

Material Safety Data Sheet



VANADIUM PENTOXIDE AR

VERSION : 01

DATE OF ISSUE :02-12-2016

SUPERSEDES : Nil

Product Code : 26820

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1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : VANADIUM PENTOXIDE AR

Product code : 26820

Identification of the product : Vanadium pentoxide

CAS No :1314-62-1

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 : MOLYCHEM

Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA) Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.

Email : info@molychem.net

Works: Plot No. B/9, Badlapur M.I.D.C.,OPP.Shobhavat Textile Co.,
Kulgaon, Badlapur (E), Dist.-Thane-421 503

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : Muta. Cat. 3; R68

Repr. Cat. 3; R63

T; R48/23

Xn; R20/22

Xi; R37

N; R51-53

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Germ cell mutagenicity - Category 2 - Warning (CLP : Muta. 2) H341

Reproductive toxicity - Unborn Child - Category 2 - Warning (CLP : Repr. 2) H361

Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation -

Category 3 - Warning (CLP : STOT SE 3) H335

Specific Target Organ Toxicity - Repeated exposure - Category 1 - Danger (CLP : STOT RE 1) H372

Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332

Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302

Environmental hazards : Hazardous to the aquatic environment - Chronic hazard -

Category 2 (CLP : Aquatic Chronic 2) H411

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

Symbol(s) : T : Toxic

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N : Dangerous for the environment



R Phrase(s) : R20/22 : Harmful by inhalation and if swallowed.

R37 : Irritating to respiratory system.

R48/23 : Toxic : danger of serious damage to health by prolonged exposure through inhalation.

R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63 : Possible risk of harm to the unborn child.

R68 : Possible risks of irreversible effects.

S Phrase(s) : S1/2 : Keep locked up and out of reach of children.

S36/37 : Wear suitable protective clothing and gloves.

S38 : In case of insufficient ventilation, wear suitable respiratory equipment.

S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

S61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.

Labelling Regulation EC 1272/2008 (CLP)

Hazard pictograms



Signal words : Danger

Hazard statements : H341 : Suspected of causing genetic defects.

H302 : Harmful if swallowed.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

H372 : Causes damage to organs through prolonged or repeated exposure.

H411 : Toxic to aquatic life with long lasting effects.

H361d: Suspected of damaging the unborn child.

Precautionary statements

• **General :** P102: Keep out of reach of children.

P103: Read label before use.

P101: If medical advice is needed, have product container or label at hand.

P201: Obtain special instructions before use.

• **Prevention :** P281: Use personal protective equipment as required.

P271: Use only outdoors or in a well-ventilated area.

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P260: Do not breathe dust, fume, gas, mist, vapours, spray.

P273: Avoid release to the environment.

P264: Wash thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

• **Response** : P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feel unwell.

P308+P313: If exposed or concerned : get medical advice.

P391: Collect spillage.

P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.

P314: Get medical advice if you feel unwell.

• **Storage** : P403+P233: Store in well-ventilated place. Keep container tightly closed.

P405: Store locked up.

• **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation : Vanadium pentoxide AR

CAS No :1314-62-1

Substance.

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures

4.1. Description of first aid measures

Inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

Eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

Ingestion : Obtain emergency medical attention. Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use : Suspected of causing genetic defects.

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Causes damage to organs through prolonged or repeated exposure. Danger of serious damage to health by prolonged exposure through inhalation. May cause respiratory irritation. Swallowing a small quantity of this material will result in serious health hazard. Suspected of damaging the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

General information : Never give anything by mouth to an unconscious person.

If exposed or concerned : get medical advice.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

Surrounding fires : Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.

5.3. Advice for fire-fighters

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection. Ventilate area.

For non-emergency personnel : Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Clean up methods : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage

7.1. Precautions for safe handling

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Handling : Obtain special instructions before use. Use only outdoors or in a well-ventilated area. Do not breathe dust, fume, gas, mist, vapours, spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use personal protective equipment as required.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour.

Special precautions : Avoid breathing dust, fume, gas, mist, vapours, spray.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep only in the original container in a cool, well ventilated place. Keep container tightly closed.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Specific end use(s) : None.

