

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.08.2011

Revision: 09.08.2011

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

- **Product identifier**
- **Trade name:** Refresh
- **Art.-No.** Refresh
- **Relevant identified uses of the substance or mixture and uses advised against**
Not determined
- **Application of the substance / the preparation** Coating
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Protection Zone
PO Box 225
Oswestry
Shropshire UK
Tel.: +44 1691 654282
Fax: +44 1691 654282
E-Mail : info@protectionzone.co.uk
- **Further information obtainable from:** See Manufacturer / Supplier
- **Emergency telephone number:**
Institut für Toxikologie
Giftnotruf Berlin
Oranienburger Str. 285
13437 Berlin

Notruf / Beratung +49-030 192 40

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



F+; Highly flammable

R11: Highly flammable.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms



GHS02

· Signal word Danger

· Hazard statements

H225 Highly flammable liquid and vapour.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

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

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.

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

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

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description:

Preparation of modified hybrid materials in ethanol-containing solution for dirt-repellent coating.

Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6	ethanol F R11 Flam. Liq. 2, H225	
CAS: 78-93-3 EINECS: 201-159-0	Methyl Ethyl Ketone Xi R36; F R11 R66-67 Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	< 1%

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- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Take affected persons out of danger area and lay down.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes (10-15) under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
A person vomiting while laying on their back should be turned onto their side.
If Victim is vomiting, bring head in low position (increased Danger of aspiration / perforation)
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
In case of fire, the following can be released:
Carbon monoxide and Carbon dioxide.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.

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Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

- **Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Prevent seepage into sewage system, workpits and cellars.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

Do not allow to penetrate the ground/soil.

- **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

- **Information about fire - and explosion protection:**

Protect against electrostatic charges.

Protect from heat.



Keep ignition sources away - Do not smoke.

Fumes can combine with air to form an explosive mixture.

Use only in explosion protected area.

Use explosion-proof apparatus / fittings and spark-proof tools.

Flammable gas-air mixtures may form in empty receptacles.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

- **Information about storage in one common storage facility:**

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Only materials of the same storage class should be stored together. Storing together with the following materials is forbidden:

- medicaments, food and feeds including additives.
- infectious, radioactive and explosive materials.

Storing together with materials of other storage classes is permitted partially only under certain conditions.

The material should not be together-stored with materials, where dangerous chemical reactions are possible.

See for this Chap. 10: Stability and reactivity

· **Further information about storage conditions:**

Protect from heat and direct sunlight.

Store in cool, dry conditions in well sealed receptacles.

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

64-17-5 ethanol

WEL Long-term value: 1920 mg/m³, 1000 ppm

78-93-3 Methyl Ethyl Ketone

WEL Short-term value: 899 mg/m³, 300 ppm
Long-term value: 600 mg/m³, 200 ppm
Sk

- **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Recommended filter device for short term use:** Filter A, brown

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· Protection of hands:



Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check protective gloves prior to each use for their proper condition.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Preventive skin protection by use of skin-protecting agents is recommended.

· Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

Plastic gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

Penetration time: > 480 min. (8h) EN 374

The numerical data are approximately values Increased Temperatures by warmed up substances, body warmth, etc. and a reduction of the layer strength by stretching can lead to a decrease of the break-through time.

With a 1,5 times bigger / smaller layer-thickness the break-through time halves / doubles itself.

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Not suitable are gloves made of the following materials:

Leather gloves

Strong material gloves

· Eye protection:



Tightly sealed goggles

· Body protection:

Solvent resistant protective clothing

Protection clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

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9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Alcohol-like

· pH-value (500 g/l) at 20°C:	1.0 - 3.0
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- Change in condition

Melting point/Melting range:	< -20°C
Boiling point/Boiling range:	78°C

· Flash point:	< 21°C
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· Flammability (solid, gaseous):	Not applicable.
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· Ignition temperature:	> 425°C
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· Decomposition temperature:	Not determined.
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· Self-igniting:	Product is not selfigniting.
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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
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- Explosion limits:

