

09/01/2017 reference H3779

Global Proficiency Ltd for AsureQuality Ltd,
Ruakura Research Centre, Hamilton East,
P O Box 20474 Hamilton.

Alpeco Ltd, 23 Edward Payton Grove, Pukehangi, Rotorua
3015, New Zealand. Ph 0064 7 347 8078 or 0800 257 328 Fax
0064 7 347 8078. Contact Haiko Kaiser heiko@apleco.co.nz

Dear Haiko Kaiser,

This is a cover letter and not part of the assessment report which is attached for any questions or suggestions and the invoice and then the web listing should follow.

Designed2Kill Aerosol (D2K-Can)

- Product description: pesticide, diatomaceous earth aerosol
- Product use: for use around food areas with no food contact
- Status: passed AsureQuality assessment factory per formula, instructions, efficacy and safety data from Alpeco. It Cost \$350 + GST (2:20 hours). We have accepted the SDS composition list

"Passed AsureQuality Assessment for food/beverage/dairy use with no potential contact with any food product, food product contact surface or the internal surface of the food products packaging & care vs inhalation" H3770 with conditions. This assessment was prepared by Global Proficiency Ltd using HACCP principles to determine equivalence with food standards listed below. See <http://assessedproducts.asurequality.com/>. This supports food Risk Management Programmes & other endorsements that may apply to this product include MPI regulated farm dairy approval, MPI dairy factory endorsement, MPI regulated non-dairy animal product approvals, EPA HSNO-OSH-environment approval (& previously AQIS).

Conditions:

- This product must be applied only in areas or in a manner as to ensure that the product does not come into contact with any food product, food product contact surface or the internal surface of the food products packaging.
- Steps shall be taken to ensure there is no food contamination risk from dead or dying targeted insects.
- Use it so as to avoid inhalation risk from silica/ crystalline silica trace impurity (per SDS, EPA NZ & purity- low food residue risk from amorphous silica & purity check vs crystalline silica).
- The assessment is subject to notification of change (e.g. in formulation, raw materials or instructions) and expires on 01/12/2021).
- The full report is attached for supplier review and verification. The assessment is activated by countersigning.

Prepared by Global Proficiency for AsureQuality Ltd...



