1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name: Neosorb® P20/60 – Sorbitol - E420i

Chemical name: D-Glucitol

REACH Registration No.: Exempted (Annex IV)

CAS No.: 50-70-4

EC No.: 200-061-5

INCI Name: Sorbitol

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

Identified uses: Industrial, food, pharmaceuticals, animal feed.

Uses advised against: No data available.

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture: The product has not been as dangerous according to the legislation in force: CLP Regulation (EC) No 1272/2008.

Label elements: Not applicable.

Other hazards: Dust may form an explosive mixture in the atmosphere.
Not fulfilling PBT (persistent/ bioaccumulative/ toxic) criteria.
Not fulfilling vPvB (very persistent/ very bioaccumulative) criteria.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance:

Chemical name	Concentration	CAS No.	EC No.	REACH Reg No.
D-Glucitol	>=99%	50-70-4	200-061-5	Exempted (Annex IV)

[cont…]

4. FIRST AID MEASURES

Description of first aid measures:

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Eye contact: Flush thoroughly with water for at least 15 minutes. Get medical assistance.

Skin contact: Wash with soap and water.

Ingestion: Product not hazardous when ingested. Ingestion may cause: Diarrhoea. Get medical attention if any discomfort continues.

Most important symptoms and effects, both acute and delayed: Ingestion may cause: Diarrhoea. Dust may irritate the eyes and the respiratory system.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Water spray.

Unsuitable extinguishing media: Dry chemicals or foams.

Special hazards arising from the substance or mixture: Fire or excessive heat may produce hazardous decomposition products. Dust may form an explosive mixture in the atmosphere. See section 10.

Advice for firefighters:

Special fire-fighting procedures: Prevent dust cold.

Special protective equipment for firefighting: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots and in enclosed spaces SCBA.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment.

Environmental precautions: Not regarded as dangerous for the environment.

Methods and material for containment and cleaning up: Remove material, as much as possible, using mechanical equipment. Prevent dust cloud. Collect and dispose of spillage as indicated in Section 13 of the SDS.

Reference to other sections: For waste disposal, see Section 13 of the SDS.

[cont…]

7. HANDLING AND STORAGE

Precautions for safe handling: See Section 8 of the SDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities: Avoid contact with oxidizing agents. Store in cool, dry place.

Specific end use(s): Industrial, food, pharmaceuticals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits: This product does not contain any components >1% with specific occupational exposure limits.

Chemical name	Type	Exposure Limit Values	Source
Dust- Inhalable dust	TWA	10 mg/m3	UK EH40 Workplace Exposure Limits (WELs) (2007)
Dust- Respirable dust	TWA	4 mg/m3	UK EH40 Workplace Exposure Limits (WELs) (2007)

Exposure controls:

Appropriate engineering controls: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear dust-resistant safety goggles where there is danger eye contact.

Skin protection:

Hand protection: No specific precautions.

Other: Wear suitable protective clothing.

Respiratory protection: In case of inadequate ventilation or risk of inhalation of dusk, use suitable respiratory equipment with particle filter (type P1).

Hygiene measures: Handle the product in accordance with the good hygiene practices and safety instructions.

Environmental exposure controls: Not regarded as dangerous for the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical State: Solid

Form: Powder

Colour: White

Odour: Odourless

pH: 5.7 at 50%

Melting point: 95°C

Boiling point: Not applicable

Flash point: Not applicable

[cont…]

Vapour Pressure: Not applicable
Vapour density (air=1): Not applicable
Relative density: 0.65
Solubility in water: 2,300 g/l at 20°C
Partition coefficient (n-octanol/water): -2.2 Literature Reference

Explosive properties: CHILWORTH- Data from similar product
Ignition temperature: 420°C (EN 50281-2-1) MIT in Cloud
> 400°C (EN 50281-2-1) 5mm layer (Glowing Temperature)
MIE (minimum Ignition Energy): 200 – 300 mJ (EN 13821 (without inductance, <63µm))
Sensitive to ignition by an electrostatic phenomenon.
dP/dtmax (Maximum Rate of explosion pressure rise): 234 bar/s (EN 14034-2)
Pmax (Maximum Explosion Over Pressure) ±10%: 6.6 bar (EN 14034-1)
Kst value (±20%): 63 barm/s (EN 14034-2)
Dust Explosion Class: st 1 (VDI 3673)
Volume resistivity: >10^9 Ω.m (IEC 61241-2-2 / Group IIIB non-conductive dust)
Moisture: 0.58% (ISO 589)
Mv (Median value): 145.08 µm (NFX 11-666)
Other data: BZ (Combustion class): 3 (VDI 2263-1)
LEL (Lower Explosion Limit): 30-60 g/m3

Other information:
Conductivity: 0.6 µS/cm (at 20°C)

10. STABILITY AND REACTIVITY

Reactivity: Oxidizing agents.

Chemical stability: Material is stable under normal conditions.

