Safety Notice

Health and Safety Warning Notice 98/05

Electricity distribution equipment: Protection relay cleaning solvents

SUBJECT CONTACT POINT:
P D MEAKIN
AD Industrial Processes
Technical Standards Directorate
Sutton Coldfield Mil extn 2169
Direct Dialling 0121 311 2169

NOTICE AUTHORISED BY:
P D MEAKIN
AD Industrial Processes

Date: 28.2.98

DEFENCE ESTATE ORGANISATION
MINISTRY OF DEFENCE

Safety Notice
Safety Notice 98/05

Electricity distribution equipment:
Protection relay cleaning solvents

INTRODUCTION

1. THE CONTENTS OF THIS NOTICE ARE TO SECURE COMPLIANCE WITH THE HEALTH & SAFETY AT WORK ETC ACT 1974.

2. This Notice is for the attention of Commanding Officers, Chief Executives, Heads of Establishment, Property Managers, Defence Land Agents, Establishment Works Consultants (EWCs), Works Services Managers (WSMs), Authorising Engineers, Authorised Persons and Contractors, involved in works for MOD.

3. This Notice is to be read by all persons involved with any works associated with the equipment that is the subject of this Notice.

4. No work involving expenditure on an MOD account is to be carried out without authority from the Property Manager or the appropriate MOD officer for that location or facility.

5. Any work required as a result of this Safety Notice must be carried out in accordance with MOD Safety Rules and Procedures as applicable.

6. The Co-ordinating Authorised Person, or other responsible person, is to notify the Property Manager:

   of the location of any equipment which exists on the Establishment and is the subject of this Notice as soon as it has been identified;

   and

   when the relevant modifications are completed, that the appropriate remedial action has been carried out.

7. Defects are to be immediately reported to the Property Manager and the applicable Authorising Engineer who must impose appropriate operating restrictions on the equipment that is the subject of this Notice, until remedial action is completed.

8. For MOD Establishments occupied by United States Visiting Forces (USVF), the responsibilities of Property Manager, EWC and WSM are jointly held by the USVF and DEO(USF). At base level this jointly managed organisation is to take appropriate action to implement the contents of this Notice. Where this Notice contains procedures which differ significantly from USVF practice, a DEO(USF) Code of Practice section will be issued.
REQUIREMENT

9. ACTION ADDRESSEES ARE TO ENSURE THAT THE INFORMATION CONTAINED WITHIN THIS SAFETY NOTICE IS PASSED TO THEIR PROPERTY MANAGERS OR OTHER RESPONSIBLE OFFICERS WITHOUT DELAY.

Manufacturers' cleaning instructions for protection relays must be followed.

BACKGROUND

10. An Electricity Association Notice has been received advising of an explosion following the cleaning of a protection relay with an inappropriate cleaner.

11. DEO have contacted the relay manufacturer concerned for more detailed information, and a copy of their response, which gives typical manufacturer's details, is attached at Annex A.
CUSTOMER'S REPORT

The fitter had cleaned the relay internally using Unicorn Contact 'S' aerosol spray, the relay then 'exploded' when energised.

CONCLUSION

Having reviewed the technical and H & S data, and evaluated a cleaning material sample our recommendations for contact cleaning on products are:-

Materials to be used: ULTRACLENE
Supplier: ELECTROLUBE
Form: LIQUID FORM (Aerosols and pump sprays are NOT recommended).

The material should be used in conjunction with conventional contact cleaning tools such as soft brushes, spatulas and lint free cotton. Both the spatulas and cotton sleeves for fitting over the spatulas are available from Automation Facilities Limited, of Wargrove, Berkshire under the names of SAFE WANDS and SAFE SLEEVES.

It is of course imperative that the material safety data recommendations are complied with during use, handling, and storage. Copies of the latest issue of the data are attached to this report.
**PRODUCT DESCRIPTION**

A special blend of solvents for cleaning of critical electro-mechanical applications. It is highly recommended for cold cleaning applications in conjunction with all types of electro-mechanical equipment. ULC is also ideal for use in cleaning tanks, as it has a low evaporation rate and high flash point. A full range of cleaning solvents are available from Electrolube. The range includes fast evaporating solvents and water based cleaners.

**PRODUCT USE**

For safe, rapid cleaning of all types of electro-mechanical equipment where the use of water-based chemicals is inadvisable. Removes grease, oxides, flux and general dirt. Ultraclens is harmless to metals and fabrics under normal conditions and safe to use on most plastics, however a small area should be tested before use.

**FEATURES**

- Powerful, penetrating action, works faster than conventional solvents.
- Lower toxicity than conventional halogenated solvents.
- High flash point, reducing the risk of fire caused by flammable solvents.
- 100% Ozone Friendly in both bulk and aerosol forms
- CO₂ propelled aerosol version available containing 20% more active cleaner.

**PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Clear, Colourless Liquid</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>173-193°C</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>&lt;-50°C</td>
</tr>
<tr>
<td>Vapour Pressure @ 38°C</td>
<td>3.75 mm/Hg (0.5 kPa)</td>
</tr>
<tr>
<td>Specific Gravity @ 20°C</td>
<td>0.79</td>
</tr>
<tr>
<td>Viscosity @ 20°C</td>
<td>1.48</td>
</tr>
<tr>
<td>Inhalation Toxicity</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;60°C</td>
</tr>
<tr>
<td>Residue on Evaporation</td>
<td>&lt;1.0 ppm</td>
</tr>
</tbody>
</table>

**PACKAGING**

- 200 ml Aerosol
- 200 ml Pumpspray
- 400 ml Aerosol
- 1 Litre Bulk
- 5 Litre Bulk
- 25 Litre Bulk

