

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name **Neopentyl Glycol flakes**

Chemical Name 2,2-dimethylpropane-1,3-diol **CAS No** 126-30-7

Other means of identification

Synonyms NEO

Pure substance/mixture Substance

Recommended use of the chemical and restrictions on use

Application Use: as an intermediate (flakes; low dustiness), in polymer production including resins (flakes; low dustiness), in construction chemicals, in surface treatments of pigments (concentration <25%)

Uses advised against Not identified.

2. HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation - Category 1

Label elements

Symbols/Pictograms



Signal word

Danger

Hazard statements

Causes serious eye damage

Precautionary Statements

Wear protective gloves and eye/face protection

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor

Contains: 2,2-dimethylpropane-1,3-diol

Supplemental information

Not applicable.

Hazards not otherwise classified (HNOC)

Other hazards

The product as such (flakes) does not cause dust explosions but fresh dust may.

Unknown Acute Toxicity

Not applicable, Substance

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No	Weight-%
2,2-dimethylpropane-1,3-diol	126-30-7	>=99

4. FIRST AID MEASURES

Description of first aid measures

Inhalation

Remove to fresh air. Rinse mouth with water. If irritation persists get medical advice/attention.

Skin contact

First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.

Eye contact

Important! Immediately rinse cautiously with tempered water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

Ingestion

Clean mouth with water and drink plenty of water afterwards. If a large quantity has been ingested or if you feel unwell, get medical advice/attention.

Most important symptoms and effects, both acute and delayed

Eye contact: Causes severe irritation with flood of tears and pain and strong redness and swelling of the eye. Risk of damage to the conjunctiva and cornea.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

All types of extinguishing media are suitable. Use fire extinguishing methods suitable to surrounding conditions.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors; Carbon monoxide (CO), Carbon dioxide (CO₂).

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Wear tightly sealed goggles, protective gloves and if dusty conditions dust filter mask (minimum N95). Ensure adequate ventilation.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment

Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal. After cleaning, flush away traces with water.

Reference to other sections

See Section 7,8,13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling

Ensure good ventilation at the work station. Avoid contact with eyes. Wear tightly sealed goggles and protective gloves. Any unavoidable deposit of dust must be regularly removed.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling. Take off all contaminated clothing and wash it before reuse. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

The product is: Hygroscopic. Keep container tightly closed. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Users are advised to consider national Occupational Exposure Limits or other equivalent values. (if existing).

Appropriate engineering controls

Eyewash stations. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Hand Protection	Wear protective gloves. PPE - Glove material: Nitrile rubber, NBR, Chloroprene rubber, CR.
Skin and body protection	Wear suitable coveralls to prevent exposure to the skin.
Respiratory protection	None under normal use conditions. Provide suction extractors if dust is formed or use dust filter mask (minimum N95).

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Solid, flakes
white

Odor

Slight

Odor threshold

No data available

Property

Value

Remarks • Method

pH

Not applicable

Melting point / freezing point

129 °C / 264 °F

OECD Test No. 102: Melting Point/ Melting Range

Boiling point / boiling range

209 °C / 408 °F

OECD Test No. 103: Boiling Point

Flash point

Not applicable

Evaporation rate

Not applicable

Flammability (solid, gas)

Not flammable (EU Method A.10)

Explosive limits

Upper explosive limits

11.4 %

Lower explosive limits

1.1 %

Vapor pressure

< 0.001 kPa

@25°C; MPBPWIN

Vapor density

Not applicable. Solid.

Relative density

1.04 g/cm³

@20°C; ISO 1183-1

Water solubility

820 g/L

@ 20 °C, OECD Test No. 105: Water Solubility

Solubility(ies)

No information available

Partition coefficient

0.1

log POW (@25°C) OECD Test No. 117: Partition Coefficient (n-octanol/water), HPLC Method

Autoignition temperature

399 °C / 750 °F

Decomposition temperature

Not applicable

Kinematic viscosity

Not applicable

Dynamic viscosity

Not applicable

Explosive properties

Not explosive.

The product as such (flakes) does not cause dust explosions but fresh dust may.

Oxidizing properties

Not oxidizing.

Density

1042 kg/m³

ISO 1183-1

Bulk density

500-600 kg/m³

@ 20 °C

Other Information

No information available.

10. STABILITY AND REACTIVITY

Reactivity

Reacts with inorganic acids and carboxylic acids to form esters. Converts to aldehydes or acids by oxidizing agents. May initiate the polymerization of isocyanates and epoxides.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

No dangerous reactions known under normal conditions of use.

Conditions to avoid

The product as such (flakes) does not cause dust explosions but fresh dust may. Avoid dust deposition.

Incompatible materials

None known.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors; Carbon monoxide (CO), Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Dermal. Inhalation.

Symptoms related to the physical, chemical and toxicological characteristics

See Section 4 for more information.

