



## SAFETY DATA SHEET

### STARCH, DI, PHOSPHATE, CROSSLINKED

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

##### 1.1. Product identifier

|                          |                                                                                                            |
|--------------------------|------------------------------------------------------------------------------------------------------------|
| Product name             | STARCH, DI, PHOSPHATE, CROSSLINKED                                                                         |
| Product number           | 23352                                                                                                      |
| Synonyms; trade names    | EMJEL P, EMJEL P 1372, EMFLO KPS 200/EG, EMJEL P 1197, ADVANTA GEL S                                       |
| REACH registration notes | This product is not classified as hazardous, the information in this datasheet is given for guidance only. |
| CAS number               | 55963-33-2                                                                                                 |

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

|                 |                                                |
|-----------------|------------------------------------------------|
| Identified uses | Food industry Binder Thickener Surface coating |
|-----------------|------------------------------------------------|

##### 1.3. Details of the supplier of the safety data sheet

|          |                                                                                                                                                                     |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supplier | Univar Solutions UK Ltd<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>SDS.EMEA@univarsolutions.com |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|

##### 1.4. Emergency telephone number

|                     |                                |
|---------------------|--------------------------------|
| Emergency telephone | SGS - +32 (0)3 575 55 55 (24h) |
| Sds No.             | 23352                          |

#### SECTION 2: Hazards identification

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

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

|                       |                |
|-----------------------|----------------|
| Physical hazards      | Not Classified |
| Health hazards        | Not Classified |
| Environmental hazards | Not Classified |

##### 2.2. Label elements

|                   |                   |
|-------------------|-------------------|
| Hazard statements | NC Not Classified |
|-------------------|-------------------|

##### 2.3. Other hazards

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

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

##### 3.1. Substances

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|                                 |                                                                                                            |
|---------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Product name</b>             | STARCH, DI, PHOSPHATE, CROSSLINKED                                                                         |
| <b>REACH registration notes</b> | This product is not classified as hazardous, the information in this datasheet is given for guidance only. |
| <b>CAS number</b>               | 55963-33-2                                                                                                 |
| <b>Composition comments</b>     | The data shown are in accordance with the latest EC Directives.                                            |

### 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>    | Rinse mouth thoroughly with water. Get medical attention if any discomfort continues. Do not induce vomiting.                                                                                   |
| <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>  | Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. 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>Inhalation</b>  | Dust may irritate the respiratory system. |
| <b>Eye contact</b> | May cause temporary eye irritation.       |

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

|                             |                                                                           |
|-----------------------------|---------------------------------------------------------------------------|
| <b>Notes for the doctor</b> | No specific recommendations. If in doubt, get medical attention promptly. |
|-----------------------------|---------------------------------------------------------------------------|

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

|                                       |                                                                        |
|---------------------------------------|------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>   | Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.  |
| <b>Unsuitable extinguishing media</b> | Do not use water jet as an extinguisher, as this will spread the fire. |

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

|                                      |                                                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Specific hazards</b>              | Dust may form explosive mixture with air.                                                        |
| <b>Hazardous combustion products</b> | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. |

#### 5.3. Advice for firefighters

|                                                      |                                                                                                       |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Protective actions during firefighting</b>        | Contain and collect extinguishing water.                                                              |
| <b>Special protective equipment for firefighters</b> | 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

|                             |                                                                                                                                                                                                                                                                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions</b> | Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. In case of spills, beware of slippery floors and surfaces. |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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### 6.2. Environmental precautions

**Environmental precautions** Avoid the spillage or runoff entering drains, sewers or watercourses. 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

**Methods for cleaning up** Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. For waste disposal, see Section 13.

### 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. Avoid handling which leads to dust formation. Eliminate all sources of ignition.

### 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. Take precautionary measures against static discharges. Dust may form explosive mixture with air. Avoid contact with the following materials: Strong alkalis. Strong oxidising agents. Water, moisture.

### 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

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

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation.

#### 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. Personal protective equipment for eye and face protection should comply with European Standard EN166.

#### 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/manufacture, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374.

#### Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

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### Hygiene measures

Wash 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. When using do not eat, drink or smoke.

### Respiratory protection

Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m<sup>3</sup>. If ventilation is inadequate, suitable respiratory protection must be worn. Particulate filter, type P2. EN 136/140/141/145/143/149 Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.

