

SAFETY DATA SHEET

Issued: 05 Jan 2014

Revision Number: 2

STAINSHIELD (SOLVENT) BASED PROTECTOR WITH ALLERGYSHIELD (ACTIGARD ®)

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 PRODUCT IDENTIFIER:

Product name: STAINSHIELD (SOLVENT) BASED PROTECTOR WITH ALLERGYSHIELD (ACTIGARD ®)

Product code: ST 2

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Intended Use: Solvent based ready-for-use product for the protection and hygiene of carpets and fabrics.

Uses advised against: This product is not for use by the general public.

Reason why uses advised against: High solvent content could give excessive exposure to vapour.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier: Stainshield Limited

PO Box 336

Oxshott

Leatherhead

Surrey

KT22 2DB

UK

Telephone number: +44(0)1372 841467

Fax Number: +44(0)1372 841465

Email: sds@stainshield.co.uk

1.4 EMERGENCY TELEPHONE NUMBER (NOT 24hrs)

Only available during office hours: +44(0)1372 841467

SECTION 2 HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF SUBSTANCE OR MIXTURE

2.1.1 Classification according to Regulation (EC) No 1272/2008

Flammable liquid Category 3, H226

Aspiration hazard Category 1, H304

Acute aquatic toxicity Category 1, H410

Chronic aquatic toxicity Category 1, H410

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2.1.2 Classification according to EU Directive 67/548/EEC / 1999/45 EC

F; R10

Xn; R65

N; R50/53

2.1.3 Additional Information

For full text of R-phrases and Hazard and EU Hazard statements: see **SECTION 16**

2.2. LABEL ELEMENTS

Label elements according to Regulation (EC) No 1272/2008

Hazard Pictograms:



Signal Word:

Danger

Hazard Statements:

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P331 Do NOT induce vomiting.

P273 Avoid release to the environment.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Supplemental Information:

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 OTHER HAZARDS

Vapour accumulation could flash and/or explode if ignited.

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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Not Applicable. This product is regulated as a mixture.

3.2 MIXTURES

Description of the mixture: Hydrocarbon mixture with Permethrin

Hazardous ingredients:

Name	CAS No	EC No	REACH Registration No.	% (weight)	Classification according to 67/548/EEC	Classification according to Regulation (EC) No 1278/2008 (CLP)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	-	923-037-2	01-2119471991-29-XXXX	<95 %	R10 Xn; R65 R66 R53	Flam. Liq. 3 H226 Aspiration Tox. 1 H304 Aquatic Chronic 2 H411 EUH066
Permethrine (ISO)	52645-53-1	258-067-9	-	0.46%	Xn; R20/22 R43 N; R50-53	Acute Tox. (Oral) 4 H302 Skin Sens 1 H317 Acute Tox. (Inh) 4 H332 Aquatic Acute 1 H400 Aquatic Chronic 1 H410

Please see section 16 for full hazard statements and R-phrases

SECTION 4 FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

GENERAL NOTES

Remove any sources of ignition. Provide additional ventilation to the area where possible.

INHALATION

Remove source of contamination or move victim to fresh air. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection in enclosed places with poor ventilation. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated shoes and clothing as soon as possible. Wash contaminated clothing before reuse.

EYE CONTACT

Immediately flush the contaminated eye(s) thoroughly with lukewarm, flowing water for 5 minutes, while holding the eyelid(s) open. Obtain medical advice.

INGESTION

Do not induce vomiting. Never give anything by mouth if victim is losing consciousness, or is unconscious or

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convulsing. Have victim drink 100-200 ml water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water. Seek immediate medical attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Acute: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea, skin rash.
Exposure may cause sudden irregular heart rhythms.

Delayed: Chemical induced pneumonitis may occur later that day.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If chemical pneumonitis is suspected, seek emergency medical attention within 24 hours of exposure.

SECTION 5 FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂).

Unsuitable Extinguishing Media: Streams of water from jet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

FLAMMABLE liquid. Heating may produce combustible vapour which can form explosive mixture with air. Vapours are heavier than air and may spread along floors.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

5.3 ADVICE FOR FIRE FIGHTERS

Fire Fighting Instructions: Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA).

