



SAFETY DATA SHEET

ALUMINIUM NITRIDE POWDER TFZ-N01P

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1. Identification

Product Name : ALUMINIUM NITRIDE POWDER TFZ-N01P
Name of manufacture : TOYO ALUMINIUM K.K
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Telephone Number : 81-66271-3154
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Emergency : TOYO ALUMINIUM K.K HINO WORKS
" [Address] : 341-14,HIGASHIYAMA, OHTANI, HINO-CHO, GAMO-GUN, SHIGA, JAPAN. 529-1608
" [Telephone Number] : 81-748-53-1151
" [FAX Number] : 81-748-53-0316
Name of section : Hino Quality Assurance Section
Recommended use : For fillers

2. Hazard identification

GHS Classification : Not Classification
GHS Label elements : Not Classification
Environmental Hazards : Ammonia is generated as decomposition products.

3. Composition/information on ingredients

Classification of the substance or mixture : Substance

| Chemical Name | Composition (%) | CAS No. |
|-------------------|-----------------|------------|
| Aluminium Nitride | > 96.0 | 24304-00-5 |

4. First-aid measures

IF INHALED : In case of inhalation of small amount of powder, wash nostrils and throat with clear water.
In case of inhalation of large amount of powder, call a physician immediately.
IF ON SKIN : Remove contaminated clothing and wash skin with soap and water.
IF IN EYES : Flush eyes with clear water for minutes or until irritation subsides.
Call a physician if irritation persists.
IF SWALLOWED : Do not induce vomiting. Call a physician immediately.

5. Fire-fighting measures**Aluminium nitride itself is nonflammability.**

Extinguishing Media : —
Prohibition extinguishing media : When aluminium nitride is in the place from which the fire is started, it is based on irrigation fire extinguishing and a halogen system fire extinguisher.
Do not make fire extinguishing absolute.
Unusual fire & explosion hazards : —
Special fire fighting procedures : —
Worker's protection : Wear complete protective wear (heatproof) including an appropriate compressed air open-circuit SCBA when you work extinguishing fire.

6. Accidental release measures

- Personal precautions, Protect equipment and Emergency procedures : In an indoor case, fully ventilate until processing of a leakage thing finishes, and wear required protective equipment for measure of leakage. Follow "8. Exposure controls/personal protection"
- Environmental precautions : In an indoor case, fully ventilate until processing finishes.
- Methods and materials for Containment and cleaning up : Avoiding raising dust, sweep up it, and keep it in an airtight container. Follow "13. Disposal considerations"
- Preventive measures of second disaster : Remove all sources of ignition promptly and pour water on leakage or its container.

7. Handling and storage

【Handling】

- Technical measure : Do not let contact with damp air, water, or liquid containing water.
: During handling, prevent from touching the skin as much as possible, and wear an dustproof mask, a protective glove, etc.
: Use after opening promptly.
- Local-ventilation／
Whole-ventilation : Install local-ventilation in handling workplace.
- Notes : Make the floor in the handling place a structure that water is infiltrated or doesn't infiltrate the floor side.
- Sanitary requirement : Do not eat and drink or do not smoke when you use this product.

【Storage】

- Appropriate condition : Do not keep it in the air saturated with moisture, water, liquid including the water.
: Seal up container storage indoors that kept suitable temperature and humidity, shading, and ventilated.
: Make the floor in the strong place a structure that water is infiltrated or doesn't infiltrate the floor side.
: Keep it in the place where child's hand does not reach.
- Packing materials : No useful information.

8. Exposure controls/personal protection

【Protective equipment】



- Respiratory protection : Use mask for dustproof mask.
- Hand protection : Use protective glove.
- Eye protection : Use safety goggles or glasses.
- Skin and body protection : Use antistatic working clothes.

Facility and equipment measures : Fully ventilate a workplace, and install equipment of local ventilation.

| Chemical Name | Unit | ACGIH | | OSHA |
|------------------------|---------|-------|------|------|
| | | TWA | STEL | PEL |
| Aluminium Nitride | No Data | | | |
| 【Reference】 Ammonia | ppm | 25 | 35 | |

(※) TWA : Load average of time STEL : Short-term exposure limit (15 minutes)
 PEL : For eight hours load average or ceiling value

9. Physical and chemical properties

| | | | |
|-------------------------|-----------------------|-------------------------------------|------------------|
| Appearance | : Yellow-white powder | Explosive limits (Upper) | : — |
| Odour | : Ammonia odour | " (Lower) | : — |
| Threshold odour | : No Data | Vapor pressure | : No Data |
| pH | : No Data | Vapor density (air=1) | : No Data |
| Melting point (°C) | : No Data | Specific gravity | : 3.26 |
| Boiling point (°C) | : No Data | Solubility | : Not soluble |
| Flash point (°C) | : No Data | Octanol/water partition coefficient | : Not applicable |
| Evaporation rate | : Not applicable | Ignition point (°C) | : No Data |
| Burning quality (Solid) | : No Data | Decomposition temperature | : 2,250 |
| " (gas) | : No Data | Viscosity | : Not applicable |

10. Stability and reactivity

| | |
|---------------------------------------|--|
| Stability | : In the usual use, it is stable. However, after particulates have risen, there is possibility of dust explosion. |
| Possibility of Hazardous reactions | : Ammonia gas is generated. (When contact with the air saturated with moisture, water and liquid including the water) |
| Conditions to avoid | : Water、Moisture、Acid、Alkali |
| Incompatible materials | : Oxidant、Hydrochloric acid、Alcohol …etc |

11. Toxicological information

| | |
|--|-----------|
| Acute toxicity – Oral | : No Data |
| Acute toxicity – Skin | : No Data |
| Acute toxicity – Inhalation (Gas) | : No Data |
| Acute toxicity – Inhalation (Vapor) | : No Data |
| Skin corrosion/Irritation | : No Data |
| Serious eye damage/Eye irritation | : No Data |
| Respiratory sensitization | : No Data |
| Skin sensitization | : No Data |
| Germ cell mutagenicity | : No Data |
| Carcinogenicity | : No Data |
| Reproductive toxicity | : No Data |
| Specific target organ systemic toxicity (single) | : No Data |
| Specific target organ systemic toxicity (repeated) | : No Data |
| Aspiration hazard | : No Data |

12. Ecological information

| | |
|----------------------------------|-----------|
| Ecotoxicity | : No Data |
| Residual/Degradability | : No Data |
| Bioaccumulation potential | : No Data |
| Hazardousness in soil | : No Data |
| Hazardousness on the ozone layer | : No Data |
| Aquatic toxicity (acute) | : No Data |
| Aquatic toxicity (chronic) | : No Data |

13. Disposal considerations

- Remainder waste : Render it harmless as much as possible and change a dangerous hazardous property level into a low state, before discarding.
- : Follow the standard of related laws and regulations and a local government about disposal.
- : When the industrial waste treatment company and municipal corporation which were approved by the governor etc. are disposing, dispose after consulting with them.
- : When you entrust disposal of waste to a processing contractor etc., fully notify them of danger or hazardous property, and entrust disposal.
- Pollution container and Packing : Purify and recycle the container or perform suitable disposal in accordance with the standard of related laws and regulations or a local government.
- : When you discard an empty container, dispose of a content completely.

14. Transport information

【International transport information】

UN number : Not Restricted

UN classification : Not Restricted

Marine pollutant : Not Restricted

Air transport (IATA/ICAO)

Not classified as a dangerous good under transport regulations.

Specific measures for safe transport

Ensure appropriate measures to prevent loading damage due to heavy load of packaging materials.

Concern about avoiding injury on the slippery floor when contents in the package scatter.

15. Regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

- | | | |
|-----------|---|---|
| Reference | : Preparation guideline of Material Safety Data Sheet | Japan Chemical industry Association |
| | : Guidebook of Product Liability Act | Japan Paint Manufacturers Association |
| | : Statute book of chemicals | The Chemical Daily Co., Ltd. |
| | : 16615 Chemicals | The Chemical Daily Co., Ltd. |
| | : Quick understanding of business for MSDS · Label | Japan Environmental Management Association for Industry |

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