

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 19-Nov-2023

Revision Number 1

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

1.1. Product identifier

Product Code(s)	66299
Safety data sheet number	66299
Product Name	CARBOWAX SENTRY POLYETHYLENE GLYCOL 3350
CAS No	25322-68-3
Synonyms	CARBOWAX SENTRY POLYETHYLENE GLYCOL 3350 USP GRANULAR (INHIBITED); MACROGOL 3350 PH. EUR, CARBOWAX SENTRY PEG3350 GR INH, CARBOWAX SENTRY POLYETHYLENE GLYCOL 3350 USP GRANULAR (UNINHIBITED); MACROGOL 3350 PH. EUR, CARBOWAX SENTRY PEG 3350 UNH GRAN, CARBOWAX SENTRY POLYETHYLENE GLYCOL 3350 USP POWDER (UNINHIBITED); MACROGOL 3350 PH. EUR, CARBOWAX SENTRY PEG 3350 U PDR, CARBOWAX SENTRY POLYETHYLENE GLYCOL 3350 USP POWDER (INHIBITED); MACROGOL 3350 PH. EUR, CARBOWAX SENTRY PEG3350 NF INH PDR
Pure substance/mixture	Substance
Molecular weight	3015 - 3685 g/mol

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

Recommended use	For the CARBOWAX™ Sentry™ Product Line, a partial list of applications include pharmaceutical products, personal care products, automotive products, household products, packaging products, petroleum chemicals, plastics, inks, coatings, adhesives, chemical intermediates, rubber processing, lubricants, metalworking fluids, mold release agents, ceramics, and wood treating. For drug, cosmetic/personal care or indirect food applications, use CARBOWAX™ SENTRY™ brand products. Only SENTRY brand products are tested to meet applicable regulatory requirements. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.
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1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
POLYETHYLENE GLYCOL 25322-68-3	> 99.0 %	-	-	-	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

First aid personnel should wear appropriate protective equipment during any rescue. Use personal protection recommended in Section 8.

Inhalation

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

	Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if symptoms occur.
Ingestion	Rinse mouth thoroughly with water. Do NOT induce vomiting. Get medical attention if symptoms occur.

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

Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.
Eyes	Dust contact with the eyes can lead to mechanical irritation.
Dermal	Prolonged contact may cause redness and irritation. Contact with product at elevated temperatures can result in thermal burns.
Ingestion	Gastrointestinal discomfort

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

Note to doctors	Treat symptomatically. Treat any burns as thermal burns, after decontamination.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed. Closed containers can burst violently when heated, due to excess pressure build-up. Avoid generation of dust. When suspended in air dust can pose an explosion hazard. Remove all sources of ignition. Ground and bond container and receiving equipment. Take precautionary measures against static discharge.
Hazardous combustion products	Carbon oxides. Alcohol. Ether. Aldehydes. Carboxylic acids. Polymers.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Avoid breathing dust. In case of spills, beware of
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slippery floors and surfaces.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Do not breathe dust. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Handle in accordance with good industrial hygiene and safety practice.

General hygiene considerations Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Use product promptly after opening. Keep away from heat. Air.

Packaging materials Suitable container/equipment material. stainless steel. Polypropylene. Polyethylene-lined container. Teflon. Glass-lined container. Plasite 3066 lined container. Plasite 3070 lined container. 316 stainless steel.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
POLYETHYLENE GLYCOL 25322-68-3		112 mg/kg bw/day [4] [6]	40.2 mg/m ³ [4] [6]

[4] Systemic health effects.

[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
POLYETHYLENE GLYCOL 25322-68-3	40 mg/kg bw/day [4] [6]		7.14 mg/m ³ [4] [6]

[4] Systemic health effects.

[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
POLYETHYLENE GLYCOL 25322-68-3	0.273 g/L	1 mg/L	27.3 mg/L	0.1 mg/L	

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
POLYETHYLENE GLYCOL 25322-68-3	1030 mg/kg sediment dw	103 mg/kg sediment dw		46.4 mg/kg soil dw	

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Wear suitable gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Polyvinyl chloride (PVC)	> 0.35 mm	

	Wear protective Neoprene™ gloves	> 0.35 mm	
	Wear protective nitrile rubber gloves	> 0.35 mm	

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact.