**ORDER CODE**

- ULC200D
- ULC200ML
- ULC400D
- ULC01L
- ULC05L
- ULC25L

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All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification. Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.
SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: ULTRACLENE
Product code: ULC - BULK
Supplier: ELECTROLUBE
H.K. Wentworth Ltd.,
Wentworth House, Blakes Road,
Wargrave, Berkshire, RG10 8AW, United Kingdom.
Emergency telephone number: 01734 404031
Fax No: 01734 403084

2. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation
Chemical Name | CAS-No | EEC-No | Class | Weight %
---------------|--------|--------|-------|--------
3-BUTOXYPROPAN-2-OL | 5131-66-8 | 603-052-00-8 | Xi; R36/38 | < 20
NON HAZARDOUS CONSTITUENTS | 80 |

3. HAZARDS IDENTIFICATION

Most important hazards: Non hazardous
Specific hazards: Solvents may degrease the skin. Prolonged skin contact may cause skin irritation and/or dermatitis. Contact with eyes may cause irritation.

4. FIRST AID MEASURES

General advice: Show this safety data sheet to the doctor in attendance.
Inhalation: Move to fresh air in case of accidental inhalation of vapours.
Skin contact: Wash off with soap and plenty of water.
Eye contact: Flush eye(s) immediately with plenty of water If eye irritation persists, consult a specialist.
Ingestion: Clean mouth with water and drink afterwards plenty of water. Consult a physician if necessary.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Extinguish with waterspray, dry chemical or alcohol foam
Extinguishing media which must not be used for safety reasons: Not applicable
Specific hazards: Standard procedure for chemical fires
Specific equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary
Specific methods: Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: wear personal protective equipment
Environmental precautions: Do not flush into surface water
Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust) After cleaning, flush away traces with water
7. HANDLING AND STORAGE

Handling: When using, do not eat, drink or smoke. Avoid contact with the skin and the eyes.

Storage: Keep containers tightly closed in a cool, well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name: 3-BUTOXYPROPA-N-2-OL

National occupational exposure limits:

Long term (8 hrs) = 300 ppm

NON HAZARDOUS CONSTITUENTS

Engineering measures
Ensure adequate ventilation

Personal protection equipment:
- Respiratory protection: No personal respiratory protective equipment normally required
- Hand protection: not required under normal use
- Eye protection: not required under normal use
- Skin and body protection: not required under normal use

Hygiene measures:
When using, do not eat, drink or smoke

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid
Colour: colourless
Odour: characteristic

Boiling point/range: > 173 °C
Melting point/range: <-50 °C
Flash point: > 60 °C
Autoignition temperature: > 200 °C

Explosion limits:
- lower 0.6 vol. %
- upper 7.0 vol. %

Relative density: (20 °C) >= 0.79

Solubility:
- Water solubility: immiscible g/l
- Viscosity: (25 °C) 1.48 mPa.s

10. STABILITY AND REACTIVITY

Stability: Stable.
Conditions to avoid: oxidizing agents
Materials to avoid: None
Hazardous decomposition products: No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: No hazards deemed to be of major importance.
Local effects: Prolonged skin contact may defat the skin and produce dermatitis.
Sensitization: No hazards deemed to be of major importance.
Long term toxicity: Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments
Chronic toxicity: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product
12. ECOLOGICAL INFORMATION

Mobility:
Persistence and degradability: Readily biodegradable, according to appropriate OECD test
Bioaccumulation: Not applicable
Ecotoxicity effects: Not applicable

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Flush into sewer with plenty of water. Do not contaminate ponds, waterways or ditches with chemical or used container
Contaminated packaging: Can be offered for recycling, re-conditioning or puncture

14. TRANSPORT INFORMATION

Proper shipping name: Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

Classification according to European directive on classification of hazardous preparations 90/492/EEC
- Contains: Not applicable
- Symbol(s):

R-phrase(s):
S-phrase(s): S2 - Keep out of reach of children. S3 - Keep in a cool place.

16. OTHER INFORMATION

Recommended use:
Recommended restrictions:
Revision number: 4
Further information: CN no. 38140090
Contact Name: Carolyn Dungey
Department: Technical

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.
Health and Safety Warning Notice 98/05
Distribution List

ACTION:

All TLBHs (please copy and distribute to all your Property Managers).

DEO USF FAO: Safety Manager

COPY:

D Def H&S CSO
D Def H&S (F&S)
Co-ordinating Authorising Engineers
H&S Focal Points
   QMG2/RO1
   CHS 1a, HQLC
   SSO(PE)
   DNES H/HS1
   DERA Malvern (CSO)
   SSO(PE&C)
   PSSO DRA Fort Halstead
   D MOD FS
IT(Strat)A2 DGITS
MOD Police - Wethersfield
MOD Police Sec - ESB

Internal:

DEO

D/DEO (OCS)
D/DEO (TS)
ADS
TSD Ind Gp Admin x 5
DEO HQ Property Manager
All DWAs
DEO HQ Library
DEO USF Library
All DLAs
HEALTH AND SAFETY WARNING NOTICES -
A CUMULATIVE LIST FOR 1998

If missing copies are required, please contact your TLBH distribution point in the first instance.

Alternatively, single copies may be requested from:

DEO HQ Library and Publications Unit
Blakemore Drive
Sutton Coldfield
West Midlands B75 7RL

STD 0121-311 + extn or Mil 742 + extn:

Tel: 3648/3744
Fax: 2155

A full list of DEO, MOD and PSA publications which are relevant to works activities on the Defence Estate are contained in the DEO Technical Publications Index (TPI). For MOD employees copies of the TPI are available through your TLBH works focal points. Consultants and Contractors should obtain copies from The Stationery Office.

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