Flammability Properties (extrapolated) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics):

Flash Point (Method): >35°C (Method: ASTM D 56)

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 7.0 LEL: 0.6

Autoignition Temperature: >200°C

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SECTION 6 ACCIDENTAL RELEASE MEASURES**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

6.1.1 For non-emergency personnel

Protective equipment: Ensure area is as well ventilated as possible before tackling spillage. Use -face or full-face respirator with filter(s) for organic vapour respiratory mask where available in confined areas.

Emergency procedure: Evacuate downwind if required. Keep unprotected persons and animals out of the area. Remove any ignition sources. Isolate and dike to confine the spill and absorb with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label contents for disposal. Repeat if necessary. Avoid drains, soil or water courses.

6.1.2 For emergency responders

Respiratory protection: half-face or full-face respirator with filter(s) for organic vapour and, when applicable, Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. Gloves that are resistant to aromatic hydrocarbons are recommended.

Small spills (<5L): Normal antistatic work clothes are usually adequate.

Large spills (>5L): Full body suit of chemical resistant, antistatic material is recommended.

6.2 ENVIRONMENTAL PRECAUTIONS

This product is dangerous for the environment. Keep away from drains, soil or water courses.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

6.3.1 For containment:

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Dyke far ahead of liquid spill for later recovery and disposal.

6.3.2 For cleaning up:

Collect with non combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/ national regulation (see section 13).

6.3.3 Other information: N/A

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6.4 REFERENCE TO OTHER SECTIONS

See Sections 8 and 13.

SECTION 7 HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

The COSHH (Control of Substances Hazardous to Health) Regulations 2002 (as amended) apply to the use of this product at work. Avoid excessive contamination of coveralls. DO NOT CONTAMINATE FOODSTUFFS, EATING UTENSILS OR FOOD CONTACT SURFACES. Do not breathe vapour or spray. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. In case of insufficient ventilation wear suitable respiratory equipment. Guidance on suitable respiratory protective equipment and eye protection is provided in HSE Booklet HS(G)53: "The Selection, Use and Maintenance of Respiratory Protective Equipment - A Practical Guide". Use proper bonding and/or ground procedures. Handle in accordance with good industrial hygiene and safety practice. Provide good ventilation at all times. WASH HANDS AND EXPOSED SKIN before meals and after use. KEEP IN A SAFE PLACE. Keep out of the reach of children. Keep away from food drink and animal feedingstuffs.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep containers tightly closed in dry, cool and well-ventilated place. Keep cool and in a safe place, where possible locked up. Only store in original packaging. Keep away from ignition sources.

7.3 SPECIFIC END USES:

For use only as an insecticide by professional operators. For use on upholstery, fabrics, carpets and rugs.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

8.1.1 Occupational Exposure Limit Values

Reciprocal calculation procedure (RCP) for mixtures of hydrocarbon solvents

Predominant hydrocarbon solvent	Form	Limit	Source
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	Vapour	1200 mg/m ³	'In-house' calculation

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

No data available

Predicted No Effect Concentration (PNEC)

No data available

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8.2 EXPOSURE CONTROLS

Treatment area	Risk of exposure	Application Rate	Area	Assigned Protection Factor (APF)	When applying PPE advised
Carpet protection	HIGH	1L per 15m ²	Normally Fixed – <i>in situ</i>	50	recommended to wear any air purifying, full face piece respirator with an organic vapour cartridge
Rug protection	MEDIUM	1L per 15m ²	Can be moved to more open area	25	recommended to wear any air purifying respirator with an organic vapour cartridge
Fabric protection	MEDIUM	1L per 30m ²	Can be moved to more open area	25	recommended to wear any air purifying respirator with an organic vapour cartridge

8.2.1 Appropriate engineering controls

Ensure adequate ventilation. Open windows/ doors during treatment. Use humidity control and cooling systems where possible (air conditioning). Where possible take item to a large well ventilated area to treat. After application leave the area until carpet/ fabric is dry.

8.2.2 Individual protection measures, such as personal protective equipment

In case of insufficient ventilation wear suitable respiratory equipment. Guidance on suitable respiratory protective equipment and eye protection is provided in HSE Booklet HS(G)53: "The Selection, Use and Maintenance of Respiratory Protective Equipment - A Practical Guide". Aromatic hydrocarbon resistant gloves are recommended. Check with glove manufacturer for specific advice. Wash after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment.

8.2.3 Environmental exposure controls

Avoid release of product to drains, soil or water courses.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- (a) Physical State: Clear, colourless liquid
- (b) Odour: Faint aromatic
- (c) Odour Threshold: No data available
- (d) pH: No data available
- (e) Melting Point: No data available
- Freezing Point: No data available

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- (f) Boiling Point/ Boiling Range: 140°C - 200°C (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (g) Flash Point (Method): >35°C (ASTM D-56) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (h) Evaporation Rate: No data available
- (i) Flammability (Solid, Gas): No data available
- (j) Upper explosion limit: 7.0% (V) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
Lower explosion limit: 0.6% (V) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (k) Vapour Pressure: 0.2 kPa (20 °C) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (l) Vapour Density (Air = 1): > 1 at 101 kPa (Calculated) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (m) Relative Density (at 15 °C): 0.701 - 0.781 g.cm³ (20 °C) (Calculated) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (n) Solubility(ies): Negligible in water
- (o) Partition coefficient (n-Octanol/Water Partition Coefficient): No data available
- (p) Autoignition Temperature: >200°C (Extrapolated) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (q) Decomposition Temperature: No data available
- (r) Viscosity: 0.8 - 2 mm²/sec (20°C) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)
- (s) Explosive Properties: No data available
- (t) Oxidising Properties: No data available

9.2 OTHER INFORMATION

Molecular Weight: 147 (Calculated) (Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)

SECTION 10 STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable under ambient storage conditions

10.2 CHEMICAL STABILITY

Product is stable under normal conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reactions known during recommended use.

10.4 CONDITIONS TO AVOID

Heat, sparks, flames and other ignition sources.

10.5 INCOMPATIBLE MATERIALS

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Strong oxidising materials

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

In case of fire hazardous decomposition products may be produced such as carbon oxides.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

1) Read-across data from similar materials (structural analogue or surrogate unless otherwise indicated) to Hydrocarbons, C10-C12, isoalkanes, <2% aromatics

Acute toxicity:

Oral toxicity

Method	Fixed dose procedure (OECD Guideline 423)	Acute toxic class method (OECD Guideline 401)	Standard acute method (OECD Guideline 401)	Acute toxic class method (OECD Guideline 401)
Read Across substance	Yes	Yes	Yes	Yes
Species	Rat	Rat	Rat	Rat
Routes of exposure	Oral: gavage	Oral: gavage	Oral: gavage	Oral: gavage
Endpoint	LD50	LD50	LD50	LD50
Effective Dose	> 15000 mg/kg bw	> 5000 mg/kg bw	> 15000 mg/kg bw	> 2000 mg/kg bw
Exposure time	One dose	One dose	One dose	One dose

Inhalation toxicity

Method	Standard acute method (OECD Guideline 403)	Standard acute method (OECD Guideline 403)	Standard acute method (OECD Guideline 403)	Standard acute method (OECD Guideline 403)
Read Across substance	Yes	Yes	Yes	Yes
Species	Rat	Rat	Rat	Rat
Routes of exposure	Inhalation: vapour	Inhalation: vapour	Inhalation: vapour	Inhalation: aerosol
Endpoint	LC50	LC50	LC50	LC50
Effective Dose	> 4951 mg/m ³ air	> 5600 mg/m ³ air	≥ 6100 mg/m ³ air	> 3.62 mg/L
Exposure time	4 hours	4 hours	4 hours	Not known

Dermal toxicity

Method	Standard acute method (OECD Guideline 402)	Standard acute method (OECD Guideline 402)	Standard acute method (OECD Guideline 402)	Standard acute method (OECD Guideline 402)
Read Across substance	Yes	Yes	Yes	Yes
Species	Rabbit	Rabbit	Rabbit	Rabbit
Routes of exposure	Skin: occlusive	Skin: occlusive	Skin: occlusive	Skin: occlusive
Endpoint	LD50	LD50	LD50	LD50
Effective Dose	≥ 3160 mg/kg bw	> 5000 mg/kg bw	> 2000 mg/kg bw	> 2000 mg/kg bw
Exposure time	24 hours	24 hours	24 hours	24 hours

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Serious eye damage/ irritation:

