

SAFETY DATA SHEET Dry Film Lubricant

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name Dry Film Lubricant

Product number DFL, EDFL200D, ZE

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

Identified uses Lubricant.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier ELECTROLUBE. A division of HK WENTWORTH LTD

ASHBY PARK, COALFIELD WAY,

ASHBY DE LA ZOUCH, LEICESTERSHIRE LE65 1JR

UNITED KINGDOM +44 (0)1530 419600 +44 (0)1530 416640 info@hkw.co.uk

1.4. Emergency telephone number

Emergency telephone IN CASE OF EMERGENCY CALL:

+44 1865 407333 (24hr, Provided by Carechem 24)

+353 (0)1 809 2166 (Beaumont Hospital, Republic of Ireland only, 8am-10pm, 7 days a week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Aerosol 1 - H222, H229

Health hazards STOT SE 3 - H336 Asp. Tox. 1 - H304

Environmental hazards Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms







Danger

Signal word

Hazard statements H222 Extremely flammable aerosol.

H229 Pressurised container: may burst if heated.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing spray.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

P501 Dispose of contents/ container in accordance with national regulations.

Contains pentane, Propan-2-ol

Supplementary precautionary P271 Use only outdoors or in a well-ventilated area.

statements P273 Avoid release to the environment.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTRE/doctor if you feel unwell.

P391 Collect spillage.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

pentane 60-100%

CAS number: 109-66-0 EC number: 203-692-4 REACH registration number: 01-

2119459286-30-XXXX

Classification

Flam. Liq. 2 - H225 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411

Propan-2-ol 5-10%

CAS number: 67-63-0 EC number: 200-661-7 REACH registration number: 01-

2119457558-25-XXXX

Classification

Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336

Carbon Dioxide 1-5%

CAS number: 124-38-9

Classification

Press. Gas (Comp.) - H280

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

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Inhalation Remove affected person from source of contamination. Move affected person to fresh air and

keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on

their side in the recovery position and ensure breathing can take place.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water

or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing

such as collar, tie or belt.

Skin contact Rinse with water.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide

apart. Continue to rinse for at least 10 minutes.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. Wash

contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth

resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards. The severity of the symptoms

described will vary dependent on the concentration and the length of exposure.

Inhalation A single exposure may cause the following adverse effects: Headache. Nausea, vomiting.

Central nervous system depression. Drowsiness, disziness, disorientation, vertigo. Narcotic

effect.

Ingestion Due to the physical nature of this product, it is unlikely that ingestion will occur. Aspiration

hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical

pneumonitis.

Skin contact Repeated exposure may cause skin dryness or cracking.

Eye contact May be slightly irritating to eyes. May cause discomfort.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder

or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up.

Bursting aerosol containers may be propelled from a fire at high speed. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurised contents and

propellant. Vapours may form explosive mixtures with air.

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Hazardous combustion products

Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting

Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Evacuate area. Risk of explosion. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated.

6.2. Environmental precautions

Environmental precautions

Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Approach the spillage from upwind. Under normal conditions of handling and storage, spillages from aerosol containers are unlikely. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Avoid exposing aerosol containers to high temperatures or direct sunlight. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin. Avoid contact with eyes. Avoid inhalation of vapours and spray/mists.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local

regulations. Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Protect from sunlight. Do not store near heat sources or expose to high temperatures. Do not expose to temperatures exceeding 50°C/122°F. Bund storage facilities to prevent soil and water pollution in the event of spillage.

The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

pentane

Long-term exposure limit (8-hour TWA): WEL 600 ppm 1800 mg/m³

Propan-2-ol

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³ Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

Carbon Dioxide

Long-term exposure limit (8-hour TWA): WEL 5000 ppm 9150 mg/m³ Short-term exposure limit (15-minute): WEL 15000 ppm 27400 mg/m³ WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment







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Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Aerosol.

Colour Milky.

Odour Characteristic.

Odour threshold Not available.

pH Not available.

Melting point Not available.

Initial boiling point and range Not a

Not available.

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Flash point Not available.

Evaporation rate Not available.

