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SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: United States of America

Revision date 07-Dec-2023

Revision Number 1

| 1. Identification | | | |
|---|----------------------------------|-----|--|
| Product identifier | | | |
| Product Name | POLYOX™ WSR N12K | | |
| Product Code(s) | 166190 | | |
| Recommended use of the chemical | and restrictions on use | | |
| Recommended use | Industrial | | |
| Restrictions on use | None under normal use conditions | | |
| Details of the supplier of the safety | data sheet | | |
| Supplier Address Nutrition & Biosciences USA 1, LLC 3490 Winton Place Rochester, New York 14623 USA + 1 800 255 6837 (General Information) | | | |
| <u>E-mail address</u> sds.genencor@iff.com | | | |
| <u>Emergency telephone number</u> Local (Washington DC): +1 703-741-5970 Toll Free: 1-800-424-9300 | | | |
| 2. Hazard(s) identification | | | |
| Classification | | | |
| Combustible dust | | Yes | |

Label elements

Signal word: Warning

May form combustible dust concentrations in air

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other information

No information available.

3. Composition/information on ingredients

<u>Mixture</u>

| Chemical name | CAS No. | Weight-% |
|----------------------|------------|----------|
| Poly(ethylene oxide) | 25322-68-3 | 95 - 100 |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

| 4. First-aid measures | | | |
|--|--|--|--|
| Description of first aid measures | | | |
| General advice | When in doubt or if symptoms are observed, get medical advice. | | |
| Inhalation | IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. | | |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. | | |
| Skin contact | IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/attention. | | |
| Ingestion | IF SWALLOWED: Never give anything by mouth to an unconscious person. Drink plenty of water. Get medical attention if symptoms occur. | | |
| Most important symptoms and effects, both acute and delayed | | | |
| Symptoms | Get medical attention if irritation or other symptoms occur. | | |
| Indication of any immediate medical attention and special treatment needed | | | |
| Note to physicians | Treat symptomatically. | | |
| 5. Fire-fighting measures | | | |
| Suitable Extinguishing Media | Foam. Dry powder. Water spray. Carbon dioxide (CO2). | | |
| Unsuitable extinguishing media | Keep product and empty container away from heat and sources of ignition. Do not use water jetstream. | | |
| Specific hazards arising from the chemical | Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. | | |
| Hazardous combustion products | Smoke production. | | |
| Explosion data Sensitivity to mechanical impac | ct No. | | |
| Sensitivity to static discharge | Yes. | | |
| Special protective equipment for fire-fighters | Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection. | | |

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

| Personal precautions | Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Use personal protection recommended in Section 8. Sweep up to prevent slipping hazard. |
|------------------------------------|---|
| For emergency responders | Use personal protection recommended in Section 8. |
| Methods and material for containme | nt and cleaning up |
| Methods for containment | Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Dispose of in accordance with local regulations. |
| Methods for cleaning up | Use industrial vacuum cleaners approved for combustible dust and area electrical classification. |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |
| Reference to other sections | See section 8 for more information. |

7. Handling and storage

Precautions for safe handling

Advice on safe handling Advice on safe handling Avoid generation of dust and aerosols. Avoid contact with eyes, skin and clothing. Minimize dust generation and accumulation. Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA- 654).

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep/store only in original container. Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Based on data available for ingredients

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------|--|---|------------|
| Dust, non-specific | TWA: 10 mg/m ³ inhalable particles, recommended TWA: 3 mg/m ³ respirable particles, recommended | TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction TWA: 15 mppcf respirable fraction | _ |

| TWA: 50 mppcf total dust |
|--------------------------|
|--------------------------|

Appropriate engineering controls

| Engineering controls | Ensure adequate ventilation. Avoid generation of dust and aerosols. | | |
|---|--|--|--|
| Individual protection measures, such as personal protective equipment | | | |
| Eye/face protection | Wear safety glasses with side shields (or goggles). | | |
| Hand protection | Wear protective gloves. | | |
| | | | |
| Skin and body protection | Wear protective gloves and protective clothing. | | |
| Respiratory protection | If exposure limits are likely to be exceeded or if irritation or other symptoms are experienced, NIOSH/MSHA or EN 136 approved respiratory protection should be worn. | | |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. | | |

