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Human Health and Ecological Risk Assessment – Guardit Soy Safe Degreaser

Environmental Risk Sciences Pty Ltd (enRiskS) has been commissioned to undertake a detailed qualitative human health and ecological risk assessment (HHERA) for a retail product produced by Guardit Solutions – Guardit Soy Safe Degreaser.

A report detailing this assessment has been prepared – *enRiskS (2016) Human Health and Ecological Risk Assessment, Guardit Solutions – Guardit Soy Safe Degreaser*. The report is attached to this letter.

The HHERA drew the following conclusions.

The ingredients of this degreaser are all readily degradable and the risks to human health and ecosystems for all the ingredients of this product – Guardit Soy Safe Degreaser – are negligible if the product is used in accordance with the MSDS and Application Note. The ingredients will be diluted before application, further diluted after use as the degreaser is washed off and rapidly degraded by microorganisms and the sun as well as by reaction with the soiling being washed off the surface (concrete, pavers, tiles and other external surfaces).

Human Health

The risks to human health from the use of this product are negligible if the product is used in accordance with the MSDS and Application Note. The blend of surfactants present in the product mean that spills onto skin of undiluted product may cause mild irritation due to the removal of natural oils and drying but the skin should recover quickly once the product is washed off should this occur.

Environmental

Given the use of this product, it is possible for wash off to reach turf and gardens surrounding an area being cleaned or to reach stormwater drains that may discharge to waterways. Once the product has been diluted or used, it is not expected that any effects will be likely for gardens or waterways. This is due to the relatively low toxicity of the chemical components as well as dilution and degradation (abiotic (breakdown in sunlight) and biotic (microorganisms using the chemicals as food)).

These conclusions are subject to the limitations discussed in the full report which is attached.

The approach taken for the assessment was in accordance with guidelines/protocols endorsed by Australian regulators, including:

- enHealth (2012a) Environmental Health Risk Assessment, Guidelines for Assessing Human Health Risks from Environmental Hazards (enHealth 2012a)
- National Health and Medical Research Council (2008) Guidelines for Managing Risks in Recreational Water (NHMRC 2008)



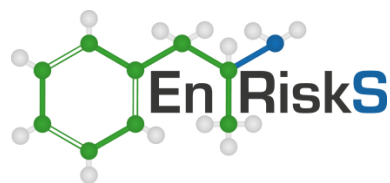
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) (ANZECC/ARMCANZ 2000)
- Australian Standard/New Zealand Standard (AS/NZS) ISO 31000:2009 Risk Management – Principles and Guidelines (AS/NZS 2009)
- enHealth (2012b) Australian Exposure Factor Guide (enHealth 2012b)
- NEPM (1999 amended 2013) National Environmental Protection Measure – Assessment of Site Contamination including:
 - Schedule B1 Investigation Levels for Soil and Groundwater (NEPC 1999 amended 2013a)
 - Schedule B4 Guideline on Health Risk Assessment Methodology (NEPC 1999 amended 2013b)
 - Schedule B5 Guideline on Ecological Risk Assessment (NEPC 1999 amended 2013c)
 - Schedule B7 Guideline on Health-Based Investigation Levels (NEPC 1999 amended 2013d)

If you require any additional information, please do not hesitate to contact Therese on (02) 9614 0297 or 0487 622 551.

Yours sincerely,

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References

ANZECC/ARMCANZ 2000, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand.

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NEPC 1999 amended 2013a, *Schedule B1, Guideline on Investigation Levels For Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council.
<<http://scew.gov.au/nepms/assessment-site-contamination>>.

NEPC 1999 amended 2013b, *Schedule B4, Guideline on Health Risk Assessment Methodology, National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council. <<http://scew.gov.au/nepms/assessment-site-contamination>>.

NEPC 1999 amended 2013c, *Schedule B5 Guideline of Ecological Risk Assessment, National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council.

NEPC 1999 amended 2013d, *Schedule B7, Guideline on Health-Based Investigation Levels, National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council. <<http://scew.gov.au/nepms/assessment-site-contamination>>.

NHMRC 2008, *Guidelines for Managing Risks in Recreational Water*, National Health and Medical Research Council, Canberra.