SAFETY DATA SHEET

Surface Decontamination Liquid (Surface Decon)
PRODUCT CODE: V-F5402

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the end user or environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material. This Safety Data Sheet is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006, and described in CLP Regulation (EC) No 1272/2008.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Surface Decon (Surface Decontamination Liquid)
Product Code: V-F5402

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

Relevant identified use: Surface Decontamination; Product should be used only for the decontamination of surfaces/equipment that are exposed to chemical warfare agents, organophosphate pesticides and certain biological toxins.
Uses advised against Product should only be used in accordance with the manufacturer label and only by trained individuals as described in Section 16.

1.3 Details of the supplier of the safety data sheet

Emergent Protective Products USA Inc.
46 Shelby Thames Drive
Hattiesburg, MS 39402
United States of America
Tel: 1-888-773-3266
E mail: mailto:CustomerService@ebsi.com

1.4 Emergency telephone number

In case of emergency Tel. Within the U.S.: 800-535-5053
Tel. Within the EU: +44 2083348527

SECTION 2: Hazards Identification

2.1 Classification of the mixture

Classification in accordance with the Classification Labelling and Packaging Regulation EC (no) 1272/2008
NONE

NONE
2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram
NONE

Signal word
NONE

Hazard statements
NONE

Precautionary statements
P280

2.3 Other hazards
This mixture contains no components considered to be persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition

3.1 Mixtures/Chemicals

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS or EC No, Registration No* (if available)</th>
<th>Concentration</th>
<th>Classification</th>
<th>DSD 67/548/EEC</th>
<th>CLP 1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methoxy polyethylene Glycol 550</td>
<td>CAS 9004-74-4 EC</td>
<td>60 – 100 %</td>
<td>Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. This substance is not classified as dangerous according to Directive 67/548/EEC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KBDO</td>
<td>CAS 103411-45-6</td>
<td>10 – 30 %</td>
<td>Insufficient data to perform a classification.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAM (2,3-Butanedione monoxime)</td>
<td>CAS: 57-71-6 EC; 200-348-5</td>
<td>0.58%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* REACH registration numbers are not available for these substances as the annual tonnages do not require a registration or the registration is envisaged for a later registration deadline.

SECTION 4: First Aid Measures

4.1 Description of first aid measures

EYE CONTACT: Wash thoroughly with water as a precaution.
SKIN CONTACT: Wash off with soap and water when conditions permit.
INGESTION: If swallowed, rinse mouth with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in Sections 2.2 and/or 11.
4.3 Indication of any immediate medical attention and special treatments needed
No specific treatment. Symptomatic treatment as required. First aiders should wear gloves.

SECTION 5: Firefighting Measures

5.1 Extinguishing media
Suitable extinguishing media: Use dry chemical, CO2, water spray (fog) or foam
Not suitable extinguishing media: Water jet.

5.2 Special hazards arising from the substance or mixture
Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides

5.3 Advice 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

6.1 Personal precautions, protective equipment and emergency procedures
Provide adequate ventilation. Avoid breathing vapours, mist or gas. Put on appropriate personal protective equipment (see Section 8).

6.2 Environmental precautions
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and clearing up
Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13) and/or Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 References to other sections
See section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling
Put on appropriate personal protective equipment (see Section 8). 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. Avoid contact with eyes and mucous membranes. Empty containers retain product residue and can be hazardous.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local regulations. Storage temperature should be between 15°C to 30°C. 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. Keep container tightly closed and
sealed until ready for use. Surface Decon is a single use product and any residual material should be disposed of according to local regulations (see section 13) and/or via a licensed waste disposal contractor. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end uses(s)
The product should be wiped onto equipment surfaces if exposure to chemical warfare agents is suspected, as described in Section 1.2. The bottle along with any unused liquid should be discarded after a single use. Disposal should occur according to local regulations (see section 13) and/or Disposal of via a licensed waste disposal contractor. Regulations may vary in different locations.

SECTION 8. Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters:

Surface Decon contains no substances with occupational exposure control limit values in the EU.

UNITED STATES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycols</td>
<td>AIHA WEEL (United States, 2011). TWA: 10mg/m3 8 hour(s). Form Aerosol</td>
</tr>
</tbody>
</table>

CANADA

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Exposure</th>
<th>TWA (8hours)</th>
<th>STEL (15 mins)</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>List Name</td>
<td>Ppm</td>
<td>Mg/m3</td>
<td>Ppm</td>
</tr>
<tr>
<td>Polyethylene Glycols</td>
<td>US AIHA 2011</td>
<td>-</td>
<td>10</td>
<td>-</td>
</tr>
</tbody>
</table>

Form: [a] Aerosol

8.2 Exposure controls

Engineering controls
General industrial hygiene practice. No special ventilation requirements.

Respiratory protection
Not required under normal conditions of use.