Respiratory protection Use appropriate respiratory protection.
Dust filter P2 (for fine dust).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	granules Powder
Colour	white
Odour	Mild.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	53 - 57 °C	Read-across.
Initial boiling point and boiling range	> 200 °C	Calculation method. Decomposes.
Flammability		Not expected to form explosive dust-air mixtures.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	246 °C	Closed cup. ASTM D 93.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)	4.5 - 7.5	solution (5 %).
Kinematic viscosity		
76 - 110 cSt		@ 98.9 °C. ASTM D 445. granules.
90.8 cSt		@ 100 °C. ASTM D 445. powder.
Dynamic viscosity		No information available.
Water solubility	Soluble in water	
Solubility(ies)		No information available.
Partition coefficient		Not determined.
Vapour pressure	< 0.01 mmHg	@ 20 °C. ASTM E1719.
Relative density	1.111	@ 60 °C. Calculation method.
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density	> 10	Calculation method.
Particle characteristics		Not determined.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information

Molecular weight	3015 - 3685 g/mol
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid Product can oxidise at elevated temperatures. Take precautionary measures against static discharges.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Alcohols. Ether. Aldehydes. Carboxylic acids. Polymers.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact Dust contact with the eyes can lead to mechanical irritation.

Skin contact Prolonged contact may cause redness and irritation. Contact with product at elevated temperatures can result in thermal burns.

Ingestion Gastrointestinal discomfort.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

ATEmix (oral) > 10000 mg/kg
ATEmix (dermal) > 20000 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
POLYETHYLENE GLYCOL	> 10000 mg/kg (Rat)	> 10000 mg/kg (Rat)	> 2.5 mg/l (Rat) (6h)

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

Skin corrosion/irritation Prolonged contact may cause redness and irritation. Contact with product at elevated temperatures can result in thermal burns.

Serious eye damage/eye irritation Dust contact with the eyes can lead to mechanical irritation.

Respiratory or skin sensitisation Not a skin sensitiser.

Method	Species	Exposure route	Results
	Guinea pig	Dermal	Not a skin sensitiser
	human data	Dermal	Negative

POLYETHYLENE GLYCOL (25322-68-3)

Method	Species	Exposure route	Results
	Guinea pig	Dermal	Not a skin sensitiser
	Human evidence	Dermal	Negative

Germ cell mutagenicity Did not show mutagenic effects in animal experiments.

Product Information			
Method	Species	Exposure route	Results
	in vitro		Negative

Carcinogenicity Did not cause cancer in laboratory animals.

Reproductive toxicity This product does not contain any known or suspected reproductive hazards.

STOT - single exposure Based on available data, specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.

STOT - repeated exposure The use of topical applications containing this material may not be appropriate in severely burned patients.
This product should not be used in patients with kidney disease; these effects would not result from normal industrial handling.
Based on available data the classification criteria are not met.

Aspiration hazard Based on available data the classification criteria are not met.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Pimephales promelas	LC50	58900 mg/L	96 hours	
	Daphnia magna	EC50	22100 mg/L	48 hours	
	Bacteria toxicity	EC50	> 10000 mg/L	16 hours	

POLYETHYLENE GLYCOL (25322-68-3)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Pimephales promelas	LC50	58900 mg/L	96 hours	
	Daphnia magna	EC50	22100 mg/L	48 hours	
	Bacteria toxicity	EC50	> 10000 mg/L	16 hours	

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable.

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	28 days	Biodegradation 90 %	Readily biodegradable

POLYETHYLENE GLYCOL (25322-68-3)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	28 days	Biodegradation 90 %	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
POLYETHYLENE GLYCOL	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

+ Sensitisers

Revision Note ***Indicates updated data since last publication

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Prepared By Lisa Bland

Revision date 19-Nov-2023

**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
 Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet