1. Identification

Product identifier used on the label

ULTRAMID® 66 H2 G25 V0KB1 NAT0046 POLYAMIDE

Recommended use of the chemical and restriction on use
Recommended use*: Polymer; for industrial processing only
Suitable for use in industrial sector: Polymers industry

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: polyamide
Synonyms: polyamide PA66

2. Hazards Identification


Classification of the product

No need for classification according to GHS criteria for this product.

Label elements
The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

Labeling of special preparations (GHS):
May emit phosphine during storage and processing. Phosphine can cause serious lung damage.
UNDER HOT MELT PROCESSING CONDITIONS, WEAR PERSONAL PROTECTIVE EQUIPMENT TO PREVENT THERMAL BURNS.

3. Composition / Information on Ingredients


<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7723-14-0</td>
<td>&gt;= 0.0 - &lt; 7.0%</td>
<td>red phosphorus</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
Avoid contact with the skin, eyes and clothing. Remove contaminated clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

If on skin:
Burns caused by molten material require hospital treatment.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

If swallowed:
Rinse mouth and then drink plenty of water. Ingestion is not likely in the available physical form. If ingested, seek medical attention. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms: No significant reaction of the human body to the product known.
Hazards: No hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Extinguishing media
6. Accidental release measures

Further accidental release measures:
High risk of slipping due to leakage/spillage of product.

Personal precautions, protective equipment and emergency procedures
No special precautions necessary.

Environmental precautions
No special precautions necessary. This product is not regulated by RCRA. This product is not regulated by CERCLA (‘Superfund’).

Methods and material for containment and cleaning up
For small amounts: Pick up with suitable appliance and dispose of. For large amounts: Pick up with suitable appliance and dispose of.

7. Handling and Storage

Precautions for safe handling
Provide suitable exhaust ventilation at the drying process and in the area surrounding the melt outlet of processing machines. Closed containers should only be opened in well-ventilated areas. Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:
Take precautionary measures against static discharges. Handling of hot melt may produce small flame-up conditions. Hot melt should be placed in cool water immediately if flame-up occurs.

Conditions for safe storage, including any incompatibilities
The product in undamaged packing need not be stored separately.

Suitable materials for containers: Low density polyethylene (LDPE)

Further information on storage conditions: Keep container tightly closed. Avoid deposition of dust. Protect against moisture.
8. Exposure Controls/Personal Protection

Components with occupational exposure limits
red phosphorus  OSHA PEL  PEL  0.1 mg/m³ ; TWA value  0.1 mg/m³ ;

Glass, oxide, chemicals  ACGIH TLV  TWA value  5 mg/m³ Inhalable fraction ; TWA value  1 fibers/cm³ Fiber ; Respirable fibers: length > 5 micrometers; aspect ratio >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

Advice on system design:
Ensure adequate ventilation. Provide local exhaust ventilation to control dusts/vapours.

Personal protective equipment
Respiratory protection:
Wear a NIOSH-certified (or equivalent) particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. Wear the following respiratory protection if exposure limits may be exceeded: Wear a NIOSH-certified (or equivalent) supplied-air respirator.

Hand protection:
Wear gloves to prevent contact during mechanical processing and/or hot melt conditions.

Eye protection:
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
No special precautions necessary. Wash soiled clothing immediately.