Hand/Skin Protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Liquid [clear solution]. Colour: Yellow. / Brown. / Orange
Odour: No data available
Odour threshold: No data available
pH: 10.35 to 10.85
Melting point: 0°C (freezing point)
Boiling point: Decomposition temperature: >200°C
Flashpoint: Open cup: 238°C (460.4°F) [Cleveland.]
Evaporation rate: 0 (butyl acetate = 1)
Flammability: No data available
Upper/lower flammability limits: Upper: 6.9%, Lower: 1.1%
Vapour pressure: <0.0013 kPa (<0.01 mm Hg) [20°C]
Vapour density > 1 [air = 1]
Relative density 1.1
Solubility in water: Soluble
Solubility in other solvents: No data available
Partition coefficient (log Kow) No data available
Auto-ignition temperature No data available
Decomposition temperature Decomposition temperature: >200°C
Viscosity (40°C) Dynamic: 126 mPa•s (126 cP)
Explosive properties No data available
Oxidising properties No data available

9.2 Other information
No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
The product is stable.

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

10.4 Conditions to avoid
The Surface Decon product (methoxy polyethylene glycol [MPEG]) when combined with some commonly used decontamination materials, i.e., solid powdered HTH (calcium hypochlorite) or solid powdered Super Tropical Bleach, causes spontaneous combustion. Should Surface Decon be used on the same decontamination line as either of these products, care must be taken to keep them apart. Do not discard the Surface Decon bottle or its contents into containers that contain or have contained solid HTH or Super Tropical Bleach.

10.5 Incompatible materials
Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis
10.6 Hazardous decomposition products
Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides.
SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Toxicokinetics

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Decontamination Liquid (Surface Decon)</td>
<td>Phase 1 PK topical application</td>
<td>Human</td>
<td>Up to 84 ml for 24 hours. PK of DAM measured in blood/serum for up to 72 hours.</td>
<td>DAM is absorbed through human skin following RSDL topical application. Heat stress increased uptake. Washing to remove RSDL limited further uptake of DAM.</td>
</tr>
</tbody>
</table>

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Decontamination Liquid (Surface Decon)</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;950 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>DAM</td>
<td>Dermal LD50</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dekon 139</td>
<td>Chronic Dermal LD50</td>
<td>Rat</td>
<td>1286 mg/kg</td>
<td>5 weeks</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Decontamination Liquid (Surface Decon)</td>
<td>21-Day cumulative (occluded) irritation study</td>
<td>Human</td>
<td>0.05mL on 1 cm sponge – topical application</td>
<td>Significantly less irritating than SLS positive control significantly more irritating than saline negative control. Concluded that RSDL had a moderate potential for mild cumulative irritation in normal use.</td>
</tr>
</tbody>
</table>

Eye irritant

Carcinogenicity

No data available. No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Results</th>
</tr>
</thead>
</table>

Page 7 of 10
Surface Decon (Surface Decontamination Liquid)
Revision 6/15
Date: June 03 2015
Supersedes:

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Decontamination Liquid (Surface Decon)</td>
<td>Viscosity and aspiration estimation</td>
<td>NA</td>
<td>NA</td>
<td>Not an aspiration hazard. Kinematic velocity of 115 mm²/s at 40°C</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological Information**

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no data available. No known significant effects or critical hazards expected.

**SECTION 13: Disposal Considerations**

13.1 Waste treatment methods

Do not dump into sewers, on the ground, or any body of water. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations.

The Supplier and Manufacturer have no control on the management practices of parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition as described in section 3 of this SDS (Composition/ Information on ingredients).
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7 and Section 8 for additional handling information and protection of employees.

**SECTION 14: Transport Information**

<table>
<thead>
<tr>
<th></th>
<th>ADR</th>
<th>IMDG</th>
<th>ICAO</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN Number</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.2 UN Proper shipping name</td>
<td>Not dangerous goods</td>
<td>Not dangerous goods</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.6 Special precautions for user</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**SECTION 15: Regulatory Information**

This Safety Data Sheet is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006, and described in CLP Regulation (EC) No 1272/2008.

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

No data available.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for the product and has not been carried out.

**SECTION 16: Other Information**

Revision information:

For surface/equipment use only. Avoid unnecessary contact with eyes and mucous membrane. Avoid extended contact with the skin.

List of Abbreviations used in this SDS:
- ADR: International Carriage of Dangerous Goods by Road
- AIHA: American Industrial Hygiene Association
- CAS: Chemical Abstracts Service
- CLP: Classification, Labelling and Packaging Regulation (EC) no 1272/2008
- DPD: Dangerous Preparations Directive 1999/45/EC
- EC: European Community/Commission
- IBC: International Bulk Chemical
Surface Decon (Surface Decontamination Liquid)
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ICAO International Civil Aviation Organization
IMDG International Maritime Dangerous Goods
MARPOL Maritime Pollution
MG/M3 Milligram per Cubic Meter
PBT Persistent, Bioaccumulative and Toxic
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) no 1907/2006
TWA Time Weighted Average
UN United Nations
vPvB very Persistent, very Bioaccumulative
WEEL Workplace Environmental Exposure Limit

Training: Surface Decon is intended to remove or neutralize CWAs, T-2 toxin and many organophosphate based pesticides from surfaces and is to be used in conjunction personal protective equipment (gas mask and protective clothing). Do not swallow. Avoid prolonged period of skin exposure. Avoid contact with eyes or mucous membranes. If contact occurs wash immediately with large amounts of water. Use only as directed.

Method used for classification of mixtures:
Test data

P and H Statements used in Sections 2 and 3

P280 Wear protective gloves/protective clothing/eye protection/face protection
H302 Harmful if swallowed
H317 May cause an allergic skin reaction