Lower:	3.5 Vol %
Upper:	15 Vol %

· Vapour pressure at 20°C:	57 hPa (Ethanol)
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· Density at 20°C:	0.8 ± 0.03 g/cm ³
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· Relative density	Not determined.
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· Vapour density	Not determined.
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· Evaporation rate	Not determined.
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- Solubility in / Miscibility with water:

limited miscibility (product fails)

· Segregation coefficient (n-octanol/water):	Not determined.
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- Viscosity:

Dynamic at 20°C:	1 - 10 mPas
Kinematic:	Not determined.

· Other information	No further relevant information available.
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10 Stability and reactivity

- Reactivity

- Chemical stability

- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Vapor / air mixtures are explosive at intensive warming. Heating can release flammable vapors.

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- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidizing agents
- **Hazardous decomposition products:**
Could be released in case of Fire:
Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

64-17-5 ethanol

Oral	LD50	7060 mg/kg (Rat (Ratte))
Inhalative	LC50/4 h	20000 mg/l (Rat (Ratte))

78-93-3 Methyl Ethyl Ketone

Oral	LD50	4050 mg/kg (Mouse (Maus)) 2737 mg/kg (Rat (Ratte))
Dermal	LD50	6480 mg/kg (Rabbit (Kaninchen))
Inhalative	LC50/4 h	32 mg/l (Mouse (Maus)) 47 mg/l (Rat (Ratte))

- **Primary irritant effect:**
- **on the skin:**
Irritation possible
More frequently or longer persisting skin contact can degrease and drain the skin, which can lead to skin complaints and dermatitis.
- **on the eye:** Irritation possible.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
In higher concentrations of narcotic effect.
Caution: This product should not be used in aerosol cans.
The inhalation of aerosols can lead to poisoning.
In acute inhalation exposure to ethanol has low toxicity.
The smell is noticeable in the range of 80 ppm, the threshold for eye irritation is much higher (> 10,000 ppm).
High exposures can cause coughing and irritation tears. In asthmatic patients nebulised ethanol dissolved in an individual case a strong narrowing of the airways (fall in FEV by 20 - 40%) from an allergic genesis of this is not to be derived.

12 Ecological information

- **Toxicity**

- **Acquatic toxicity:**

EC0	6500 mg/l (Pseudomonas putida)
LC50	8150 mg/l (Leuciscus idus (Goldorfe))

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- **Persistence and degradability** biodegradable
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Must be specially treated adhering to official regulations.

- **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA | <p>1993</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · ADR | <p>1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL), ETHYL METHYL ETHYL KETONE (METHYL ETHYL KETONE)), special provision 640D</p> |
| <ul style="list-style-type: none"> · IMDG | <p>FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL), ETHYL METHYL KETONE (METHYL ETHYL KETONE))</p> |

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· IATA	FLAMMABLE LIQUID, N.O.S. (ETHANOL, ETHYL METHYL KETONE (METHYL ETHYL KETONE))
· Transport hazard class(es)	
· ADR	
	
· Class	3 (F1) Flammable liquids.
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E, <u>S-E</u>
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Tunnel restriction code	D/E
· UN "Model Regulation":	UN1993, FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL), ETHYL METHYL KETONE (METHYL ETHYL KETONE)), special provision 640D, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**

GHS02

· **Signal word** Danger· **Hazard statements**

H225 Highly flammable liquid and vapour.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

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

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

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

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

· **National regulations:**

Class	Share in %
NK	50-100

· **Other regulations, limitations and prohibitive regulations**

National and local regulations concerning chemicals shall be observed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

R11 Highly flammable.

R36 Irritating to eyes.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

· **Training hints**

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· Department issuing MSDS:

T&E Gefahrgutlogistik S.A. Luxembourg

Tel: 00352-267166-0

Fax: 00352-267166-19

Mail: customerservice@protectionzone.co.uk

· Contact: Customer Service**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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