9. Physical and Chemical Properties

Form: pellets
Odour: garlic-like
Odour threshold: No applicable information available.
Colour: various, depending on the colourant
pH value: not applicable
Melting temperature: approx. 260 °C (DIN 53765)
Boiling range: The substance / product decomposes therefore not determined.
Sublimation point: No applicable information available.
Flash point: > 400 °C (Unspecified)
Flammability: not self-igniting
Flammability of Aerosol Products: not applicable, the product does not form flammable aerosoles
Lower explosion limit: For solids not relevant for classification and labelling.
Upper explosion limit: For solids not relevant for classification and labelling.
Autoignition: > 400 °C (ASTM D1929)
Vapour pressure: not applicable
Density: 1.15 - 1.60 g/cm3 (20 °C) (EN ISO 1183-1)
Relative density: Study does not need to be conducted.
Bulk density: 500 - 800 kg/m3
Vapour density: not applicable
Partitioning coefficient n-octanol/water (log Pow): not applicable
Self-ignition temperature: not self-igniting
Thermal decomposition: > 320 °C (TGA)
Viscosity, dynamic: not applicable, the product is a solid
Viscosity, kinematic: not applicable, the product is a solid
Solubility in water: insoluble
Solubility (quantitative): No applicable information available.
Solubility (qualitative): No applicable information available.
Evaporation rate: The product is a non-volatile solid.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is chemically stable.
No hazardous reactions known.

Conditions to avoid
Temperature: > 320 degrees Celsius

Incompatible materials
No substances known that should be avoided.

Hazardous decomposition products
Decomposition products:
Possible thermal decomposition products:
hydrogen cyanide, carbon monoxide, Phosphine

Thermal decomposition:
> 320 °C (TGA)
11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Contact with molten product may cause thermal burns. The resin in pelleted form poses a low hazard.

Oral
Type of value: ATE
Value: > 5,000 mg/kg
Insignificant hazard The product has not been tested. The statement has been derived from the properties of the individual components.

Inhalation
Not inhalable due to the physico-chemical properties of the product.

Dermal
Type of value: ATE
Value: > 5,000 mg/kg
Insignificant hazard The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment other acute effects
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: Thermal decomposition products of the substance can irritate the eyes, skin, and respiratory tract.

Skin
No data available.

Eye
No data available.

Sensitization
Assessment of sensitization: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No adverse effects have been reported in the processing and use of the product. No known chronic effects.

Genetic toxicity
Assessment of mutagenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Carcinogenicity
Assessment of carcinogenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Reproductive toxicity
Assessment of reproduction toxicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure
No significant reaction of the human body to the product known.

12. Ecological Information

Toxicity
Aquatic toxicity
Assessment of aquatic toxicity:
The product has not been tested. The statement has been derived from the structure of the product. There is a high probability that the product is not acutely harmful to aquatic organisms.

Persistence and degradability
Assessment biodegradation and elimination (H2O)
Experience shows this product to be inert and non-degradable.

The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

Bioaccumulative potential
Bioaccumulation potential
Because of the product's consistency and low water solubility, bioavailability is improbable.

13. Disposal considerations

Waste disposal of substance:
Check for possible recycling. Dispose of in accordance with national, state and local regulations.

Container disposal:
Packs must be completely emptied. Completely emptied packagings can be given for recycling.
14. Transport Information

Land transport
USDOT
Not classified as a dangerous good under transport regulations

Sea transport
IMDG
Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO
Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Not hazardous;

EPCRA 313:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7723-14-0</td>
<td>red phosphorus</td>
</tr>
</tbody>
</table>

CERCLA RQ

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7723-14-0</td>
<td>red phosphorus</td>
</tr>
</tbody>
</table>

State regulations

<table>
<thead>
<tr>
<th>State RTK</th>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJ</td>
<td>7723-14-0</td>
<td>red phosphorus</td>
</tr>
<tr>
<td></td>
<td>65997-17-3</td>
<td>Glass, oxide, chemicals</td>
</tr>
<tr>
<td>PA</td>
<td>7723-14-0</td>
<td>red phosphorus</td>
</tr>
<tr>
<td></td>
<td>65997-17-3</td>
<td>Glass, oxide, chemicals</td>
</tr>
</tbody>
</table>

NFPA Hazard codes:
Health: 3  Fire: 1  Reactivity: 0  Special:

HMIS III rating
Health: 3  Flammability: 1  Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2017/08/29
We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

ULTRAMID® 66 H2 G25 V0KB1 NAT0046 POLYAMIDE is a registered trademark of BASF Corporation or BASF SE

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

END OF DATA SHEET