

Material Safety Data Sheet



VANADIUM PENTOXIDE

VERSION : 01

DATE OF ISSUE :02-12-2016

SUPERSEDES : Nil

Product Code : 19840

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

1.1. Product identifier

Trade name : VANADIUM PENTOXIDE

Product code : 19840

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

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Specific target organ

toxicity — Repeated H372

exposure, Category 1

Acute toxicity (inhal.), H332

Category 4

Acute toxicity (oral), H302

Category 4

Germ cell mutagenicity, H341

Category 2

Reproductive toxicity, H361d

Category 2

Specific target organ H335

toxicity — Single

exposure, Category 3,

Respiratory tract irritation

Hazardous to the aquatic

environment — Chronic

Hazard, Category 2

H411

Full text of classification categories and H statements : see section 16

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Classification according to Directive 67/548/EEC or 1999/45/EC

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display

Extra classification(s) to display

Symbol(s): Xn: Harmful

T : Very toxic

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 risk of irreversible effects.

S Phrase(s):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 where possible).

S61: avoid release to the environment . refer to special instruction/safety data sheets.

Hazard pictograms



Signal word: Danger

Hazard statements: H302+H332 - Harmful if swallowed or if inhaled

H335 - May cause respiratory irritation

H341 - Suspected of causing genetic defects

H361d - Suspected of damaging the unborn child

H372 - Causes damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements: P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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2.3. Other hazards

No additional information available

3. Composition/information on ingredients

3.1. Substance : VANADIUM PENTOXIDE

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

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries : Suspected of causing genetic defects. Causes damage to organs through prolonged or repeated exposure.

Symptoms/injuries after inhalation : May cause respiratory irritation. Harmful if inhaled.

Symptoms/injuries after ingestion : Harmful if swallowed.

Chronic symptoms : Suspected of damaging the unborn child.

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

Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

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

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

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Protection during firefighting : Do not attempt to take action without suitable protective equipment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Stop release.

6.2. Environmental precautions

Toxic to aquatic life with long lasting effects.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clear up rapidly by scoop or vacuum.

6.4. Reference to other sections

No additional information available

7. Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a wellventilated area. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in original container. Store in a dry place.

Protect from moisture.

7.3. Specific end use(s)

No additional information available

8. Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : protective gloves

Eye protection : Chemical goggles or safety glasses

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Skin and body protection : Wear suitable protective clothing

Respiratory protection : Wear respiratory protection

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 690 °C

Freezing point : No data available

Boiling point : 1750 °C

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : 6.3

Relative density : No data available

Density : 3.36 g/cm³

Solubility : Water: Slight (0.1-1%)

Log Pow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

9.2. Other information

No additional information available

10. Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

10.5. Incompatible materials

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No additional information available

10.6. Hazardous decomposition products

No additional information available

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Inhalation: Harmful if inhaled. Oral: Harmful if swallowed.

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : Not classified

Reproductive toxicity : Suspected of damaging the unborn child.

Specific target organ toxicity (single exposure): May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms: Harmful if swallowed.

12. Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

13. Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal

recommendations: Dispose of contents/container to ...

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14. Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 2862

UN-No. (IMDG) : 2862

UN-No.(IATA) : 2862

UN-No.(ADN) : 2862

UN-No. (RID) : 2862

14.2. UN proper shipping name

Proper Shipping Name (ADR) : VANADIUM PENTOXIDE

Proper Shipping Name (IMDG) : VANADIUM PENTOXIDE

Proper Shipping Name (IATA) : VANADIUM PENTOXIDE

Proper Shipping Name (ADN) : VANADIUM PENTOXIDE

Proper Shipping Name (RID) : VANADIUM PENTOXIDE

Transport document description (ADR) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, (E), ENVIRONMENTALLY

HAZARDOUS

Transport document description (IMDG) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, MARINE

POLLUTANT/ENVIRONMENTALLY HAZARDOUS

Transport document description (IATA) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, ENVIRONMENTALLY HAZARDOUS

Transport document description (ADN) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, ENVIRONMENTALLY HAZARDOUS

Transport document description (RID) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR : Transport hazard class(es) (ADR) : 6.1

Danger labels (ADR) : 6.1

IMDG : Transport hazard class(es) (IMDG) : 6.1

Danger labels (IMDG) : 6.1

IATA:Transport hazard class(es) (IATA) : 6.1

Hazard labels (IATA) : 6.1

AND:Transport hazard class(es) (ADN) : 6.1

Danger labels (ADN) : 6.1

RID:Transport hazard class(es) (RID) : 6.1

Danger labels (RID) : 6.1

14.4. Packing group

Packing group (ADR) : III

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Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : T5

Special provision (ADR) : 600

Limited quantities (ADR) : 5kg

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P002, IBC08, LP02, R001

Special packing provisions (ADR) : B3

Mixed packing provisions (ADR) : MP10

Portable tank and bulk container

instructions (ADR): T1

Portable tank and bulk container special

provisions (ADR): TP33

Tank code (ADR) : SGAH

Tank special provisions (ADR) : TU15, TE19

Vehicle for tank carriage : AT

Transport category (ADR) : 2

Special provisions for carriage - Bulk(ADR): VC1, VC2, AP7

Special provisions for carriage - Loading,
unloading and handling (ADR): CV13, CV28

Special provisions for carriage - Operation(ADR): S9

Hazard identification number (Kemler No.) : 60

Orange plates :

Tunnel restriction code (ADR) : E

EAC code : 2X

- Transport by sea

Limited quantities (IMDG) : 5 kg

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P002, LP02

IBC packing instructions (IMDG) : IBC08

IBC special provisions (IMDG) : B3

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Tank instructions (IMDG) : T1
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A
Stowage category (IMDG) : A
MFAG-No : 151

- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y645
PCA limited quantity max net quantity (IATA): 10kg
PCA packing instructions (IATA) : 670
PCA max net quantity (IATA) : 100kg
CAO packing instructions (IATA) : 677
CAO max net quantity (IATA) : 200kg
ERG code (IATA) : 6L

- Inland waterway transport

Classification code (ADN) : T5
Special provisions (ADN) : 600, 802
Limited quantities (ADN) : 5 kg
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : T5
Special provision (RID) : 600
Limited quantities (RID) : 5kg
Excepted quantities (RID) : E1
Packing instructions (RID) : P002, IBC08, LP02, R001
Special packing provisions (RID) : B3
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID): T1
Portable tank and bulk container special provisions (RID): TP33
Tank codes for RID tanks (RID) : SGAH
Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2
Special provisions for carriage – Bulk

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(RID): VC1, VC2, AP7

Special provisions for carriage – Loading

and unloading (RID): CW13, CW28, CW31

Colis express (express parcels) (RID) : CE11

Hazard identification number (RID) : 60

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

VANADIUM PENTOXIDE is not on the REACH Candidate List

VANADIUM PENTOXIDE is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal

Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

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

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