

Safety data sheet according to Regulation (EC) No. 1907/2006

Trade name: Product made from natural starch

Revision date: 04 January 2017

Print date: 16 November 2018

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

1.1 Product identifier

Substance name/ Trade name: **S5 in grain levels 15-16-20-22-28-30-45**

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

Relevant identified uses: Separating and test dust

Uses advised against: -

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Supplier: KSL staubtechnik gmbh

Address/ PO Box: Westendstrasse 11

Nat.-Ident./ Postcode/ city: DE - 89415 Lauingen

Telephone/ Fax/ E-mail: +49 (0) 9072 / 95 00-0 / Fax no: -50 / info@ksl-staubtechnik.de

1.4 Emergency telephone number

+49 (0) 9072/ 95 00-0 (Accessibility: Mon-Thu 8am to 4pm, Fri 8am to 12pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008

No hazardous substance or hazardous mixture according to Regulation (EC) No. 1272/2008

2.2 Label elements

2.2.1 Label elements according to Regulation (EC) No. 1272/2008

Not subject to label according to Regulation (EC) No. 1272/2008

2.3 Other hazards

Dust and air can form mixtures that may explode - risk of dust explosion.

Under normal use, adverse health effects are not known or expected.

SECTION 3: Composition/information on ingredients

3.1 Substances

The product is a mixture.

3.2 Mixtures

Composition/ information on ingredients

Description of the mixture: **natural starch product**

Hazardous ingredients: None

Product identifier	CAS No.	EC No.	Concentrationrange [M.-%]	Reg. no. (REACH)	Classification according to Regulation (EC) No. 1272/2008
Starch	9005-25-8	232-679-6	>= 98%	exempt	Not applicable

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

If symptoms persist, it is advised to consult a doctor. Please specify substance/product and measures taken to the doctor.

After inhalation:

Move to fresh air.

After skin contact:

Wash with water and soap.

After eye contact:

Holding eyelids open, rinse with plenty of water.

After ingestion:

Rinse mouth with plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

Dust may cause irritation of the eyes and respiratory tract (caused by foreign bodies).

4.3 Indication of any immediate medical attention and special treatment needed

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Treat according to symptoms.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable:

Water spray jet, alcohol-resistant foam

Unsuitable:

Powder and solid water jet: Hazard of dust cloud mixture

5.2 Special hazards arising from the substance or mixture

In case of fire and excessive heat, hazardous decomposition products may develop. Dust may form explosive mixtures in the air.

5.3 Advice for firefighters

Self-contained breathing apparatus

5.4 Additional advice

Take precautionary measures against static charges. Avoid dust formation.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Wear protective clothing as described under Section 8. Follow the instructions for safe use, as described under Section 7.

6.1.2. For emergency responders

Emergency plans are not necessary. With high dust levels, respiratory protection is however required.

6.2 Environmental precautions

No direct discharge of aqueous suspensions in water. Keep the substance away from waters, sewerage or soil. Hazard to drinking water can only occur if large amounts enter the soil and waters; in this case, notify authorities.

6.3 Methods and material for containment and cleaning up

6.3.1 Notes for containment

Avoid dust generation.

6.3.2 Notes for clean-up

Absorb or suck the mixture mechanically. For disposal, collect it in the containers provided for this purpose, according to local regulations. Use approved industrial vacuum cleaners or suction systems for potentially explosive areas.

6.3.3 Advice on inappropriate containment and cleaning methods

Blowing-off for cleaning purposes is not permitted.

6.4 Reference to other sections

As to disposal, please refer to Section 13 of the Safety Data Sheet (SDS).

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.1.1 Recommendations on safe handling

Avoid dust formation and deposits. Take precautionary measures against static charges.

Measures to prevent fire and explosion

Take precautionary measures against static charges. Avoid dust formation. Keep away from sources of ignition.

Measures to prevent aerosol and dust generation

Sweep only with an appropriate cleaning agent. For cleaning, use suitable methods as dry as possible - such as vacuum intake - that do not cause dust generation.

Measures to protect the environment

Keep the substance away from waters, sewerage or soil.

7.1.2 Advice on general occupational hygiene

During work do not drink, eat or smoke. Wash hands after use/ contact. In dusty atmosphere, use breathing masks and safety goggles.

7.2 Conditions for safe storage, including any incompatibilities

Advice on storage conditions

Store containers dry. Do not store together with explosives and/or oxidising substances.

Requirements for storage rooms and vessels

Store in dry and sealed containers, possibly the original ones.

Storage class:

VCI: 11 (flammable solids)

7.3 Specific end use(s)

Industry and sector specific guidance

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For specific end uses (see Section 1.2), no additional information is available.

SECTION 8: Exposure controls/ personal protection

8.1 Control parameters

8.1.1 National limit value

Components with workplace-related limit values to be monitored:

Chemical identity	CAS No.	EC No.	National limit value	Exposure type	Comment/ Legal provision
General dust limit value	-	-	1.25 (A) mg/m ³ (respirable)	inhalative	Workplace-related limit value TRGS 900
General dust limit value	-	-	10 (E) mg/m ³ (inhalable)	inhalative	Workplace-related limit value TRGS 900

8.1.2 International limit values

Components with workplace-related limit values to be monitored:

Chemical identity	CAS No.	EC No.	International limit value	Exposure type	Comment/ Legal provision
Starch	9005-25-8	232-679-6	see the GESTIS database of international limit values *	inhalative	respective international workplace-related limit value

* The GESTIS database of international limit values can be found at the following link: <http://limitvalue.ifa.dguv.de>

8.2 Exposure controls

8.2.1 Appropriate engineering controls

To comply with workplace-related limit values, combined technical and individual protection measures are often necessary. Recommended measuring procedures for workplace-related measurements: see the professional association series of papers. For the identified uses (Section 1.2), technical control devices and personal protection measures are recommended. Ventilate as required to control dust in the air. With high dust content in the air, use an explosion-proof ventilation system.

8.2.2 Individual protection measures such as personal protective equipment

General

When the product is used as intended, no personal protective equipment is necessary. Treat the product in compliance with the safety instructions.

Eye/face protection

In case of dust generation, wear closed protective goggles according to the EN 166 Standard.

Skin/hand protection

In sensitive people, it may be mildly irritating to the skin due to mechanical friction. If necessary, wear protective gloves according to Standard EN 374.

Respiratory protection

In case the exposure limit values are exceeded (e.g. with open handling of powdery product), a suitable breathing mask with P2 particle filter must be worn according to Standard 143.

Occupational hygiene

During work do not drink, eat or smoke. Wash your hands before any breaks and after finishing work, and if necessary have a shower. Avoid contact with eyes and skin. After work, workers should wash or have a shower and use skin care products. Clean contaminated clothing, shoes, watches, etc., before re-using.

8.2.3 Environmental exposure controls

See Sections 6 and 7. No further action is required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a)	Appearance:	- Aggregate state	Powder - solid
		- Colour	white to slightly yellowish
(b)	Odour		neutral
(c)	Odour threshold:		not applicable
(d)	pH-value:		5.0 – 7.0 (at 20°C)
(e)	Melting point/ freezing point:		not applicable
(f)	Initial boiling and boiling range:		not applicable, as chem. decomposition occurs before reaching the boiling point
(g)	Flash point:		not applicable as it is not a liquid
(h)	Evaporation rate:		not applicable as it is not a liquid
(i)	Flammability (solid, gas):		not applicable
(j)	Lower explosive limits:		≥ 60 g/m ³
(k)	Vapour pressure:		not applicable
(l)	Vapour density:		not applicable
(m)	Relative density:		not applicable
(n)	Solubility(ies):		insoluble

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(o)	Partition coefficient:	not specified
(p)	Auto-ignition temperature:	> 300° C
(q)	Decomposition temperature:	from 200° C
(r)	Viscosity:	not applicable as it is not a liquid
(s)	Explosive properties:	explosive (dust explosion class ST1) not explosive or pyrotechnic. No gas development or self-sustaining exothermic chemical reactions.
(t)	Oxidising properties:	not applicable, the mixture has no oxidising properties

9.2 Other information

Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

In case of appropriate storage and handling, no hazardous reactions are known.
Dust explosion hazard with dust-air mixtures

10.2 Chemical stability

Under normal ambient temperature and pressure the mixture is stable.

10.3 Possibility of hazardous reactions

No hazard under normal storage conditions

10.4 Conditions to avoid

Moisture and water during storage may cause lump formation and loss of product quality.
Temperatures > 100°C

10.5 Incompatible materials

Avoid contact with acids.

10.6 Hazardous decomposition products

none; decomposes into carbon monoxide and dioxide, water and oxygen

SECTION 11: Toxicological information

11.1 Information on toxicological effects

For the product, no toxicological information is available.

