An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Aluminium oxide nanopowder, (α -phase) APS 200 nm, 99.9% Product Code: AO 115 CAS No : 1344-28-1 1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet
Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email <u>info@ottokemi.com</u>

1.4. Emergency telephone number Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
2.2 Label elements
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances Synonyms : Alumina Formula : Al2O3 Molecular weight : 101,96 g/mol CAS-No. : 1344-28-1 EC-No. : 215-691-6 No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures If inhaled After inhalation: fresh air. In case of skin contact In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. In case of eye contact After eye contact: rinse out with plenty of water. Remove contact lenses. If swallowed After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell. 4.2 Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 4.3 Indication of any immediate medical attention and special treatment needed No data available **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the

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surrounding environment. Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given. 5.2 Special hazards arising from the substance or mixture Aluminum oxide Not combustible. Ambient fire may liberate hazardous vapours. 5.3 Advice for firefighters In the event of fire, wear self-contained breathing apparatus. 5.4 Further information Do not use halocarbon extinguishers.none

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions
No special precautionary measures necessary.
6.3 Methods and materials for containment and cleaning up
Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities Tightly closed. Dry. strongly hygroscopic
7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with workplace control parameters
8.2 Exposure controls
Appropriate engineering controls
Change contaminated clothing. Wash hands after working with substance.
Personal protective equipment
Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Respiratory protection
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Control of environmental exposure

No special precautionary measures necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form:	Powder
b) Odor	No data available
c) Odor Threshold	No data available
Hq (b	No data available
e) Melting	
point/freezing point	
Melting point/range:	2.040 °C
51 5	

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f) Initial boiling point and boiling range g) Flash point h) Evaporation rate i) Flammability (solid,gas) i) Upper/lower flammability or explosive limits k) Vapor pressure I) Vapor density m) Relative density n) Water solubility o) Partition coefficient: n-octanol/water p) Autoignition temperature q) Decomposition temperature r) Viscositv s) Explosive properties t) Oxidizing properties 9.2 Other safety information No data available

2.980 °C Not applicable No data available No data available

No data available No data available No data available No data available insoluble

Not applicable for inorganic substances

No data available

No data available No data available No data available No data available

SECTION 10: Stability and reactivity

10.1 Reactivity No data available 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature) 10.3 Possibility of hazardous reactions No data available 10.4 Conditions to avoid Exposure to moisture. no information available 10.5 Incompatible materials Strong oxidizing agents 10.6 Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Aluminum oxide Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects Acute toxicity LD50 Oral - Rat - male and female - > 10.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - > 2,3 mg/l (OECD Test Guideline 403) Skin corrosion/irritation Skin - Rabbit Result: No skin irritation - 24 h (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405) Respiratory or skin sensitization Draize Test - Guinea pig Result: Does not cause skin sensitization. - Mouse

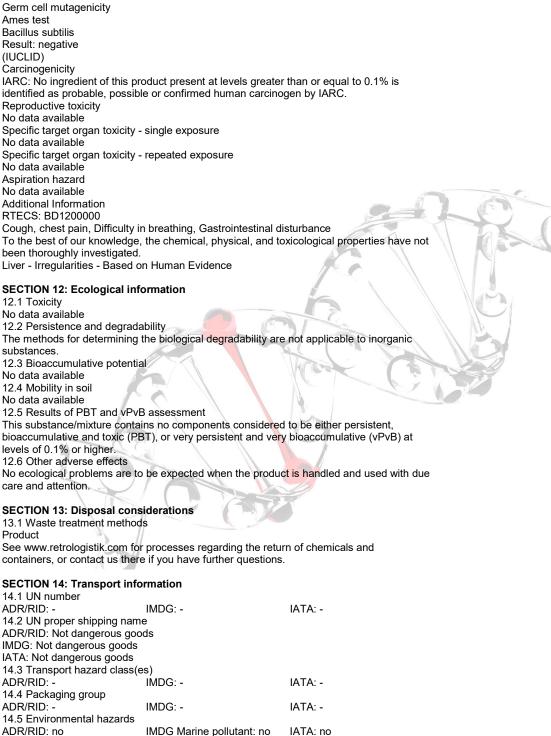
Result: Does not cause respiratory sensitization.

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14.6 Special precautions for user

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Further information

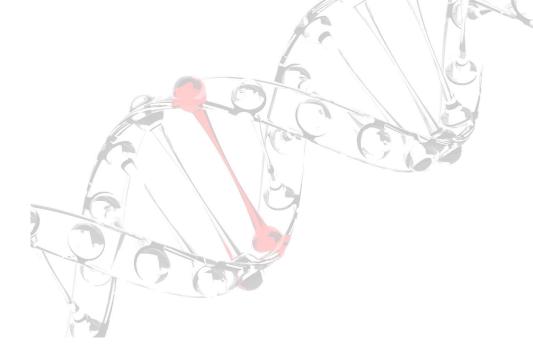
Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.



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