9. Physical and chemical properties

Information on basic physical and chemical properties

| Appearance | Powder | |
|---|--------------------------|--|
| Physical state | Solid | |
| Color | White to off-white | |
| Odor | ammoniacal | |
| Odor threshold | No information available | |
| Property | Values | Remarks • Method |
| рН | 8 - 10 | aqueous solution |
| Melting point / freezing point | No data available | None known |
| Initial boiling point and boiling rang | eNo data available | None known |
| Flash point | No data available | CC (closed cup) |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | May form combustible dust concentrations in air |
| Flammability Limit in Air | | Not applicable to Solids |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapor pressure | No data available | None known |
| Relative vapor density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | No data available | soluble |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | bioconcentration : None known |
| Autoignition temperature | 345 °C | Key literature references and sources for data |
| Decomposition temperature | > 300 | Differential Scanning Calorimetry (DSC) Decomposes on heating |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | Solid |
| Other information | | |
| Explosive properties | No data available | |
| Oxidizing properties | No information available | |
| Molecular weight | > 1000 | |

10. Stability and reactivity

| Reactivity | Not expected. |
|------------------------------------|---|
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | None under normal processing. |
| Hazardous polymerization | Hazardous polymerization does not occur. |
| Conditions to avoid | Heat, flames and sparks. May form combustible dust concentrations in air. |
| Incompatible materials | Keep away from heat, flames and sparks. |
| | |

Hazardous decomposition products No hazardous decomposition products known.

11. Toxicological information

Information on likely routes of exposure

Product Information

| Acute toxicity | |
|----------------|--|
| Inhalation | No information or data specific to the product on this toxicological (health) effect is available. |
| Eye contact | No information or data specific to the product on this toxicological (health) effect is available. |
| Skin contact | No information or data specific to the product on this toxicological (health) effect is available. |
| Ingestion | No information or data specific to the product on this toxicological (health) effect is available. |
| | |

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Get medical attention if irritation or other symptoms occur.

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

| Respiratory or skin sensitization | No information available. | |
|-----------------------------------|---------------------------|--|
| Germ cell mutagenicity | No information available. | |
| Carcinogenicity | No information available. | |
| Reproductive toxicity | No information available. | |
| STOT - single exposure | No information available. | |
| STOT - repeated exposure | No information available. | |
| Aspiration hazard | No information available. | |

Numerical measures of toxicity

Component Information

Based on data available for ingredients

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|------------------------------------|-------------------|----------------------|-----------------|
| Poly(ethylene oxide) 25322-68-3 | >4000 mg/kg (Rat) | >5000 mg/kg (Rabbit) | - |

| Poly(ethylene oxide) 25322-68-3 | |
|---------------------------------|--------------|
| Eye irritation | Not expected |
| Skin irritation | Not expected |
| Respiratory irritation | Not expected |
| Sensitization | Not expected |
| Reproductive effects | Not expected |
| Mutagenic effects | Not expected |

12. Ecological information

| Systemic Toxicity | Not expected |
|-------------------|--------------|
| Carcinogenicity | Not expected |
| Teratogenicity | Not expected |

| Ecotoxicity | Based on (| data available for ingredients | | | |
|---|--|---------------------------------|---|--|--|
| Persistence and degradability | Based on o | data available for ingredients. | | | |
| Bioaccumulative potential | Based on o | data available for ingredients. | | | |
| Chemical name | | Biodegradation | Bioaccumulation/Accumulation | | |
| Poly(ethylene oxide) 25322-68-3 | | | No bioaccumulation potential Molecular weight >1,000 | | |
| Mobility in soil | No information available. | | | | |
| Other adverse effects | No information available. | | | | |
| 13. Disposal considerations | | | | | |
| Waste from residues/unused productsDispose of wastes in an approved waste disposal facility. Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable. | | | | | |
| Contaminated packaging | Dispose of empty containers and wastes safely. Dispose of waste product or used containers according to local regulations. | | | | |
| 14. Transport information | | | | | |

| DOT | Not regulated |
|------|---------------|
| IATA | Not regulated |
| IMDG | Not regulated |

15. Regulatory information

International Inventories

Based on data available for ingredients

| Chemical name | AICS | DSL/NDSL | EINECS/ELIN CS | ENCS | IECSC | KECL | PICCS |
|------------------------------------|------|----------|-------------------|------|-------|------|-------|
| Poly(ethylene oxide) 25322-68-3 | Х | Х | Х | Х | Х | Х | Х |

US Federal Regulations

TSCA

A food, food additive, drug, cosmetic, or device, when manufactured, processed or

distributed in commerce for use as a food, food additive, drug, cosmetic, or device is not subject to the notification requirements of the United States of America regulation 40 CFR 720.

| Chemical name | CAS No. | US TSCA Inventory listing | US TSCA active/inactive designation |
|----------------------|------------|---------------------------|--|
| Poly(ethylene oxide) | 25322-68-3 | Present | Active |

<u>SARA 313</u>

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Based on data available for ingredients

16. Other information

Legend:

 TSCA
 - United States Toxic Substances Control Act Section 8(b) Inventory

 DSL/NDSL
 - 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

 AICS
 - Australian Inventory of Chemical Substances

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 ****Indicates updated data since last publication.

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