SAFETY DATA SHEET

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

1.1. Product identifier
   Trade name
   Junckers Refresher
   Product no.
   802-50
   REACH registration number
   Not applicable
   Other means of identification

1.2. Relevant identified uses of the substance or mixture and uses advised against
   Relevant identified uses of the substance or mixture
   Maintenance of wood floors, indoors.
   Wood articles (AC11)
   Uses advised against
   -
   The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet
   Company and address
   Junckers Industrier A/S
   Vaerftsvej 4
   DK-4600 Koege
   Tel.: +45 7080 3000
   Contact person
   Katja Hansen
   E-mail
   productsafety@junckers.dk
   SDS date
   06-10-2015
   SDS Version
   1.0

1.4. Emergency telephone number
   Use your national or local emergency number
   See section 4 “First aid measures”

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
   This product is not classified as dangerous.
   See full text of H-phrases in section 2.2.

2.2. Label elements
   Hazard pictogram(s)
   -
   Signal word
   -
   Hazard statement(s)
   -
   Safety statement(s)
   General -
   Prevention -
   Response -
   Storage -
   Disposal -
   Identity of the substances primarily responsible for the major health hazards
   -

2.3. Other hazards
According to EC-Regulation 1907/2006 (REACH)

**Additional labelling**
Contains 2-methyl-2H-isothiazol-3-one, 1,2-benzisothiazol-3(2H)-one, Blend of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC 247-500-7]+2-methyl-2H-isothiazol-3-one [EC 220-239-6] (3:1), Adipohydrazide. May produce an allergic reaction. Safety data sheet available on request. (EUH210)

**Additional warnings**
- VOC
  VOC-MAX: 140 g/l, MAXIMUM VOC CONTENT (A (WB)): 140 g/l.

**SECTION 3: Composition/information on ingredients**

3.1/3.2. Substances/Mixtures

| NAME: | 2-(2-butoxyethoxy)ethanol |
| IDENTIFICATION NOS.: | CAS-no: 112-34-5 EC-no: 203-961-6 REACH-no: 01-2119475104-44-xxxx Index-no: 603-096-00-8 |
| CONTENT: | 1-3% |
| CLP CLASSIFICATION: | Eye Irrit. 2 H319 |
| NOTE: | S |

| NAME: | Adipohydrazide |
| IDENTIFICATION NOS.: | CAS-no: 1071-93-8 EC-no: 213-999-5 REACH-no: 01-2119962900-36-xxxx |
| CONTENT: | <1% |
| CLP CLASSIFICATION: | Skin Sens. 1A, Aquatic Chronic 2 H317, H411 |

(*) See full text of H-phrases in chapter 16. Occupational exposure limits are listed in section 8, if these are available.

**Other informations**

ATEmix(inhale, vapour) > 20
ATEmix(inhale, dust/mist) > 20000
ATEmix(dermal) > 2000
ATEmix(oral) > 2000
Eye Cat. 2 Sum = Sum(Ci/S(G)CL) = 0.2376 - 0.3564
Skin Cat. 2 Sum = Sum(Ci/S(G)CL) = 0 - 0

**SECTION 4: First aid measures**

4.1. Description of first aid measures

**General information**
In the case of accident: Contact a doctor or casually department – take the label or this safety data sheet. Contact a doctor, if in doubt about the injured person’s condition or if the symptoms continue. Never give an unconscious person water or similar.

**Inhalation**
Get the person into fresh air and stay with them.

**Skin contact**
Remove contaminated clothing and shoes at once. Skin that has come in contact with the material must be washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

**Eye contact**
Remove contact lenses. Flush eyes immediately with plenty of water (20-30°C) for at least 15 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. If irritation continues, contact a doctor.

**Ingestion**
Give the person plenty to drink and stay with the person. If the person feels unwell, contact a doctor immediately and take this safety data sheet or the label from the product with you. Do not induce vomiting unless recommended by the doctor. Hold head facing down so that no vomit runs back into the mouth and throat.

**Burns**
Not applicable

4.2. Most important symptoms and effects, both acute and delayed
Neurotoxic effect: This product contains organic solvents, which can have an effect on the nervous system. Symptoms of neurotoxicity can be: loss of appetite, headache, dizziness, whistling in the ears,
According to EC-Regulation 1907/2006 (REACH)

tingling sensations in the skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer. The skin will then be more prone to absorb dangerous substances, e.g. allergens. This product contains substances that may cause an allergic reaction in people who are already so disposed.

