



## SAFETY DATA SHEET DOWCAL 200 SOLUTION

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

#### 1.1. Product identifier

<b>Product name</b>	DOWCAL 200 SOLUTION
<b>Product number</b>	13412
<b>Synonyms; trade names</b>	DOWCAL 200 25% SOL, DOWCAL 200 30% SOL, DOWCAL 200 35% SOL, DOWCAL 200 40% SOL, DOWCAL 200 55% SOL, DOWCAL 200 50% SOL, DOWCAL 200 45% SOL, DOWCAL 200 25% GREEN, DOWCAL 200 35% SOL (RED)

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

<b>Identified uses</b>	Heat Carrier,
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#### 1.3. Details of the supplier of the safety data sheet

<b>Supplier</b>	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 sds@univar.com +44 1274 267306
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#### 1.4. Emergency telephone number

<b>Emergency telephone</b>	SGS - +32 (0)3 575 55 55 (24h)
<b>Sds No.</b>	13412

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC/1272/2008)

<b>Physical hazards</b>	Not Classified
<b>Health hazards</b>	Not Classified
<b>Environmental hazards</b>	Not Classified

**Environmental** The product is not expected to be hazardous to the environment.

#### 2.2. Label elements

<b>Hazard statements</b>	NC Not Classified
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#### 2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

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<b>MONOPROPYLENE GLYCOL</b>		<b>10-30%</b>
CAS number: 57-55-6	EC number: 200-338-0	REACH registration number: 01-2119456809-23-XXXX
<b>Classification</b> Not Classified	<b>Classification (67/548/EEC or 1999/45/EC)</b> -	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

**Composition comments**      This product is not classified as hazardous, the information in this datasheet is given for guidance only.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
<b>Skin contact</b>	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

<b>Skin contact</b>	Slightly irritating.
<b>Eye contact</b>	May cause temporary eye irritation.

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

**Notes for the doctor**      No specific recommendations. If in doubt, get medical attention promptly.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media**    Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

#### 5.2. Special hazards arising from the substance or mixture

**Specific hazards**                Oxides of the following substances: Carbon.

#### 5.3. Advice for firefighters

**Special protective equipment for firefighters**    Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions**            Wear protective clothing as described in Section 8 of this safety data sheet.

#### 6.2. Environmental precautions

**Environmental precautions**    Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

#### 6.3. Methods and material for containment and cleaning up

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**Methods for cleaning up** Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

### 6.4. Reference to other sections

**Reference to other sections** Wear protective clothing as described in Section 8 of this safety data sheet.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Avoid spilling. Avoid contact with skin and eyes.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place.

### 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

#### **MONOPROPYLENE GLYCOL**

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> particulate

Long-term exposure limit (8-hour TWA): WEL 150 ppm 474 mg/m<sup>3</sup> total vapour and particulates

WEL = Workplace Exposure Limit

**Ingredient comments** No exposure limits known for ingredient(s).

#### MONOPROPYLENE GLYCOL (CAS: 57-55-6)

<b>DNEL</b>	General population - Inhalation; Long term systemic effects: 50 mg/m <sup>3</sup> General population - Inhalation; Long term local effects: 10 mg/m <sup>3</sup> Workers - Inhalation; Long term systemic effects: 168 mg/m <sup>3</sup> Workers - Inhalation; Long term local effects: 10 mg/m <sup>3</sup>
<b>PNEC</b>	- Fresh water; 260 mg/l - Marine water; 26 mg/l - STP; 20000 mg/l - Sediment (Freshwater); 572 mg/kg - Sediment (Marinewater); 57.2 mg/kg - Soil; 50 mg/kg

#### SODIUM BENZOATE (CAS: 532-32-1)

**Ingredient comments** No exposure limits known for ingredient(s).

<b>DNEL</b>	Industry - Dermal; Long term systemic effects: 34.7 mg/kg/day Consumer - Dermal; Long term systemic effects: 20.8 mg/kg/day Industry - Inhalation; Long term systemic effects: 10.4 mg/m <sup>3</sup> Consumer - Inhalation; Long term systemic effects: 2.1 mg/m <sup>3</sup> Consumer - Oral; Long term systemic effects: 25 mg/kg/day Industry - Inhalation; Long term local effects: 6.3 mg/m <sup>3</sup> Consumer - Inhalation; Long term local effects: 1.3 mg/m <sup>3</sup>
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<b>PNEC</b>	<ul style="list-style-type: none"> <li>- Fresh water; 0.13 mg/l</li> <li>- Marine water; 0.013 mg/l</li> <li>- Intermittent release; 0.305 mg/l</li> <li>- Soil; 0.276 mg/kg</li> <li>- Sediment (Freshwater); 1.76 mg/kg</li> <li>- Sediment (Marinewater); 0.176 mg/kg</li> <li>- STP; 10 mg/l</li> </ul>
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### BORON POTASSIUM OXIDE TETRAHYDRATE (CAS: 12045-78-2)

**Ingredient comments** No exposure limits known for ingredient(s).

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

##### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

##### Hand protection

No specific hand protection recommended. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: Impermeable material. 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.

##### Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

##### Hygiene measures

Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

##### Respiratory protection

No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

### **SECTION 9: Physical and Chemical Properties**

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Various colours.
<b>Odour</b>	Characteristic.
<b>Odour threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Melting point</b>	No information available.
<b>Initial boiling point and range</b>	No information available.
<b>Flash point</b>	No information available.

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<b>Evaporation rate</b>	No information available.
<b>Evaporation factor</b>	No information available.
<b>Flammability (solid, gas)</b>	No information available.
<b>Upper/lower flammability or explosive limits</b>	No information available.
<b>Other flammability</b>	No information available.
<b>Vapour pressure</b>	No information available.
<b>Vapour density</b>	No information available.
<b>Relative density</b>	No information available.
<b>Bulk density</b>	No information available.
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	No information available.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Explosive properties</b>	No information available.
<b>Explosive under the influence of a flame</b>	No information available.
<b>Oxidising properties</b>	No information available.
<b><u>9.2. Other information</u></b>	
<b>Other information</b>	Not determined.
<b>Refractive index</b>	No information available.
<b>Particle size</b>	No information available.
<b>Molecular weight</b>	No information available.
<b>Volatility</b>	No information available.
<b>Saturation concentration</b>	No information available.
<b>Critical temperature</b>	No information available.
<b>Volatile organic compound</b>	No information available.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity**                      There are no known reactivity hazards associated with this product.

#### 10.2. Chemical stability

**Stability**                         Stable at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**                      Will not polymerise.

#### 10.4. Conditions to avoid

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**Conditions to avoid** Avoid excessive heat for prolonged periods of time.

### 10.5. Incompatible materials

**Materials to avoid** Strong acids. Strong alkalis. Strong oxidising agents.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Fire creates: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Skin corrosion/irritation

**Animal data** No information available.

#### Serious eye damage/irritation

**Serious eye damage/irritation** No information available.

#### Respiratory sensitisation

**Respiratory sensitisation** No information available.

#### Skin sensitisation

**Skin sensitisation** No information available.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** No information available.

#### Carcinogenicity

**Carcinogenicity** No information available.

#### Reproductive toxicity

**Reproductive toxicity - fertility** No information available.

#### Specific target organ toxicity - single exposure

**STOT - single exposure** No information available.

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** No information available.

#### Aspiration hazard

**Aspiration hazard** No information available.

#### **Inhalation**

Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.

#### **Ingestion**

May cause discomfort if swallowed.

#### **Skin contact**

Liquid may irritate skin.

#### **Eye contact**

Vapour or spray in the eyes may cause irritation and smarting.

## SECTION 12: Ecological Information

#### **Ecotoxicity**

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

### 12.1. Toxicity

**Toxicity** Not considered toxic to fish.

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### 12.2. Persistence and degradability

**Persistence and degradability** There are no data on the degradability of this product.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** No information available.

### 12.4. Mobility in soil

**Mobility** The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

### 12.6. Other adverse effects

**Other adverse effects** Not determined.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Do not puncture or incinerate, even when empty.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

## SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

No information required.

### 14.2. UN proper shipping name

No information required.

### 14.3. Transport hazard class(es)

No information required.

### 14.4. Packing group

No information required.

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**  
No.

### 14.6. Special precautions for user

No information required.

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information required.

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### SECTION 15: Regulatory information

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

##### **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).  
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).  
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

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### Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.  
 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.  
 CAS: Chemical Abstracts Service.  
 DNEL: Derived No Effect Level.  
 IATA: International Air Transport Association.  
 IMDG: International Maritime Dangerous Goods.  
 Kow: Octanol-water partition coefficient.  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 PBT: Persistent, Bioaccumulative and Toxic substance.  
 PNEC: Predicted No Effect Concentration.  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 vPvB: Very Persistent and Very Bioaccumulative.  
 IARC: International Agency for Research on Cancer.  
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
 cATpE: Converted Acute Toxicity Point Estimate.  
 BCF: Bioconcentration Factor.  
 BOD: Biochemical Oxygen Demand.  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 LOAEC: Lowest Observed Adverse Effect Concentration.  
 LOAEL: Lowest Observed Adverse Effect Level.  
 NOAEC: No Observed Adverse Effect Concentration.  
 NOAEL: No Observed Adverse Effect Level.  
 NOEC: No Observed Effect Concentration.  
 LOEC: Lowest Observed Effect Concentration.  
 DMEL: Derived Minimal Effect Level.  
 EL50: Exposure Limit 50  
 hPa: Hectopascal  
 LL50: Lethal Loading fifty  
 OECD: Organisation for Economic Co-operation and Development  
 POW: Octanol-water partition coefficient  
 SCBA: self-contained breathing apparatus  
 STP: Sewage Treatment Plant  
 VOC: Volatile Organic Compounds

### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity  
 Aquatic Acute = Hazardous to the aquatic environment (acute)  
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

### Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

### Revision date

07/12/2016

### Revision

03

### Supersedes date

12/08/2016

### SDS number

13412

### Version number

1.002

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<b>SDS status</b>	Approved.
<b>Signature</b>	Lisa Bland
<b>Risk phrases in full</b>	Not classified.