irritation.

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-aminopropan-2-ol	Eyes - Severe irritant	Rabbit	-	24 hours 250 ug	-
	Eyes - Severe irritant	Rabbit	-	970 ug	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	485 mg	-
2,2',2"-nitrilotriethanol	Eyes - Mild irritant	Rabbit	-	10 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Human	-	72 hours 15 mg l	-
	Skin - Severe irritant	Mouse	-	50 %	-
	Skin - Mild irritant	Rabbit	-	24 hours 560 mg	-

Sensitization : Based on available data, the classification criteria are not met.

Section 11. Toxicological information

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Product/ingredient name	IARC
2,2',2''-nitrilotriethanol	3

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.

Name	Category	Route of exposure	Target organs
ammonium dihydrogenorthophosphate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

Name	Result
Mineral oil	ASPIRATION HAZARD - Category 1

Other information : None identified.

Information on the likely routes of exposure

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Eye contact : Causes serious eye damage.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

None identified.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Not expected under normal use.

Skin contact : pain or irritation,redness

Eye contact : pain,redness,watering,burns

Ingestion : Not expected under normal use.

Section 12. Ecological information

This material is toxic to aquatic life. This material is harmful to aquatic life with long lasting effects.

Toxicity

Product/ingredient name	Result	Species	Exposure
ammonium dihydrogenorthophosphate	Acute LC50 86 mg/l	Fish - Peixes	96 hours
1-aminopropan-2-ol	Acute EC50 32.7 mg/l	Algae - Scenedesmus subspicatus	72 hours
	Acute EC50 108.82 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 210 mg/l Fresh water	Fish - Carassius auratus	96 hours
Alcohols, C10-12, ethoxylated propoxylated	Acute EC50 10 to 100 mg/l	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 12 mg/l	Daphnia - Daphnia magna	48 hours
2,2',2''-nitrilotriethanol	Acute EC50 609.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 11800000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 16000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

Section 12. Ecological information

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
1-aminopropan-2-ol	-0.96	0.11	low
2,2',2''-nitrilotriethanol	-1	<3.9	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Empty containers or liners may retain some product residues. Empty containers retain product residue and can be hazardous. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

Section 14. Transport information

	ADG	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Additional information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not Scheduled

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australian Inventory of Industrial Chemicals (AIIC) : All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC) : All components are listed or exempted.

Section 16. Any other relevant information

Date of issue/Date of revision : 12/2/2021

Version : 1

Key to abbreviations : ADG = Australian Dangerous Goods
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations
IARC = International Agency for Research on Cancer.

References : **Safety data sheets of raw materials, global regulatory body information, scientific literature, and testing data .**

Indicates information that has changed from previously issued version.

Notice to reader

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Section 16. Any other relevant information

for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to the gross negligence of such company.