Method	Standard acute method (OECD Guideline 404)	Standard acute method (OECD Guideline 405)	Standard acute method (OECD Guideline 404)
Read Across substance	Yes	Yes	Yes
Species	Rabbit	Rabbit	Rabbit
Routes of exposure	Skin: semi-occlusive	Eye	Eye
Dose	0.5 ml	0.1ml	0.1ml
Result	Fully reversible within 14 days	Non irritating	Non irritating
Exposure time	14 days	7 days	72 hours

Respiratory or skin sensitisation:

Method	Guinea pig maximisation test (OECD Guideline 406)	Guinea pig maximisation test (OECD Guideline 406)	Guinea pig maximisation test (OECD Guideline 406)
Read Across substance	Yes	Yes	Yes
Species	Guinea pig	Guinea pig	Rabbit
Routes of exposure	Intradermal injection; dermal occlusive dressing; topical challenge	Intradermal injection; dermal occlusive dressing; topical challenge	Intradermal injection; dermal occlusive dressing; topical challenge
Dose	5%; 100%; 0.5%	0.1ml; 5%; 5%	0.1ml; 5%; 25%
Result	Not considered a dermal sensitiser	Not considered a dermal sensitiser	Not considered a dermal sensitiser

Germ cell mutagenicity:

Method	Mammalian cell gene mutation assay (OECD Guideline 476)	Bacterial reverse mutation assay (OECD Guideline 471)	In vitro mammalian chromosome aberration test (OECD Guideline 479)
Read Across substance	Yes	Yes	Yes
Species	Chinese Hamster V79 cells in vitro	<i>S. typhimurium</i> TA 1535, TA 1537, TA 98 and TA 100	Chinese hamster Ovary
Dose	Without activation: 0.1, 0.3, 0.6, 1, 2, 3 µg/ml With activation: 100, 500, 1000, 5000 µg/ml	not cytotoxic up to 5000 µg/plate	not cytotoxic up to 50 µL/ml
Genotoxicity Result	Negative with and without metabolic activation	Negative with and without metabolic activation	Negative with and without metabolic activation

Carcinogenicity

Method	Combined Chronic Toxicity / Carcinogenicity Study (OECD Guideline 453)	Combined Chronic Toxicity / Carcinogenicity Study (OECD Guideline 453)	Combined Chronic Toxicity / Carcinogenicity Study (OECD Guideline 453)
Read Across substance	Yes	Yes	Yes
Species	Mouse	Rat (female)	Rat (female)
Routes of exposure	Inhalation : vapour	Inhalation : vapour	Inhalation : vapour
Endpoint	NOAEC	NOAEC	NOAEC
Dose	0, 550, 1100, 2200 mg/m ³	0, 138, 550, 1100, or 2200 mg/m ³	No data available
Effect Level	1100 mg/m ³ air	≥ 2200 mg/m ³ air	50 ppm
Exposure time	6 hours plus 12 minutes per day	6 hours plus 12 minutes per day	No data available

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Reproductive toxicity:

Method	Reproduction / Developmental Toxicity Screening Test (OECD Guideline 421)	One-Generation Reproduction Toxicity Study (OECD Guideline 415)	Subchronic Inhalation Toxicity (OECD Guideline 413)
Read Across substance	No	Yes	No
Species	Rat	Rat	Rat
Routes of exposure	Inhalation: vapour	Oral: gavage	Inhalation: vapour
Endpoint	NOAEC	NOAEL	NOAEC
Dose	100, 300 ppm	0, 325, 750, 1500 mg/kg bw/day	0, 138, 275, 550, 1100 or 2200 mg/m ³ air
Effect Level	≥ 300 ppm	≥ 1500 ppm	≥ 2200 mg/m ³ air
Exposure time	6 hours/day	7 days/ week	6 hours plus 12 mins/day

Summary of evaluation of the CMR properties:

Not considered to be a carcinogenic, mutagenic, or reproductive toxicant.

STOT-single exposure:

No data available.

STOT-repeated exposure:

No data available.

Aspiration hazard

Based on physico-chemical properties of the material. May be fatal if swallowed and enters airways.