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

Information to medics
Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Water jets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture
If the product is exposed to high temperatures, as in the case of fire, dangerous catabolic substances are produced. These are: Carbon oxides. Fire will result in thick black smoke. Exposure to catabolic products can damage your health. Fire fighters should use proper protection gear. Closed containers, which are exposed to fire, should be cooled with water. Do not let fire-extinguishing water run into sewers and other water courses.

5.3. Advice for firefighters
Wear self-contained breathing apparatus and protective clothing to prevent contact.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
No specific requirements.

6.2. Environmental precautions
No specific requirements.

6.3. Methods and material for containment and cleaning up
Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. Cleaning should be done as far as possible using normal cleaning agents. Solvents should be avoided.

6.4. Reference to other sections
See section on “Disposal” with regard to the handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
See section on 'Exposure controls/personal protection' for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities
Always store in containers of the same material as the original.

Storage temperature
Room temperature 18 to 23°C

7.3. Specific end use(s)
This product should only be used for applications described in Section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL
2-(2-butoxyethoxy)ethanol (EH40/2005)
Long-term exposure limit (8-hour TWA reference period): 10 ppm | 67.5 mg/m3
Short-term exposure limit (15-minute reference period): 15 ppm | 101.2 mg/m3

DNEL / PNEC
DNEL (2-(2-butoxyethoxy)ethanol): 10 ppm - Exposure: Inhalation - Duration: Long term - Remarks: Supplier ESDS
DNEL (2-(2-butoxyethoxy)ethanol): 5 mg/kg - Exposure: Inhalation - Duration: Long term - Remarks: Supplier ESDS
According to EC-Regulation 1907/2006 (REACH)

PNEC (2-(2-butoxyethoxy)ethanol): 0,1 mg/L - Exposure: Water - Duration: Continuous - Remarks: Supplier ESDS
PNEC (2-(2-butoxyethoxy)ethanol): 0,4 mg/L - Exposure: Soil - Duration: Continuous - Remarks: Supplier ESDS

8.2. Exposure controls
Compliance with the stated exposure limits values should be checked on a regular basis.

General recommendations
Smoking, consumption of food or liquid, and storage of tobacco, food or liquid, are not allowed in the workroom.

Exposure scenarios
If there is an appendix to this safety data sheet, the indicated exposure scenarios must be complied.

Exposure limits
Trade users are covered by the rules of the working environment legislation on maximum concentrations for exposure. See work hygiene threshold values below.

Appropriate technical measures
Airborne gas and dust concentrations must be kept as low as possible and below the current threshold values (see below). Use for example an exhaust system if the normal air flow in the work room is not sufficient. Make sure that eyewash and emergency showers are clearly marked.

Hygiene measures
Whenever you take a break in using this product and when you have finished using it, all exposed areas of the body must be washed. Always wash hands, forearms and face.

Measures to avoid environmental exposure
No specific requirements.

Individual protection measures, such as personal protective equipment

Generally
Use only CE marked protective equipment.

Respiratory Equipment
No specific requirements.

Skin protection
No specific requirements.

Hand protection
Recommended: Nitrile rubber. Breakthrough time: > 30 minutes (Class 2)

Eye protection
No specific requirements.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Faint</td>
</tr>
<tr>
<td>pH</td>
<td>7-8</td>
</tr>
<tr>
<td>Viscosity</td>
<td>-</td>
</tr>
<tr>
<td>Density (g/cm3)</td>
<td>1,01</td>
</tr>
</tbody>
</table>

Phase changes
- Melting point (°C)
- Boiling point (°C)
- Vapour pressure (mm Hg)

Data on fire and explosion hazards
- Flashpoint (°C)
- Ignition (°C)
- Self ignition (°C)
- Explosion limits (Vol %)
- Oxidizing properties