Numerical measures of toxicity
Unknown Acute Toxicity Not applicable, Substance

Acute toxicity

Product does not present an acute toxicity hazard based on known or supplied information.

2,2-dimethylpropane-1,3-diol (126-30-7)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 401: Acute Oral Toxicity	Rat	Oral	>6400	LD50 (lethal dose) mg/kg
OECD Test No. 402: Acute Dermal Toxicity	Guinea pig	Dermal	>4000	LD0 mg/kg
OECD Test No. 403: Acute Inhalation Toxicity	Rat	Inhalation	140	LC0 mg/m ³ 8h saturated vapor concentration

Skin corrosion/irritation

Non-irritating to the skin.

2,2-dimethylpropane-1,3-diol (126-30-7)			
Method	Species	Exposure route	Results:
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal	Slightly irritating. No classification according to GHS criteria.

Serious eye damage/eye irritation

Risk of serious damage to eyes.

2,2-dimethylpropane-1,3-diol (126-30-7)			
Method	Species	Exposure route	Results:
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye	Causes serious eye damage

Respiratory or skin sensitization

Not a skin sensitizer.

2,2-dimethylpropane-1,3-diol (126-30-7)			
Method	Species	Exposure route	Results:
OECD Test No. 429: Skin Sensitization: Local Lymph Node Assay	Mouse	Skin	Not a skin sensitizer

Germ cell mutagenicity

Not mutagenic.

2,2-dimethylpropane-1,3-diol (126-30-7)		
Method	Species	Results:
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Negative
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro	Negative
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	in vitro	Negative

Carcinogenicity

No information available.

Reproductive toxicity

No impairment of fertility has been observed. No embryotoxic or teratogenic effects have been observed.

2,2-dimethylpropane-1,3-diol (126-30-7)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Oral	1000	P, NOAEL mg/kg bw/day Effects on fertility
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Oral	1000	F1, NOAEL mg/kg bw/day Developmental effects
OECD Test No. 414: Prenatal Development Toxicity Study	Rat	Oral	1000	M, NOAEL mg/kg bw/day
OECD Test No. 414: Prenatal Development Toxicity Study	Rat	Oral	1000	NOAEL mg/kg bw/day Teratogenicity

STOT - single exposure

No known effects under normal use conditions

STOT - repeated exposure

2,2-dimethylpropane-1,3-diol (126-30-7)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 408: Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	Oral	1000	NOAEL mg/kg bw/day
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat male	Oral	300	NOAEL mg/kg bw/day
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat female	Oral	1000	NOEL (No observed effect level) mg/kg bw/day

Aspiration hazard

No hazard identified.

12. ECOLOGICAL INFORMATION

Toxicity

Low toxicity to aquatic organisms.

2,2-dimethylpropane-1,3-diol (126-30-7)					
Method	Species	Exposure route	Effective dose	Exposure time	Remarks
JIS K 0102-1986-71	Oryzias latipes (Ricefish)	Freshwater	>10000	48h	LC50 (lethal concentration) mg/l
Regulation (EC) No. 440/2008, Annex, C.2	Daphnia magna	Freshwater	>500	48h	EC50 (effective concentration) mg/l
DIN 38412, Part 9	Scenedesmus subspicatus	Freshwater	>500	72h	EC50 (effective concentration) mg/l
Unknown	Daphnia magna	Freshwater	>1000	21d	NOEC mg/l
Other	Bacteria toxicity	Freshwater	2000	24h	EC10 mg/l

Persistence and degradability

Readily biodegradable.

2,2-dimethylpropane-1,3-diol (126-30-7)			
Method	Value	Exposure time	Results:
OECD Test No. 111: Hydrolysis as a Function of pH	T _{1/2}	1 year (pH=7)	Abiotic Degradation In contact with water the substance will hydrolyse slowly. After evaporation or exposure to the air, the substance will be slowly degraded by photochemical processes with OH-radicals.
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	70-80%	28d	Readily biodegradable

Bioaccumulative potential

Not potentially bioaccumulable.

Chemical Name	Partition coefficient	Bioconcentration factor (BCF)
2,2-dimethylpropane-1,3-diol	0.1	0.3-0.5

Mobility in soil

The product is not expected to adsorb to a high degree to suspended solids and sediment based upon the log Koc which indicates a moderate to high mobility in soil.

Chemical Name	Log Koc
2,2-dimethylpropane-1,3-diol	0

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Thoroughly emptied and clean packaging may be recycled.

14. TRANSPORT INFORMATION

TDG Road transport	Not regulated
RID Rail transport	Not regulated
IMDG Sea transport	Not regulated
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available
IATA Air transport	Not regulated

15. REGULATORY INFORMATION

International Regulations

Not applicable.

National regulations

Canada

Not applicable.

END OF MSDS