12 The formulation in confidence follows & is not for public circulation

(Alpeco Ltd) Designed2Kill Aerosol (D2K-Can) H3779 09-01-2017	Registrations column. Scope: NZ checks (FSANZ, US FDA 21 CFR/ NSF, Food Chemicals Codex, EPA NZ, EU, French culinary listings or related data for equivalent safety). NZ background (Animal Products Act, Risk Management Programmes. Detergent & Sanitiser Manufacturer's Code of Practice, Detergent & Sanitiser Standards and Analytical Methods. Quality Manual - Assessment Procedures	Purity column Scope: Purity column raw purities to be per FSANZ purity wanted (as ingredient etc) FCC7 2010-2011 with GMP indicators & FSANZ also (require Pb<2, As<1, Heavy metals <40 mg/kg). Purity column.
HAACP analysis - instruction summary.	Label (Designed-2-kill. Alternative pest control for bugs & insects. Based on Diatomaceous earth (DE - amorphous silica). Harmless to skin & lethal to insects. Ideal for bed bugs, cockroaches, fleas, ants, slaters, silverfish, beetles, mites including red mites and other crawling insects. Directions - shake can well. Test on paper to ensure free streaming. Hold can 15 cm from target upright at arms-length & spray generously to cover target. Ensure ventilation of the area. Storage & disposal - pressurised dispenser away from sunlight & under 50C. Do not pierce or burn. Recycle if possible. Warning - read label. Do not spray on ignition source. Wear protective gloves, eye & face protection. Wash hands & exposed skin thoroughly after handling. If skin irritation occurs see medical advice. If in eyes then water rinse for several minutes - detail - & if irritation remains get medical attention. Beware concentrating & inhaling. Danger extremely flammable aerosol causes serious eye irritation & mild skin irritation. Propellant hydrocarbon & flammable 2). Bulletin (Adds to use instruction listings).	SDS (Alpeco DE Spray Aerosol. Hazardous per HSN0, DG for transport. GHS classification skin irritation cat 2, eye irritation cat 2A and flammable aerosol cat 1. Class codes. Composition - Hydrocarbon propellant CAS 68476-85-7 60-90%, Heptane CAS 142-82-5 10-30%, & Silica amorphous/ diatomaceous earth 1-5%. First aid. Fire, Accidental release, Handling & storage. Exposure controls NZ WES - hydrocarbon TWA 1800 mg/m3 or 1000 ppm. Heptane 1640 mg/m3/ 400 ppm, Silica amorphous 10 mg/m3. Properties - Lower explosive limit 1.5%. Toxicology data on inhalation, ingestion, skin & eye contact (note on respiratory irritation sighted). Transport list is detailed. Regulatory HSR002515 aerosols flammable group standard. Propellant H/C, Heptane and Silica amorphous were all on NZIoC & NZ WES). . e
HAACP analysis vs aspects beyond instructions	Prior information/ registrations (NewASUREQuality Assessment. SDS Regulatory had EPA NZ HSR002515 aerosols flammable group standard. Propellant H/C, Heptane and Silica amorphous were all on NZIoC & NZ WES). Food safety/toxicity (This is per the raw material food listings as low risk in the table. QA (Unfound unrequired for low contact) QC specs (Unfound unrequired for low contact. Micro safety by anhydrous formula vs pathogens listed below)	Unwanted effects (NPIUC National Poisons Information Centre had DE fact sheet that DE force breathing in mice contributed to lung cancers but amorphous silica did not and some DEs are very pure. Occupational Health Guideline for Amorphous Silica per US Dept. of Labour says exposure routes are inhalation and eyes. This wants health monitoring at potentially hazardous levels OSHA NZ Workplace Exposure Standards 10 mg/m3, OSHA 6 mg/m3, crystalline form 0.1 mg/m3. OSHA NZ Workplace). Hygiene efficacy (The efficacy of DE vs common bedbug Cimex Lectularius by Dogget SL et al Westmead Hospital& references therein sighted highly efficacious vs nymphs & adults at a variety of doses & humidities)
Butane/ propane LPG CAS 68476-85-7 from - 60-90% Raw 1 hydrocarbon propellant	Found in FDA21CFR174.1655 GRAS with GMP for purpose of aerating agent, gas, propellant used variously, OSHA PEL TWA 1000 ppm, etc. Flammable gas label flammable gas. Safety central nervous system effects at high concentrations. An asphyxiant flammable gas etc. FSANZ Food Code1.3.3 Processing aids also allows food additives in 1.3.3.sched 2 (Miscellaneous additives permitted in accordance with GMP in processed foods specified in the schedule...	Purity wanted (per column header). Purity found (Unfound & un-required for this application).
Heptane CAS 142-82-5 from - 10-30% Raw 2 paraffinic hydrocarbon	EPA NZ in appropriate group standard w/o exclusion per finish product SDS. For food is similar/ higher homologue to raw 1.	Purity wanted (per column header). Purity found (Unfound & unrequired for this application).
Silica amorphous, diatomaceous earth celite CAS 61790-53-2 from - Raw 3 Diatomaceous earth.	EPA NZ under Group Standard FDA21CFR172.480 (178.3570 equivalent) & FSANZ FS Code 1.3.1 schedule 2 direct ingredient for processed food. Also 172.480. OSHA NZ Workplace Exposure Standards 10 mg/m3, OSHA 6 mg/m3, crystalline form 0.1 mg/m3. Lewis Food Additives Handbook says Pure unadulterated considered non-toxic. Some deposits or calcined form have crystalline quartz considered fibrinogenic. OMRI listed fossil shell flour DE as livestock feed ingredient.	Purity wanted (per column header). Purity found (RJ LG Inc. found sample 1 Fossil shell flour had total crystalline silica 0.2 % 12/01/2009).
Pathogens needing to be controlled - by preservative not pH - are listed with pH growth ranges	pH growth ranges: B cereus 4.4-9.3, Campylobacter jejuni 4.9-9.0, C botulinum A & B 4.8-8.5 type E 5-8.5, C perfringens 5-8.9, Listeria monocytogenes 4.5-8.0, Salmonella 3.8-9,	Staph aureus 4.3-9.0, vibrio cholerae 6-11, vibrio parahaemolyticus 4.8-9, vibrio vulnificus 5-10, Yersinia enterocolitica 4.4-9.6

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	irritation & mild skin irritation. Propellant hydrocarbon & flammable 2). Bulletin (Adds to use instruction listings).	
HACCP analysis vs aspects beyond instructions	Prior information/ registrations (New AsureQuality Assessment. SDS Regulatory had EPA NZ HSR002515 aerosols flammable group standard. Propellant H/C, Heptane and Silica amorphous were all on NZIoC & NZ WES). Food safety/toxicity (This is per the raw material food listings as low risk in the table. QA (Unfound unrequired for low contact) QC specs (Unfound unrequired for low contact. Micro safety by anhydrous formula vs pathogens listed below)	Unwanted effects (NPIUC National Poisons Information Centre had DE fact sheet that DE force breathing in mice contributed to lung cancers but amorphous silica did not and some DEs are very pure. Occupational Health Guideline for Amorphous Silica per US Dept. of Labour says exposure routes are inhalation and eyes. This wants health monitoring at potentially hazardous levels OSHA NZ Workplace Exposure Standards 10 mg/m3, OSHA 6 mg/m3, crystalline form 0.1 mg/m3. OSHA NZ Workplace). Hygiene efficacy (The efficacy of DE vs common bedbug Cimex Lectularius by Dogget SL et al Westmead Hospital & references therein sighted highly efficacious vs nymphs & adults at a variety of doses & humidities)
Raw 1 hydrocarbon propellant	Found in FDA21CFR174.1655 GRAS with GMP for purpose of aerating agent, gas, propellant used variously, OSHA PEL TWA 1000 ppm, etc. Flammable gas label flammable gas. Safety central nervous system effects at high concentrations. An asphyxiant flammable gas etc. FSANZ Food Code 1.3.3 Processing aids also allows food additives in 1.3.3.sched 2 (Miscellaneous additives permitted in accordance with GMP in processed foods specified in the schedule...	Purity wanted (per column header). Purity found (Unfound & un-required for this application).
Raw 2 paraffinic hydrocarbon	EPA NZ in appropriate group standard w/o exclusion per finish product SDS. For food is similar/ higher homologue to raw 1.	Purity wanted (per column header). Purity found (Unfound & unrequired for this application).
Raw 3 Diatomaceous earth.	EPA NZ under Group Standard FDA21CFR172.480 (178.3570 equivalent) & FSANZ FS Code 1.3.1 schedule 2 direct ingredient for processed food. Also 172.480. OSHA NZ Workplace Exposure Standards 10 mg/m3, OSHA 6 mg/m3, crystalline form 0.1 mg/m3. Lewis Food Additives Handbook says Pure unadulterated considered non-toxic. Some deposits or calcined form have crystalline quartz considered fibrinogenic. OMRI listed fossil shell flour DE as livestock feed ingredient.	Purity wanted (per column header). Purity found (RJ LG Inc. found sample 1 Fossil shell flour had total crystalline silica 0.2 % 12/01/2009).
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- Food safety/toxicity (This is per the raw material food listings as low risk in the table).

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Contents - This is a simplified report with sections 2-11 replaced by a summary on p1 and in the table in section 1 - except that efficacy detail shows in section 7

0 Information is to be evidential (std 0).	1 Materials safety and residues etc
2 Material (other – function)	3 Quality assurance certificate
4 Purity (or Design, formulation, fabrication and finish).	5 Instructions
6 Freedom from apparent side effects	7 Efficacy or hygiene to meet food safety margins
8 Packaging safety.	9 Summary of submitted information etc
10 Standards/References - front page/may be attached	11 Contacts.
12 Confidential information re design, formulation etc.	13 Covering letter & then 14 Raw material confidential information

Risk Rating (failure/accident)

	Chemical	Microbiological
Incidence	Low	Low
Susceptibility	Low	Low
Severity	Low	Low
Total	Low	Low

Organics

For organic production when food is absent during use and residues are rinsed etc. Reference NZS8410 Organic Production section 10 Storage, transport, preparation and handling. 10.1.2 Where the premises vehicles and equipment are used solely for organic products: (a) Only those substances used in table D1 shall be used for housekeeping purposes in the presence of the product (note that product absence is already a requirement of this assessment). If other materials are used for cleaning, surfaces that could come in contact with organic products shall be flushed with potable water prior to re-entry of organic products, and any airborne substance dispersed. (b) If there are products of more than one organic status (e. g. organic and in conversion to organic), the requirements of 10.1.3 shall be followed as if the higher status organic product were in the presence of products not complying with this standard. 10.1.3 (Note that If not dedicated to organics then the plan must state how there is no non-organics inclusion inc. "sealing, labelling documentation").

Evaluation: Note that Standards vs. submission-responses yield compliance status in each of the sections below.

Nature of information

0 Standard: Assurance information is to be evidential/cross-registered/or ex accredited bodies (and approvals may need levels of independence for toxicity and efficacy).

- Prior information/ registrations (New AsureQuality Assessment. SDS Regulatory had EPA NZ HSR002515 aerosols flammable group standard. Propellant H/C, Heptane and Silica amorphous were all on NZIoC & NZ WES).

Raw materials:

1 Standard:

Raw materials are to be identified safe: traceably identified, non-toxic, and pure - depending on the level of contact. Raw materials are to be safe at residue levels with safety factors (simplified here eg per cross-registration of USFDA 21 CFR/ ANZF/ EU etc registrations factored for likely equivalence and recognising high 1.5 L milk consumption would have been required by FDA etc – refers to supplier confidential appendix but with identifiers excluded

Response

(Alpeco Ltd) Designed2Kill Aerosol (D2K-Can) H3779 09-01-2017	Registrations column. Scope: NZ checks (FSANZ, US FDA 21 CFR/ NSF, Food Chemicals Codex, EPA NZ, EU, French culinary listings or related data for equivalent safety). NZ background (Animal Products Act, Risk Management Programmes. Detergent & Sanitiser Manufacturer's Code of Practice, Detergent & Sanitiser Standards and Analytical Methods. Quality Manual - Assessment Procedures	Purity column Scope: Purity column raw purities to be per FSANZ purity wanted (as ingredient etc) FCC7 2010-2011 with GMP indicators & FSANZ also (require Pb<2, As<1, Heavy metals <40 mg/kg). Purity column.
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Alpeco Ltd, 23 Edward Payton Grove, Pukehangi, Rotorua
3015, New Zealand. Ph. 0064 7 347 8078 or 0800 257 328 Fax
0064 7 347 8078. Contact Haiko Kaiser heiko@alpeco.co.nz

To whom it may concern,

Designed2Kill Aerosol (D2K-Can)

- Product description: pesticide, diatomaceous earth aerosol
- Product use: for use around food areas with no food contact

"Passed AsureQuality Assessment for food/beverage/dairy use with no potential contact with any food product, food product contact surface or the internal surface of the food products packaging & care vs inhalation" H3770 with conditions. This assessment was prepared by Global Proficiency Ltd using HACCP

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Prepared by Global Proficiency for AsureQuality Ltd...

REG Hutchinson
Date 09/01/16

Supplier: 

Scope and purpose of the assessment:

- Asurequality assessment is a non-regulated, voluntary, and evidential certification by the supplier demonstrating equivalence with food safety standards, and also that product instructions address hazards for staff & equipment. The assessment is independently confirmed, without prejudice or guarantee, using information submitted by the supplier or from other sources. Confidentiality of the product formulation is maintained using coded material identifiers in the report, and appendices containing confidential information are provided only to the supplier.
- Scope: NZ checks (FSANZ, US FDA 21 CFR/ NSF, Food Chemicals Codex, EPA NZ, EU, French culinary listings or related data for equivalent safety). NZ background (Animal Products Act, Risk Management Programmes. Detergent & Sanitiser Manufacturer's Code of Practice) Detergent & Sanitiser Standards and Analytical Methods. Quality Manual - Assessment Procedures

Summary of assessment with risks highlighted:

- Prior information/ registrations (New AsureQuality Assessment. SDS Regulatory had EPA NZ HSR002515 aerosols flammable group standard. Propellant H/C, Heptane and Silica amorphous were all on NZIoC & NZ WES).
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