2) Permethrin

Acute toxicity:

Oral toxicity

Method	No data available	No data available	Fixed dose procedure (OECD Guideline 423)
Species	Rat	Rat	Rat
Routes of exposure	Oral: gavage	Oral: gavage	Oral: gavage
Endpoint	LD50	LD50	LD50
Effective Dose	383 mg/kg bw	424 mg/kg bw	2000 mg/kg bw
Exposure time	One dose	One dose	One dose

Inhalation toxicity

Method	No data available	No data available	No data available
Species	Rat	Mouse	Rat
Routes of exposure	Inhalation: vapour	Inhalation: vapour	Inhalation: vapour
Endpoint	LC50	LC50	NOAEL
Effective Dose	485 mg/m ³ air	685 mg/m ³ air	50 mg/m ³ air
Exposure time	No data available	No data available	3 hour/day

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Dermal toxicity

Method	No data available	No data available	Standard acute method (OECD Guideline 402)
Species	Rabbit	Rabbit	Rat
Routes of exposure	Skin: No data available	Skin: No data available	Skin: No data available
Endpoint	LD50	Mild reaction	LD50
Effective Dose	≥ 2000 mg/kg bw	5000 mg/kg bw	≥ 2000 mg/kg bw
Exposure time	No data available	24 hours	No data available

Serious eye damage/ irritation:

Method	OECD 405	No data available
Species	Rabbit	Rabbit
Routes of exposure	Eye	Eye
Dose	No data available	No data available
Result	Non-irritant	Non-irritant

Respiratory or skin sensitisation:

Method	OECD 406	OECD 405
Species	Guinea-pig	Guinea-pig
Routes of exposure	No data available	No data available
Dose	No data available	No data available
Result	Non-sensitiser	Non-sensitiser

Germ cell mutagenicity:

Method	Micronucleus test	DNA inhibition	Sister chromatid exchange
Species	Human Lymphocyte	Human Lymphocyte	Human Lymphocyte
Dose	10 mg/l	140 µmol/l	50 mg/l
Genotoxicity Result	Negative	Negative	Negative

Carcinogenicity:

No data available.

Reproductive toxicity:

Method	No data available
Species	Rat
Routes of exposure	Oral: gavage
Endpoint	No data available
Dose	250 mg/kg bw/day
Effect Level	No data available
Exposure time	7 days/ week

Summary of evaluation of the CMR properties:

Not considered to be a carcinogenic, mutagenic, or reproductive toxicant.

STOT-single exposure:

No data available.

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STOT-repeated exposure:

No data available.

Aspiration hazard:

No data available.

Other information:

No data available.

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for substances detailed in section 3.2 unless otherwise specified.

12.1. TOXICITY

Acute (short-term) toxicity:

Fish:

Method	Fish, Acute toxicity Test (OECD Guideline 203)	No data available
Substance	Hydrocarbons, C10-C12, containing isoalkanes, with <2% aromatics	Permethrine
Species	Rainbow trout	No data available
Routes of exposure	in water	No data available
Endpoint	LL50	No data available
Effective Dose	>1000 mg/l	No data available
Exposure time	96 hr	No data available

Crustacea:

No data available

Algae/ aquatic plants:

Method	Alga, Growth Inhibition Test (OECD Guideline 201)	Alga, Growth Inhibition Test (OECD Guideline 201)
Substance	Hydrocarbons, C10-C12, containing isoalkanes, with <2% aromatics	Permethrin
Species	Pseudokirchnerella subcapitata	Pseudokirchnerella subcapitata
Routes of exposure	in water	In water
Endpoint	EL50	EC50
Effective Dose	> 1000 mg/l	540 µg/l
Exposure time	72 hr	72 hr

Other organisms:

Method	QSAR modelled data (calculated)	Read-across from supporting substance (structural analogue or surrogate)	Acute oral toxicity
Substance	Hydrocarbons, C10-C12, containing isoalkanes, with <2% aromatics	Isododecane	Permethrin
Species	Tetrahymena pyriformis	Pseudomonas putida	Northern bobwhite (bird)
Routes of exposure	in water	medium	Oral: gavage
Endpoint	EL50	EL10	LD50

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Effective Dose	mg/l	> 2 other: ml/l	> 2000 mg/kg/bw
Exposure time	48 hr	5 hr	No data available

Chronic (long-term) toxicity:

Fish:

Method	QSAR modelled data (calculated)	No data available
Substance	Hydrocarbons, C10-C12, containing isoalkanes, with <2% aromatics	Permethrin
Species	Rainbow trout	No data available
Routes of exposure	in water	No data available
Endpoint	NOELR	No data available
Effective Dose	0.192 mg/l	No data available
Exposure time	28 days	No data available

Crustacea:

No data available

Algae/ aquatic plants:

No data available

Other organism:

No data available

12.2 PERSISTENCE AND DEGRADABILITY

Abiotic Degradation: Expected to be

Physical- and photo-chemical elimination: Permethrin is photolytic; however other substances present are not expected to be majorly photolytic

Biodegradation: The substances in this product are expected to be biodegradable

12.3 BIOACCUMULATIVE POTENTIAL

Partition coefficient n-octanol/ water (log Kow): Not determined

Bioconcentration factor (BCF): Not determined

12.4 MOBILITY IN SOIL

Known or predicted distribution to environmental compartments: Permethrin binds tightly to soil. Hydrocarbons, C10-C12, containing isoalkanes, with <2% aromatics will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

Surface tension: No data available

Adsorption/ Desorption: No data available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

This product does not contain any PBT or vPvB substances

12.6 OTHER ADVERSE EFFECTS

No adverse effects are expected.

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12.7 ADDITIONAL INFORMATION

Half-life of permethrin in aerobic soils is 39.5 days, with a range from 11.6 to 113 days

VOC Hydrocarbons, C10-C12, containing isoalkanes, with <2% aromatics: Yes

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of waste and residues in accordance with local authority requirements.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

13.1 WASTE TREATMENT METHODS

This mixture is suitable for disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products by a specialist company.

REGULATORY DISPOSAL INFORMATION

European Waste Code: 08 XX XX

Empty containers may contain residue and can be dangerous. DO NOT EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY.

SECTION 14 TRANSPORT INFORMATION

1) Hydrocarbons, C10-C12, containing isoalkanes, with <2% aromatics

	LAND (ADR/RID)	INLAND WATERWAYS (ADNR/ADN)	SEA (IMDG)	AIR (IATA)
14.1	UN (or ID) Number: 3295			
14.2	UN Proper Shipping Name (Technical Name): HYDROCARBONS, LIQUID, N.O.S. (iso and cycloalkanes (C10-C11))			
14.3	Transport Hazard Class(es): 3			
14.4	Packing Group: III			
14.5	Environmental Hazards: Yes	Environmental Hazards: Yes	Environmental Hazards: Marine Pollutant	Environmental Hazards: Yes
14.6	Special Precautions for users: Classification Code: F1 Label(s) / Mark(s): 3, EHS Hazard ID Number: 30 Hazchem EAC: 3Y	Special Precautions for users: Hazard ID Number: 30 Label(s) / Mark(s): 3 (N2, F), EHS	Special Precautions for users: Label(s): 3 EMS Number: F-E, S-D Transport Document Name: UN3295, HYDROCARBONS, LIQUID, N.O.S. (iso and cycloalkanes (C10-C11)), 3, PG III, (40°C c.c.), MARINE POLLUTANT	Special Precautions for users: Label(s) / Mark(s): 3 Transport Document Name: UN3295, HYDROCARBONS, LIQUID, N.O.S., 3, PG III

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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Limited Quantity Exemptions: Maximum quantity per inner receptacle is 5 litres. Maximum quantity per outer package is 30 litres. Combination packs only.

SECTION 15 REGULATORY INFORMATION

This mixture is classified and labelled under European Regulation (EC) No 1272/2008 The CLP Regulations. Classification under Chemicals (Hazard Information & Packaging for supply) Regulations – CHIP 4 (2009) is also provided.

This product is approved, in the UK, under the Control of Pesticides Regulations (COPR) 1986 for use as directed: HSE 9720.

STATUTORY CONDITIONS OF APPROVAL RELATING TO USE.

FOR USE ONLY AS AN INSECTICIDE.

FOR USE ONLY BY PROFESSIONAL OPERATORS.

SOLVENT BASED READY-FOR-USE PRODUCT.

Apply 1 litre of product over 15 square metres of carpet. Apply 1 litre of product over 30 meters of fabric.