## SECTION 9: Physical and chemical properties

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

|                                              |                           |
|----------------------------------------------|---------------------------|
| Appearance                                   | Crystalline powder.       |
| Colour                                       | White.                    |
| Odour                                        | Characteristic.           |
| Odour threshold                              | No information available. |
| pH                                           | No information available. |
| Melting point                                | No information available. |
| Initial boiling point and range              | No information available. |
| Flash point                                  | No information available. |
| Evaporation rate                             | No information available. |
| Evaporation factor                           | No information available. |
| Flammability (solid, gas)                    | No information available. |
| Upper/lower flammability or explosive limits | No information available. |
| Other flammability                           | No information available. |
| Vapour pressure                              | No information available. |
| Vapour density                               | No information available. |
| Relative density                             | No information available. |
| Bulk density                                 | No information available. |
| Solubility(ies)                              | No information available. |
| Partition coefficient                        | No information available. |
| Auto-ignition temperature                    | >400°C                    |
| Decomposition Temperature                    | No information available. |
| Viscosity                                    | No information available. |
| Explosive properties                         | No information available. |
| Explosive under the influence of a flame     | No information available. |
| Oxidising properties                         | No information available. |

### 9.2. Other information

|                   |                 |
|-------------------|-----------------|
| Other information | Not determined. |
|-------------------|-----------------|

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|                           |                           |
|---------------------------|---------------------------|
| Refractive index          | No information available. |
| Particle size             | No information available. |
| Molecular weight          | No information available. |
| Volatility                | No information available. |
| Saturation concentration  | No information available. |
| Critical temperature      | No information available. |
| Volatile organic compound | 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 and when used as recommended. |
|-----------|---------------------------------------------------------------------|

#### 10.3. Possibility of hazardous reactions

|                                    |                                                                |
|------------------------------------|----------------------------------------------------------------|
| Possibility of hazardous reactions | Will not polymerise. Dust may form explosive mixture with air. |
|------------------------------------|----------------------------------------------------------------|

#### 10.4. Conditions to avoid

|                     |                                                                                                                                                                       |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conditions to avoid | Avoid excessive heat for prolonged periods of time. Protect from humidity The substance is hygroscopic and will absorb water by contact with the moisture in the air. |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 10.5. Incompatible materials

|                    |                                                                        |
|--------------------|------------------------------------------------------------------------|
| Materials to avoid | Strong alkalis. Water, steam, water mixtures. Strong oxidising agents. |
|--------------------|------------------------------------------------------------------------|

#### 10.6. Hazardous decomposition products

|                                  |                                                                                                                                                          |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazardous decomposition products | Does not decompose when used and stored as recommended. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity - oral

|                                              |         |
|----------------------------------------------|---------|
| Acute toxicity oral (LD <sub>50</sub> mg/kg) | 2,000.0 |
|----------------------------------------------|---------|

##### Acute toxicity - dermal

|                                                |         |
|------------------------------------------------|---------|
| Acute toxicity dermal (LD <sub>50</sub> mg/kg) | 2,000.0 |
|------------------------------------------------|---------|

##### Acute toxicity - inhalation

|                                                             |     |
|-------------------------------------------------------------|-----|
| Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l) | 5.0 |
|-------------------------------------------------------------|-----|

##### Skin corrosion/irritation

|             |                           |
|-------------|---------------------------|
| Animal data | No information available. |
|-------------|---------------------------|

##### Serious eye damage/irritation

|                               |                                     |
|-------------------------------|-------------------------------------|
| Serious eye damage/irritation | May cause temporary eye irritation. |
|-------------------------------|-------------------------------------|

##### Respiratory sensitisation

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**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** Dust in high concentrations may irritate the respiratory system.

**Ingestion** May cause discomfort if swallowed.

**Skin contact** Powder may irritate skin.

**Eye contact** Particles 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.

### Acute aquatic toxicity

**Acute toxicity - fish** LC50, 96 hours: > 100 mg/l,

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: > 100 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** IC<sub>50</sub>, 72 hours: > 100 mg/l,

### 12.2. Persistence and degradability

**Persistence and degradability** The product is readily biodegradable.

**Biological oxygen demand** ~ 0.6 g O<sub>2</sub>/g substance

**Chemical oxygen demand** ~ 1.2 g O<sub>2</sub>/g substance

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** The product does not contain any substances expected to be bioaccumulating.

**Partition coefficient** No information available.

### 12.4. Mobility in soil

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**Mobility** Not determined.

### 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** Waste should be treated as controlled waste. 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.

## SECTION 15: Regulatory information

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

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### 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) No 2015/830 of 28 May 2015.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

### 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

## STARCH, DI, PHOSPHATE, CROSSLINKED

|                                                       |                                                                                                                                                                 |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification abbreviations and acronyms</b>      | Acute Tox. = Acute toxicity<br>Aquatic Acute = Hazardous to the aquatic environment (acute)<br>Aquatic Chronic = Hazardous to the aquatic environment (chronic) |
| <b>Key literature references and sources for data</b> | Supplier's information.                                                                                                                                         |
| <b>Revision comments</b>                              | NOTE: Lines within the margin indicate significant changes from the previous revision.                                                                          |
| <b>Revision date</b>                                  | 19/03/2021                                                                                                                                                      |
| <b>Version number</b>                                 | 2.002                                                                                                                                                           |
| <b>Supersedes date</b>                                | 03/10/2018                                                                                                                                                      |
| <b>SDS number</b>                                     | 23352                                                                                                                                                           |
| <b>SDS status</b>                                     | Approved.                                                                                                                                                       |
| <b>Signature</b>                                      | Jitendra Panchal                                                                                                                                                |

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