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

- **Respiratory protection :** In case of insufficient ventilation, wear suitable respiratory equipment.

- **Hand protection :** Wear protective gloves.

- **Eye protection :** Chemical goggles or safety glasses.

- **Others :** When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Solid.

Odour : Odorless

Odour threshold : No data available.

pH value : Not applicable.

Melting point [°C] : 690 °C

Decomposition point [°C] : N/A

Critical temperature [°C] : N/A

Auto-ignition temperature [°C] : N/A

Flammability (solid, gas) : N/A

Flash point [°C] : N/A

Boiling point [°C] : 1750⁰C

Initial boiling point [°C] : N/A

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Final boiling point [°C] : N/A

Evaporation rate : N/A

Vapour pressure [20°C] : N/A

Vapour pressure mm/Hg : N/A

Vapour density : 6.3

Density [g/cm³] : 3.36

Relative density, gas (air=1) : N/A

Relative density, liquid (water=1) : N/A

Solubility in water [% weight] : Slight (0.1-1%)

Solubility in water : N/A

Log Pow octanol / water at 20°C : No data available.

Solubility : N/A

Viscosity at 40°C [mm²/s] : N/A

9.2. Other information

Explosive properties : N/A

Explosion limits - upper [%] : N/A

Explosion limits - lower [%] : N/A

Oxidising properties : No data available.

10. Stability and reactivity

10.1. Reactivity

Reactivity : Not established.

10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

- **Inhalation** : Harmful if inhaled.
- **Dermal** : Based on available data, the classification criteria are not met.
- **Ingestion** : Harmful if swallowed.

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Corrosion : Based on available data, the classification criteria are not met.
Irritation : May cause respiratory irritation.
Sensitization : Based on available data, the classification criteria are not met.
Mutagenicity : Suspected of causing genetic defects.
Carcinogenicity : Based on available data, the classification criteria are not met.
Toxic for reproduction : Suspected of damaging the unborn child.
STOT-single exposure : Based on available data, the classification criteria are not met.
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard : Based on available data, the classification criteria are not met.

12. Ecological information

12.1. Toxicity

Toxicity information : Toxic to aquatic life with long lasting effects.

12.2. Persistence - degradability

Persistence - degradability : May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil

Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

14. Transport information

14.1. Land transport (ADR-RID)

Proper shipping name : VANADIUM PENTOXIDE, non-fused form

UN N° : 2862

H.I. nr : 60

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ADR - Class : 6.1

Labelling - Transport : 6.1 : Toxic substances.

LÉ

ADR - Classification code : T5

ADR - Group : III

ADR - Packing instructions : P002 R001 LP002

ADR - Limited Quantity : 5 KG

ADR - Tunnel code : E : Passage forbidden through tunnels of category E.

14.2. Sea transport (IMDG) [English only]

Proper shipping name : VANADIUM PENTOXIDE, non-fused form

UN N° : 2862

IMO-IMDG - Class or division : 6.1 : Toxic substances.

IMO-IMDG - Packing group : III

IMO- IMDG - Packing instructions : P002 LP02

IMO-IMDG - Limited quantities : 5 kg

IMO-IMDG - Marine pollution : Yes

EMS-Nr : F-A S-A

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : VANADIUM PENTOXIDE, non-fused form

UN N° : 2862

IATA - Class or division : 6.1 : Toxic substances.

IATA - Packing group : III

IATA - Passenger and Cargo Aircraft : ALLOWED

- Passenger and Cargo - Packing : 670

instruction

- Passenger and Cargo - Maximum : 100 kg

Quantity/Packing

IATA - Cargo only : ALLOWED

- Cargo only - Packing instruction : 677

- Cargo only - Maximum Quantity/ : 200 kg

Packing

IATA - Limited Quantities : 10 kg

ERG-Nr : 6L

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental : Ensure all national/local regulations are observed. regulations/legislation specific for the substance or mixture

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REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.

REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

16. Other information

Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.

vPvB: very persistent and very bioaccumulative

Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Further information : None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008 **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

End of document

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