The COSHH (Control of Substances Hazardous to Health) Regulations 2002 (as amended) apply to the use of this product at work. Avoid excessive contamination of coveralls. DO NOT CONTAMINATE FOODSTUFFS, EATING UTENSILS OR FOOD CONTACT SURFACES. This material and its container must be disposed of in a safe way. If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. Do not breathe vapour or spray. In case of insufficient ventilation wear suitable respiratory equipment. Guidance on suitable respiratory protective equipment and eye protection is provided in HSE Booklet HS(G)53: "The Selection, Use and Maintenance of Respiratory Protective Equipment - A Practical Guide". Do not empty into drains. REMOVE OR COVER ALL FISH TANKS AND BOWLS before application. HAZARDOUS TO BEES. EXCLUDE ANIMALS DURING APPLICATION. FOR INDOOR USE ONLY.

Users must comply in full with all their legal responsibilities under the Control of Pesticides Regulations 1986 (as amended), including complying with all Conditions of Approval

To avoid risks to man and the environment, comply with the instructions for use.

*WASH HANDS AND EXPOSED SKIN before meals and after use.

*KEEP IN A SAFE PLACE.

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*Keep out of the reach of children.

*Keep away from food drink and animal feedingstuffs.

*DO NOT HANDLE TREATED FABRICS UNTIL DRY AND AIR THOROUGHLY BEFORE USE

15.2 CHEMICAL SAFETY ASSESSMENT

REACH Information: A Chemical Safety Assessment has been carried out for one or more substances present in the material.

SECTION 16 OTHER INFORMATION

List of abbreviations and acronyms:

ADN	European provisions concerning the international carriage of dangerous goods by inland waterways
ADNR	European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
ASTM	American Society for Testing and Material
bw	body weight
CAS	Chemical Abstracts Service
CHIP	Chemical (Hazard Information and Packaging) Regulations
CLP	Classification Packaging and Labelling
CMR	Carcinogenic, Mutagenic or toxic to Reproduction
EC	European Commission
EC	European Communities
EEC	European Economic Community
EU	European Union
g	grams
HSE	Health and Safety Executive
IATA	International Air Transport Association
IBC	Internation bulk container
ID	Identification
IMDG	nternational Maritime Dangerous Goods Code
Inh	inhalation
ISO	International Organization for Standardization
kg	kilogram
Kow	Octanol/Water Partition Coefficient
LC	Lethal Concentration
LD	Lethal Dose
LEL	Lower Explosive Limit/Lower Explosion Limit
m ³	cubic metre
mg	milligram
ml	millilitre
mm	millimetre
N.O.S.	Not Otherwise Specified

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NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observed Effect Loading Rate
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic chemicals
ppm	parts per million
QSAR	Quantitative Structure-Activity Relationship
REACH	Registration Evaluation and Authorisation of Chemicals
RID	Reglements Internationales Relatif au Transport des Marchandises Dangereuses par Chemin de Fer
STOT	Specific target organ toxicity
Tox	Toxicity
UEL	Upper explosive limit
UN	United Nations
VOC	Volatile Organic Compound
vPvB	Very Persistent and Very Bioaccumulative substances

List of relevant Hazard and Precautionary Phrases

H-statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

P-statements

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P303+P361+P353	
P370+P378	In case of fire: Use ... for extinction.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to ...
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331	Do NOT induce vomiting.
P405	Store locked up.

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P501	Dispose of contents/container to ...
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to ...

Risk Phrases

R10	Flammable
R20/22	Harmful by inhalation and if swallowed
R43	May cause sensitisation by skin contact
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R53	May cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking

Safety Phrases

S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label where possible
S23	Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer)
S51	Use only in well-ventilated areas
S61	Avoid release to the environment. Refer to special instructions/safety data sheet

References

ECHA	European Chemicals Agency, http://echa.europa.eu/
HSE	Health and Safety Executive, http://www.hse.gov.uk/
WHO	WHO SPECIFICATIONS AND EVALUATIONS FOR PUBLIC HEALTH PESTICIDES PERMETHRIN (40:60 cis:trans isomer ratio)
IPCS	Pesticide residues in food – 1999 Sponsored jointly by FAO and WHO with the support of the International Programme on Chemical Safety (IPCS)
TOXNET	Databases on toxicology, hazardous chemicals, environmental health, and toxic releases, http://toxnet.nlm.nih.gov/

Revisions

Modernised for CLP & REACH

Changes throughout in all sections 1-16.

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