Possibility of hazardous reactions: No hazardous reactions under ordinary conditions of use and storage.

Conditions to avoid: Prevent dust cloud. Dust clouds may be explosive under certain conditions. Avoid dust close to ignition sources.

Incompatible materials: Strong oxidizing substances.

Hazardous decomposition products: Carbon Monoxide. Carbon Dioxide.

[cont…]

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity :

Test / Substance	Species	Type / Result	Exposure	Remarks
OECD 423 D-glucitol	Mouse	LD50 - Oral : >2000 mg/kg No mortalities were reported during the study period.		- REACH data -
OECD 423 Syrups, hydrolyzed starch, hydrogenated	Rat	LD50 - Oral : > 5000 mg/kg No mortalities were reported during the study period.		- REACH data - Data from similar product.

Skin irritation. :

Test / Substance	Species	Result	Exposure	Remarks
OECD 439 Glucose syrups wheat hydrolysed	Human	Not Irritating	1 h	- REACH data - Data from similar product.

Serious eye irritation :

Test / Substance	Species	Result	Exposure	Remarks
OECD 405 Glucose syrups wheat hydrolysed	Rabbit	Not Irritating	72 h	- REACH data - Data from similar product.

Sensitization :

Test / Substance	Type	Species	Result	Remarks
OECD 429 Glucose syrups wheat hydrolysed	In vivo	Mouse	Non-Sensitising	- REACH data - Data from similar product.

Repeated dose toxicity :

Test / Substance	Species	Result	Exposure	Remarks
OECD 453 Syrups, hydrolyzed starch, hydrogenated	Rat	NOAEL : 4500 mg/kg No treatment related effects.	52 Week(s).	- REACH data - Data from similar product.

Mutagenesis :

Test / Substance	Type	Species	Result	Remarks
OECD 473 Syrups, hydrolyzed starch, hydrogenated	In vitro	Hamster	Negative	- REACH data - Data from similar product.
OECD 471 (Ames) Syrups, hydrolyzed starch, hydrogenated	In vitro	S. typhimurium	Negative	- REACH data - Data from similar product.
OECD 474 Syrups, hydrolyzed starch, hydrogenated	In vivo	Mouse	Negative	- REACH data - Data from similar product.

Carcinogenicity :

Test / Substance	Species	Route of Exposure / Exposure	Result	Remarks
OECD 451 Syrups, hydrolyzed starch, hydrogenated	Rat	Oral	No treatment related effects.	- REACH data - Data from similar product.

Reproductive toxicity :

Test / Substance	Species	Route of Exposure / Exposure	Result	Remarks
OECD 416 Syrups, hydrolyzed starch, hydrogenated	Rat	Oral	No treatment related effects.	- REACH data - Data from similar product.

[cont…]

12. ECOLOGICAL INFORMATION

Toxicity:

Acute toxicity:

Test / Substance	Species	Type/Result	Exposure	Remarks
OECD 203 D-glucitol	Oryzias latipes	LC50 : >1430 mg/l	48 h	- REACH data -
OECD 202 D-glucitol	Daphnia magna	LC50 : >1390 mg/l	48 h	- REACH data -
OECD 201 D-glucitol	Pseudokirchneriella subcapitata	EC50 : >1420 mg/l	72 h	- REACH data -

Chronic Toxicity: No data available.

Persistence and degradability:

Test / Substance	Result	Remarks
OECD 301b Glucose syrups wheat hydrolysed	> 73 % / 28 d The product is readily biodegradable.	- REACH data - Data from similar product.

Bioaccumulative potential:

Test / Substance	Log Pow (n-Octanol/Water Partition Coefficient)	Bioconcentration Factor (BCF) / Bioaccumulation	Remarks
D-glucitol	-2.2	~ 3	Potential to bioaccumulate is low. - Literature Reference -

Mobility in soil:

Test / Substance	Medium	Organic Carbon Partition Coefficient (Koc)	Remarks
D-glucitol	soil	~ 10	This material is readily biodegraded and is not likely to bioconcentrate. - Literature Reference -

Results of PBT and vPvB assessment: Exempted.

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Product: Dispose of waste in an appropriate authorised treatment facility in accordance with regulations in force and product characteristics at time of disposal.

Packaging material: Single use packaging. Collect for salvage or disposal.

14. TRANSPORT INFORMATION

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

Environmental hazards: Not regulated.

Special precautions for user: No special precautions.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

[cont…]

15. REGULATORY INFORMATION

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

Chemical safety assessment: Exempted.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Revision information: Not relevant.

Key literature references and sources for data: No data available.

Abbreviations and acronyms used in the SDS:

LD50: Lethal dose 50%.
LC50: Lethal concentration 50%.
EC50: The effective concentration of substances that causes that causes 50% of the maximum response.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CLP: Classification, Labelling and Packaging.
OECD: Organisation for Economic Cooperation and Development.
PBT: Persistent, Bioaccumulative and Toxic.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals.
vPvB: very Persistent and very Bioaccumulative substance.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.