Solubility
- Solubility in water
- n-octanol/water coefficient
- Soluble

9.2. Other information
- Solubility in fat
- Additional information
- N/A

SECTION 10: Stability and reactivity

10.1. Reactivity
According to EC-Regulation 1907/2006 (REACH)

10.2. Chemical stability
The product is stable under the conditions, noted in the section on “Handling and storage”.

10.3. Possibility of hazardous reactions
No special

10.4. Conditions to avoid
Do not expose to heat (e.g. sunlight), because it can lead to excess pressure.

10.5. Incompatible materials
Strong acids, strong bases, strong oxidizing agents, and strong reductants agents.

10.6. Hazardous decomposition products
The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Substance</th>
<th>Species</th>
<th>Test</th>
<th>Route of exposure</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adipohydrazide</td>
<td>Rat</td>
<td>LD50</td>
<td>Oral</td>
<td>&gt;2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Adipohydrazide</td>
<td>Rat</td>
<td>LC50</td>
<td>Inhalation</td>
<td>&gt;5.3 mg/l</td>
<td></td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>Rat</td>
<td>LD50</td>
<td>Oral</td>
<td>&gt;2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>Rabbit</td>
<td>LD50</td>
<td>Dermal</td>
<td>&gt;2000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
No data available.

Serious eye damage/irritation
No data available.

Respiratory or skin sensitisation
No data available.

Germ cell mutagenicity
No data available.

Carcinogenicity
No data available.

Reproductive toxicity
No data available.

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

Long term effects
Neurotoxic effect: This product contains organic solvents, which can have an effect on the nervous system. Symptoms of neurotoxicity can be: loss of appetite, headache, dizziness, whistling in the ears, tingling sensations in the skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin’s natural fat layer. The skin will then be more prone to absorb dangerous substances, e.g. allergens. This product contains substances that may cause an allergic reaction in people who are already so disposed.

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Species</th>
<th>Test</th>
<th>Test duration</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adipohydrazide</td>
<td>Fish</td>
<td>LC50</td>
<td>96 h</td>
<td>&gt;100 mg/l</td>
</tr>
<tr>
<td>Adipohydrazide</td>
<td>Daphnia</td>
<td>EC50</td>
<td>48 h</td>
<td>&gt;106 mg/l</td>
</tr>
<tr>
<td>Adipohydrazide</td>
<td>Algae</td>
<td>EC50</td>
<td>72 h</td>
<td>9.19 mg/l</td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>Fish</td>
<td>LC50</td>
<td>96 h</td>
<td>1300 mg/l</td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>Daphnia</td>
<td>EC50</td>
<td>14 H</td>
<td>2850 mg/l</td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>Algae</td>
<td>EC50</td>
<td>Akute</td>
<td>&gt;100 mg/L</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Biodegradability</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>Yes</td>
<td>Modified OECD Screening Test</td>
<td>90-100%</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential
According to EC-Regulation 1907/2006 (REACH)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Potential bioaccumulation</th>
<th>LogPow</th>
<th>BFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>No</td>
<td>0.56</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**12.4. Mobility in soil**

2-(2-butoxyethoxy)ethanol: Log Koc= 0.521864, Calculated from LogPow (High mobility potential).

**12.5. Results of PBT and vPvB assessment**

No data available

**12.6. Other adverse effects**

This product contains ecotoxic substances which can have damaging effects on water-organisms. This product contains substances which can cause undesirable long-term effects in the water environment, due to its poor biodegradability.

### SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

This product is not covered by the regulations on dangerous waste.

**Waste**

- EWC code
  - 08 01 11

**Specific labelling**

- Contaminated packing
  - No specific requirements.

### SECTION 14: Transport information

Not listed as dangerous goods under ADR and IMDG regulations.

**14.1 – 14.4 ADR/RID**

**14.5. Environmental hazards**

- 

**14.6. Special precautions for user**

- 

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

No data available

(*) Packing group

(**) Marine pollutant

### SECTION 15: Regulatory information
According to EC-Regulation 1907/2006 (REACH)

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

**Restrictions for application**
People under the age of 18 must not be exposed to this product cf. Council Directive 94/33/EC.

**Demands for specific education**
-

**Additional information**

**Sources**
EC regulation 1907/2006 (REACH)
Directive 2000/532/EC
EC Regulation 1272/2008 (CLP)

15.2. Chemical safety assessment
No

**SECTION 16: Other information**

**Full text of H-phrases as mentioned in section 3**
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.

**The full text of identified uses as mentioned in section 1**
AC11 = Wood articles.

**Other symbols mentioned in section 2**
-

**Other**
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
A change (in proportion to the last essential change (first cipher in SDS version)) is marked with a blue triangle.

**The safety data sheet is validated by**
Admin

**Date of last essential change**
(First cipher in SDS version)
-

**Date of last minor change**
(Last cipher in SDS version)
-