

SAFETY DATA SHEET

TECTALOY MUKOWT HD2 RADIATOR FLUSH

Infosafe No.: HXKZM
ISSUED Date : 27/06/2017
ISSUED by: APPLIED AUSTRALIA PTY LTD -
AN (ITW) ILLINOIS TOOL WORKS COMPANY

1. IDENTIFICATION

GHS Product Identifier

TECTALOY MUKOWT HD2 RADIATOR FLUSH

Product Code

TEHD21L

Company Name

ITW AAMTECH (ABN 63 004 235 063)

Address

1-9 NINA LINK DANDENONG SOUTH
VIC 3175 AUSTRALIA

Telephone/Fax Number

Tel: 1800 177 989

Fax: +61 2 9725 4698; 1800 308 556

Emergency phone number

1800 638 556; 1800 039 008; 0800 2436 2255

E-mail Address

info@aamtech.com.au

Recommended use of the chemical and restrictions on use

Automotive radiator flush and cleaner.

Additional Information

Website: www.aamtech.com.au

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Eye Damage/Irritation: Category 1

Skin Corrosion/Irritation: Category 2

STOT Single Exposure: Category 3 (respiratory tract irritation)

Signal Word (s)

DANGER

Hazard Statement (s)

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Precautionary Statement (s)

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

P102 Keep out of reach of children.

P103 Read label before use.

Pictogram (s)

Corrosion, Exclamation mark



Precautionary statement – Prevention

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

Precautionary statement – Response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

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 or doctor/physician.

P362 Take off contaminated clothing and wash before reuse.

Precautionary statement – Storage

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

P405 Store locked up.

Precautionary statement – Disposal

P501 Dispose of contents/container in accordance with local regulations.

Other Information

Classification of the substance or mixture:

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

Classification [1]: Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation)

Legend: 1. Classified by ; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
ORGANIC ACIDS	Not Available	<2 %
Citric acid	77-92-9	30-60 %
Water	7732-18-5	30-60 %

Other Information

Synonyms: TEHD2

Substances:

See section below for composition of Mixtures

4. FIRST-AID MEASURES

Inhalation

If fumes, aerosols or combustion products are inhaled remove from contaminated area.

Other measures are usually unnecessary.

Ingestion

For advice, contact a Poisons Information Centre or a doctor at once.

Urgent hospital treatment is likely to be needed.

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. Transport to hospital or doctor without delay.

Skin

If skin contact occurs:
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.

Eye contact

If this product comes in contact with the eyes:
Immediately hold eyelids apart and flush the eye continuously with 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.
Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
Transport to hospital or doctor without delay.
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.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.
Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.
In such an event consider:
Foam.

Specific Methods

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.

Specific Hazards Arising From The Chemical

Fire Incompatibility: None known.

Fire/Explosion Hazard:

The material is not readily combustible under normal conditions.
However, it will break down under fire conditions and the organic component may burn.
Not considered to be a significant fire risk.
Heat may cause expansion or decomposition with violent rupture of containers.
Decomposes on heating and produces toxic fumes of:

,
carbon dioxide (CO₂)

,
other pyrolysis products typical of burning organic material.

Decomposition Temperature

Not Available

6. ACCIDENTAL RELEASE MEASURES

Clean-up Methods - Small Spillages

Clean up all spills immediately.
Avoid breathing vapours and contact with skin and eyes.
Control personal contact with the substance, by using protective equipment.
Contain and absorb spill with sand, earth, inert material or vermiculite.
Slippery when spilt.

Clean-up Methods - Large Spillages

Slippery when spilt.

Minor hazard.

Clear area of personnel.

Alert Fire Brigade and tell them location and nature of hazard.

Control personal contact with the substance, by using protective equipment as required.

Other Information

Personal Protective Equipment advice is contained in Section 8 - Exposure controls/personal protection of the MSDS.

7. HANDLING AND STORAGE

Precautions for Safe Handling

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.

DO NOT allow clothing wet with material to stay in contact with skin

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:

Polyethylene or polypropylene container.

Packing as recommended by manufacturer.

Check all containers are clearly labelled and free from leaks.

Storage incompatibility:

Avoid strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

INGREDIENT DATA:

Not Available

EMERGENCY LIMITS

Ingredient: TECTALOY MUKOWT HD2 RADIATOR FLUSH

Material name: Not Available

TEEL-1: Not Available

TEEL-2: Not Available

TEEL-3: Not Available

Ingredient: citric acid

Original IDLH: Not Available

Revised IDLH: Not Available

Ingredient: organic acids

Original IDLH: Not Available

Revised IDLH: Not Available

Ingredient: water

Original IDLH: Not Available

Revised IDLH: Not Available

Appropriate 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

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.

Eye Protection

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.

Hand Protection

Wear chemical protective gloves, e.g. PVC.

Wear safety footwear or safety gumboots, e.g. Rubber

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care.

Personal Protective Equipment

Other protection:

Overalls.

P.V.C. apron.

Barrier cream.

Thermal Hazards

Not Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Liquid

Appearance

Orange liquid; mixes with water.

Odour

Not Available

Decomposition Temperature

Not Available

Solubility in Water

Miscible

pH

Not Available (as supplied)

Not Available as a solution (1%)

Vapour Pressure

Not available.

Vapour Density (Air=1)

Not Available

Evaporation Rate

Not Available

Odour Threshold

Not Available

Viscosity

Not Available

Volatile Component

Not available.