Evaporation factor Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or

explosive limits

Not available.

Other flammability

Vapour pressure

Not available.

Vapour density

Not available.

Relative density Not available.

Bulk density 1.58 kg/l

Solubility(ies) Not available.

Partition coefficient Not available.

Auto-ignition temperature Not available.

Decomposition Temperature Not available.

Viscosity Kinematic viscosity ≤ 20.5 mm²/s.

Explosive properties Not available.

Oxidising properties Not available.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the

prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous

reactions

The following materials may react strongly with the product: Oxidising agents.

10.4. Conditions to avoid

Conditions to avoid Avoid exposing aerosol containers to high temperatures or direct sunlight. Pressurised

container: may burst if heated

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a

hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition

products

Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

SECTION 11: Toxicological information

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11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC50) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisationBased on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitroBased on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicityNone of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity -

development

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H336 May cause drowsiness or dizziness.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Asp. Tox. 1 - H304 May be fatal if swallowed and enters airways. Pneumonia may be the

result if vomited material containing solvents reaches the lungs.

General information The severity of the symptoms described will vary dependent on the concentration and the

length of exposure.

Inhalation A single exposure may cause the following adverse effects: Headache. Nausea, vomiting.

Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic

effect.

Ingestion Due to the physical nature of this product, it is unlikely that ingestion will occur. Aspiration

hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical

pneumonitis.

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Skin contact Repeated exposure may cause skin dryness or cracking.

Eye contact May be slightly irritating to eyes. May cause discomfort.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs Central nervous system

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not available.

12.4. Mobility in soil

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all

surfaces.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle

products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners

may retain some product residues and hence be potentially hazardous.

Do not empty into drains. Empty containers must not be punctured or incinerated because of

the risk of an explosion. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers,

labelled with their contents.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal

documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 1950

UN No. (IMDG) 1950

UN No. (ICAO) 1950

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UN No. (ADN) 1950

14.2. UN proper shipping name

Proper shipping name

AEROSOLS

(ADR/RID)

Proper shipping name (IMDG) AEROSOLS (CONTAINS pentane)

Proper shipping name (ICAO) AEROSOLS
Proper shipping name (ADN) AEROSOLS

14.3. Transport hazard class(es)

ADR/RID class 2.1

ADR/RID classification code 5F

ADR/RID label 2.1

IMDG class 2.1

ICAO class/division 2.1

ADN class 2.1

Transport labels



14.4. Packing group

ADR/RID packing group None

IMDG packing group None

ICAO packing group None

ADN packing group None

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-D, S-U

ADR transport category 2

Tunnel restriction code (D)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

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SECTION 15: Regulatory information

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

National regulations Health and Safety at Work etc. Act 1974 (as amended).

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment

Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EH40/2005 Workplace exposure limits.

The Aerosol Dispensers Regulations 2009 (SI 2009 No. 2824).

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18

December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH) (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as

amended).

Council Directive of 20 May 1975 on the approximation of the laws of the Member States

relating to aerosol dispensers (75/324/EEC) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by

Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways.

RID: European Agreement concerning the International Carriage of Dangerous Goods by

Rail.

IATA: International Air Transport Association.

ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate.

LC₅₀: Lethal Concentration to 50 % of a test population.

LD₅o: Lethal Dose to 50% of a test population (Median Lethal Dose).

EC₅: 50% of maximal Effective Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations

and acronyms

Aerosol = Aerosol

STOT SE = Specific target organ toxicity-single exposure

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Classification procedures

Asp. Tox. 1 - H304: STOT SE 3 - H336: : Calculation method. Aquatic Chronic 2 - H411: :

according to Regulation (EC)

1272/2008

Calculation method. Aerosol 1 - H222, H229: : Expert judgement.

Training advice Read and follow manufacturer's recommendations. Only trained personnel should use this

material.

Issued by Emily Kirk

Dry Film Lubricant

Revision date 18/11/2019

Revision 1.1

SDS number 1217

Hazard statements in full H222 Extremely flammable aerosol.

H225 Highly flammable liquid and vapour.

H229 Pressurised container: may burst if heated.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.