

CAS No: MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Trade name : Potassium Metal
Product code : 05321
Formula : K

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Substances and Mixtures H260
which, in contact with
water, emit flammable
gases, Category 1
Skin corrosion/irritation, H314
Category 1B

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

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

F; R14/15
C; R34

Full text of R-phrases: see section 16

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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

Hazard pictograms (CLP) :



GHS02

GHS05

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H260 - In contact with water releases flammable gases which may ignite spontaneously
H314 - Causes severe skin burns and eye damage

Precautionary statements (CLP) :

P223 - Keep away from any possible contact with water, because of violent reaction and possible flash fire
P231+P232 - Handle under inert gas. Protect from moisture
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P370+P378 - In case of fire: Use ... for extinction

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%
POTASSIUM METAL FOR SYNTHESIS		100

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

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First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries	: Causes severe skin burns and eye damage.
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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Catches fire spontaneously if exposed to air.
Hazardous decomposition products in case of fire	: Thermal decomposition generates : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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SECTION 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.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Stop release. Ventilate area.

6.2. Environmental precautions

Do not allow water (or moist air) contact with this material.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Large spills: scoop solid spill into closing containers.
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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Keep away from any possible contact with water, because of violent reaction and possible flash fire.
Precautions for safe handling	: Protect from moisture. Handle under inert gas. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Wash ... thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Store in a dry place. Protect from moisture. Store in dry protected location to prevent any moisture contact.
Incompatible materials	: Keep away from any possible contact with water, because of violent reaction and possible flash fire.

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7.3. Specific end use(s)

No additional information available

SECTION 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 face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: silver white.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 64 °C
Freezing point	: No data available
Boiling point	: 760 °C
Flash point	: No data available
Auto-ignition temperature	: 3600 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: In contact with water releases flammable gases which may ignite spontaneously
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.86 g/cm ³
Solubility	: Water: Reacts violently in water
Log Pow	: No data available
Viscosity, kinematic	: No data available

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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

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours. Reacts violently with water.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

In contact with water releases flammable gases which may ignite spontaneously. Highly reactive material. Reacts violently with water.

10.4. Conditions to avoid

Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Serious eye damage, category 1, implicit

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

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SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

Additional information : Do not allow water (or moist air) contact with this material.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : 2257

UN-No. (IMDG) : 2257

UN-No.(IATA) : 2257

UN-No.(ADN) : 2257

UN-No. (RID) : 2257

14.2. UN proper shipping name

Proper Shipping Name (ADR) : POTASSIUM

Proper Shipping Name (IMDG) : POTASSIUM

Proper Shipping Name (IATA) : POTASSIUM

Proper Shipping Name (ADN) : POTASSIUM

Proper Shipping Name (RID) : POTASSIUM

Transport document description (ADR) : UN 2257 POTASSIUM, 4.3, I, (B/E)

Transport document description (IMDG) : UN 2257 POTASSIUM, 4.3, I

Transport document description (IATA) : UN 2257 POTASSIUM, 4.3, I

Transport document description (ADN) : UN 2257 POTASSIUM, 4.3, I

Transport document description (RID) : UN 2257 POTASSIUM, 4.3, I

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14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 4.3

Danger labels (ADR) : 4.3



IMDG

Transport hazard class(es) (IMDG) : 4.3

Danger labels (IMDG) : 4.3



IATA

Transport hazard class(es) (IATA) : 4.3

Hazard labels (IATA) : 4.3



ADN

Transport hazard class(es) (ADN) : 4.3

Danger labels (ADN) : 4.3



RID

Transport hazard class(es) (RID) : 4.3

Danger labels (RID) : 4.3



14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : I

Packing group (ADN) : I

Packing group (RID) : I

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14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: W2
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P403, IBC04
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T9
Portable tank and bulk container special provisions (ADR)	: TP7, TP33
Tank code (ADR)	: L10BN(+)
Tank special provisions (ADR)	: TU1, TE5, TT3, TM2
Vehicle for tank carriage	: AT
Transport category (ADR)	: 1
Special provisions for carriage - Packages (ADR)	: V1
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV23
Special provisions for carriage - Operation (ADR)	: S20
Hazard identification number (Kemler No.)	: X423
Orange plates	: 
Tunnel restriction code (ADR)	: B/E
EAC code	: 4W

- Transport by sea

Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P403
Packing provisions (IMDG)	: PP31
IBC packing instructions (IMDG)	: IBC04
IBC special provisions (IMDG)	: B1
Tank instructions (IMDG)	: T9
Tank special provisions (IMDG)	: TP7, TP33
EmS-No. (Fire)	: F-G
EmS-No. (Spillage)	: S-N
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: H1
Segregation (IMDG)	: SG35, SG26
MFAG-No	: 138

- Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden

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PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: 487
CAO max net quantity (IATA)	: 15kg
Special provision (IATA)	: A1
ERG code (IATA)	: 4W

- Inland waterway transport

Classification code (ADN)	: W2
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Provisions for handling and stowage of the cargo (ADN)	: HA08
Number of blue cones/lights (ADN)	: 0

- Rail transport

Classification code (RID)	: W2
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P403, IBC04
Mixed packing provisions (RID)	: MP2
Portable tank and bulk container instructions (RID)	: T9
Portable tank and bulk container special provisions (RID)	: TP7, TP33
Tank codes for RID tanks (RID)	: L10BN(+)
Special provisions for RID tanks (RID)	: TU1, TE5, TT3, TM2
Transport category (RID)	: 1
Special provisions for carriage – Packages (RID)	: W1
Special provisions for carriage – Loading and unloading (RID)	: CW23
Hazard identification number (RID)	: X423

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 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

Potassium Metal is not on the REACH Candidate List

Potassium Metal is not on the REACH Annex XIV List

15.1.2. National regulations

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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

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Water-react. 1	Substances and Mixtures which, in contact with water, emit flammable gases, Category 1
H260	In contact with water releases flammable gases which may ignite spontaneously
H314	Causes severe skin burns and eye damage
R14/15	Reacts violently with water, liberating extremely flammable gases
R34	Causes burns
C	Corrosive
F	Highly flammable

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product