Partition Coefficient: n-octanol/water

Not Available

Surface tension

Not Available

Flash Point

Not Applicable

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

100°C approx

Relative density

1.14 (Water = 1)

Melting/Freezing Point

Not available.

Other Information

Taste: Not Available

Gas group: Not Available

VOC g/L: Not Available

10. STABILITY AND REACTIVITY

Reactivity

See section 7 - Handling and storage

Chemical Stability

Unstable in the presence of incompatible materials.

Product is considered stable.

Hazardous polymerisation will not occur.

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

Possibility of hazardous reactions

See section 7 - Handling and storage

11. TOXICOLOGICAL INFORMATION

Toxicology Information

Tectaloy Mukowt HD2 Radiator Flush

TOXICITY: Not Available

IRRITATION: Not Available

Citric acid

TOXICITY:

Dermal (rat) LD50: >2000 mg/kg[1]

Oral (rat) LD50: 3000 mg/kgd[2]

IRRITATION:

Eye (rabbit): 0.75 mg/24h-SEVERE

Skin (rabbit): 500 mg/24h - mild

Water

TOXICITY: Not Available

IRRITATION: Not Available

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

Tectaloy Mukowt HD2 Radiator Flush: >

CITRIC ACID:

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

for citric acid (and its inorganic citrate salts)

Based on many experimental data in animals and on human experience, citric acid is of low acute toxicity. The NOAEL for repeated dose toxicity for rats is 1200 mg/kg/d. The major, reversible (sub)chronic toxic effects seem to be limited to changes in blood chemistry and metal absorption/excretion kinetics. Citric acid is not suspected of being a carcinogen nor a reprotoxic or teratogenic agent.

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.

Tectaloy Mukowt HD2 Radiator Flush & WATER:

No significant acute toxicological data identified in literature search.

Acute Toxicity: Data Not Available to make classification

Ingestion

Accidental ingestion of the material may be damaging to the health of the individual.

Ingestion of low-molecular organic acid solutions may produce spontaneous haemorrhaging, production of blood clots, gastrointestinal damage and narrowing of the oesophagus and stomach entry.

Inhalation

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Skin

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 contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. 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.

Eye

If applied to the eyes, this material causes severe eye damage. Solutions of low-molecular weight organic acids cause pain and injury to the eyes.

Skin corrosion/irritation

Data required to make classification available

Serious eye damage/irritation

Data required to make classification available

Mutagenicity

Data Not Available to make classification

Respiratory sensitisation

Data Not Available to make classification

Carcinogenicity

Data Not Available to make classification

Reproductive Toxicity

Data Not Available to make classification

STOT-single exposure

Data available to make classification

STOT-repeated exposure

Data Not Available to make classification

Aspiration Hazard

Data Not Available to make classification

Chronic Effects

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Tectaloy Mukowt HD2 Radiator Flush

Endpoint: Not Available

Test Duration (hr): Not Available

Species: Not Available

Value: Not Available

Source: Not Available

water

Endpoint: Not Available

Test Duration (hr): Not Available

Species: Not Available

Value: Not Available

Source: Not Available

citric acid

Endpoint: NOEC

Test Duration (hr): 16

Species: Crustacea

Value: 153mg/L

Source: 4

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient: citric acid

Persistence: Water/Soil: LOW

Persistence: Air: LOW

Ingredient: water

Persistence: Water/Soil: LOW

Persistence: Air: LOW

Mobility

Ingredient: citric acid

Mobility: LOW (KOC = 10)

Ingredient: water

Mobility: LOW (KOC = 14.3)

Bioaccumulative Potential

Ingredient: citric acid

Bioaccumulation: LOW (LogKOW = -1.64)

Ingredient: water

Bioaccumulation: LOW (LogKOW = -1.38)

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

Reduction

Reuse

Recycling

Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

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.

Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).

Decontaminate empty containers.

14. TRANSPORT INFORMATION

U.N. Number

None Allocated

UN proper shipping name

None Allocated

Transport hazard class(es)

None Allocated

Other 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

15. REGULATORY INFORMATION

Regulatory information

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

CITRIC ACID(77-92-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

National Inventory: Canada - NDSL

Status: Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) (citric acid; water)

National Inventory: China - IECSC
Status: All ingredients are on the inventory

National Inventory: Europe - EINEC / ELINCS / NLP
Status: All ingredients are on the inventory

National Inventory: Japan - ENCS
Status: All ingredients are on the inventory

National Inventory: Korea - KECI
Status: All ingredients are on the inventory

National Inventory: New Zealand - NZIoC
Status: All ingredients are on the inventory

Poisons Schedule

N/A

Australia (AICS)

All ingredients are on the inventory

Philippines (PICCS)

All ingredients are on the inventory

USA (TSCA)

All ingredients are on the inventory

16. OTHER INFORMATION

User Codes

User Title Label	User Codes
Task #	24325
Transcription Sign Off	24325 TC 28092017

Other Information

Version No: 7.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Hazard Alert Code: 3

S.GHS.AUS.EN

Other means of identification: Not Available

Ingredients with multiple cas numbers

Name: citric acid

CAS No: 77-92-9, 1192555-95-5, 12262-73-6, 136108-93-5, 245654-34-6, 43136-35-2, 623158-96-3, 856568-15-5, 878903-72-1, 890704-54-8, 896506-46-0, 906507-37-7

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.

This SDS has been transcribed into Infosafe GHS format from an original, issued by the manufacturer on the date shown. Any disclaimer by the manufacturer may not be included in the transcription.

END OF SDS

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