Acute toxicity

No information available / not a hazardous substance

Skin corrosion/irritation

No information available / not a hazardous substance

Serious eye damage/irritation

No information available / not a hazardous substance

Respiratory or skin sensitisation

No information available / not a hazardous substance

Mutagenicity

No information available / not a hazardous substance

Carcinogenicity

No information available / not a hazardous substance

Reproductive toxicity

No information available / not a hazardous substance

Aspiration hazard

No information available / not a hazardous substance

Specific target organ toxicity — single exposure

No information available / not a hazardous substance

Specific target organ toxicity — repeated exposure

No information available / not a hazardous substance

Delayed and immediate effects, as well as chronic effects from short and long term exposure

Immediate effects

Irritation of the eyes or respiratory tract caused by exposure to foreign bodies may occur

Chronic effects with prolonged exposure

No information available / not a hazardous substance

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SECTION 12: Ecological information

For the product, no ecotoxicological data is available.

12.1 Toxicity

No data available.

12.2 Persistence and degradability

Starch is biodegradable.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

exempt

12.6 Other adverse effects

Unknown

SECTION 13: Disposal considerations

13.1 Waste treatment methods

It can be disposed of together with household waste in compliance with local regulations. Collect the product dry. Do not dispose of into drains or surface waters.

Recommendation

Agree on the correct waste code with the disposal company.

Waste code according to the European List of Waste (LoW)

010410 – dusty and powdery waste

Treatment of purified/unclean packaging

150106 – mixed packaging according to specific material recycling

SECTION 14: Transport information

With respect to transport regulations, the product is not hazardous (ADR, RID, ADN, IMDG, ICAO/IATA).

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

No special measures

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not applicable

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SECTION 15: Regulatory information

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

The product does not fall within the registration requirement of EC Regulation 1907/2006 (REACH).

EU regulations

National regulations

When handling this product, the following valid legal provisions are i. a. to be complied with

VwVwS Water hazard class: 1 - slightly hazardous for water

TRGS 500 "precautions"

TRGS 900 "Work-place related limit values"

Technical Instructions on Air Quality Control

Regulation on occupational health care (Verordnung zur arbeitsmedizinischen Vorsorge - ArbMedVV)

Basic principles of the Institution for Statutory Accident Insurance and Prevention on occupational medical examinations

15.2 Chemical safety assessment

A safety assessment has not been carried out.

SECTION 16: Other information

16.1 Changes to the previous version

Editorial revision

Removal of references to 1999/45 / EC and 67/548 / EEC under points 2 and 3

16.2 Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ArbMedVV	Verordnung zur arbeitsmedizinischen Vorsorge (Regulation on occupational health care)
BG	Berufsgenossenschaft (Institution for Statutory Accident Insurance and Prevention)
CAS	Chemical Abstracts Service
CLP	Classification, labelling and packaging (Regulation (EC) No. 1272/2008)
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IMDG	International agreement on the Maritime transport of Hazardous Goods
PBT	Persistent, bio-accumulative and toxic
REACH	Registration, Evaluation and Authorisation of Chemicals (Regulation (EC) 1907/2006)
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
TRGS	Technische Regeln für Gefahrstoffe (Technical rules for dangerous substances)
VCI	Verband der chemischen Industrie e.V. (Registered association of the chemical industry)
vPvB	Very persistent, very bioaccumulative
VwVwS	Verwaltungsvorschrift wassergefährdende Stoffe (Administrative Regulation on the Classification of Substances hazardous to Waters into Water Hazard Classes)

16.3 Literature references and sources of data

With regard to the sources of key data and technical information we refer to the information provided by the raw material supplier/ manufacturer or the ECHA Classification and Labelling Inventory.

16.4 Methods compliant with article 9 of Regulation (EC) No. 1272/2008 used to evaluate information for the purpose of classification

No own assessment of the mixture has been made.

Bridging principles for the classification of mixtures according to Regulation (EC) No. 1272/2008, article 6, paragraph 5 have been applied.

The classification of the water pollution class of this mixture has been carried out according to Point 3, Annex 4, of the VwVwS.

16.5 Training appropriate for workers

In addition to training programmes for employees on the topics of health, safety and environment, companies must ensure that their employees read and understand this safety data and are able to implement its requirements.

16.6 Other information

The product can be safely used in the production of food packaging units. In the manufacture of our products, no antibiotics, bactericides or fungicides are used.

16.7 Disclaimer

The information contained in this safety data sheet describes the safety requirements of our product and is based on our current level of knowledge. It implies no guarantee of the product properties and does not justify a contractual legal relationship. This safety data sheet serves the user as reference information. Although this safety data sheet has been drawn up with great care, no guarantee for data accuracy, and no liability for the consequences of printing, typeset or transcription errors can be accepted. The existing laws, regulations and rule systems, including those not mentioned in this data sheet, must be complied with by the recipient of our products under their own responsibility.