

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name: POTASSIUM IODIDE
CAS-No.: 7681-11-0
EC No.: 231-659-4

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses:

INDUSTRIAL USES: Polymers and Plastics. Washing and Cleaning Products. Pharmaceutical applications.
Chemical intermediate.

INDUSTRIAL AND PROFESSIONAL USES: Chemical additive. Use as a laboratory chemical. Some grades of this substance are available for feed/food use; (E2) Feed additive. Food ingredient (mineral).

Uses advised against: None known.

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (EC 1272/2008): Physical and Chemical Hazards: Not classified.
Human health: STOT RE 1 - H372
Environment: Not classified.

Classification (67/548/EEC): T;R48/25.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

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Label elements:

EC No.: 231-659-4

Label In Accordance With (EC) No. 1272/2008



Signal Word:

Danger

Hazard Statements:

H372 Causes damage to organs Glands through prolonged or repeated exposure if swallowed.

Precautionary Statements:

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

P260 Do not breathe vapour/spray.

P264 Wash contaminated skin thoroughly after handling.

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container in accordance with national regulations.

Other hazards

Not Classified as PBT/vPvB by current EU criteria.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Product name: POTASSIUM IODIDE

CAS-No.: 7681-11-0

EC No.: 231-659-4

Gross Formula: KI

Composition Comments: Purity > 99%

4. FIRST AID MEASURES

Description of first aid measures:

General information: Contact physician if discomfort continues.

Inhalation: Remove victim immediately from source of exposure. Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion: Immediately rinse mouth and provide fresh air. Drink plenty of water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention.

Skin contact: Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water.

Eye contact: Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes.

Most important symptoms and effects, both acute and delayed:

General information: See section 11 for additional information on health hazards.

Inhalation: Dust may irritate throat and respiratory system and cause coughing.

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Ingestion: Nausea, vomiting. Iodine is essential for synthesis of thyroid hormones. Exposure to excess iodine may produce hypothyroidism or hyperthyroidism.

Skin contact: May cause minor irritation on skin contact. Discoloration of the skin.

Eye contact: May cause temporary eye irritation.

Indication of any immediate medical attention and special treatment needed: No specific first aid measures noted. Treat Symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Use fire-extinguishing media appropriate for surrounding materials. The product is non-combustible.

Unsuitable extinguishing media: Water may be less effective than alternatives.

Special hazards arising from the substance or mixture:

Hazardous combustion products: Iodine.

Specific hazards: When heated and in case of fire, irritating vapours/gases may be formed.

Advice for firefighters:

Special Fire Fighting Procedures: Water spray should be used to cool containers. Keep run-off water out of sewers and water sources. Dike for water control.

Protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Avoid inhalation of dust. Provide adequate ventilation. Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. Wash thoroughly after dealing with a spillage.

Environmental precautions: Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up:

Avoid generation and spreading of dust. Small Spillages: Shovel into dry containers. Cover and move the containers. Flush the area with water. Large Spillages: Collect in containers and seal securely. Inform Authorities if large amounts are involved.

Reference to other sections: Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid spilling, skin and eye contact. Do not eat, drink or smoke when using the product. Avoid handling which leads to dust formation. Provide good ventilation. Wear protective clothing as described in Section 8 of this safety data sheet.

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Conditions for safe storage, including any incompatibilities: Store in tightly closed original container in a dry, cool and well-ventilated place. Store between 15°C and 30°C.

Storage Class: Chemical storage.

Specific end use(s): The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Ingredient Comments: No exposure limits noted for ingredient(s).

Exposure controls: Protective equipment



Engineering measures: Provide adequate general and local exhaust ventilation.

Respiratory equipment: In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2). EN149.

Hand protection: Use suitable protective gloves if risk of skin contact. Neoprene, nitrile, polyethylene or PVC.

Eye protection: Wear approved safety goggles. Recommended: EN 166.

Other Protection: Provide eyewash, quick drench.

Hygiene measures: DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Personal protection: Protective equipment must be selected in accordance with current CEN standards.

Skin protection: Wear appropriate clothing to prevent reasonably probable skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Crystalline powder.

Colour: White.

Odour: Odourless.

Solubility: Soluble in water.

Initial boiling point and boiling range (°C): 1323°C

Melting point (°C): 686°C

Relative density: 3.12 (H₂O=1) [20°C]

Vapour density (air=1): No information available.

Vapour pressure: <0.01 hPa (20°C)

Evaporation rate: No information available.

pH-Value, Conc. Solution: No information available.

pH-Value, Diluted Solution: 6 - 9 50 g/l H₂O @ 20C

Viscosity: Not applicable.

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Solubility Value (G/100G H₂O @20°C): 144

Decomposition temperature (°C): No information available.

Odour Threshold, Lower: Not applicable.

Flash point (°C): Not applicable.

Auto Ignition Temperature (°C): Not applicable.

Flammability Limit - Lower (%): Not applicable.

Partition Coefficient (N-Octanol/Water): log Pow 0.04

Explosive properties: Not classified.

Other Flammability: The product has no flammability, explosive or self-inflammability properties.

Oxidising properties: Does not meet the criteria for oxidising.

Other information: Mol. Weight 166.01

10. STABILITY AND REACTIVITY

Reactivity: Reacts violently with strong acids. Will react violently with: Strong oxidising substances. Strong reducing agents.

Chemical stability: The substance is hygroscopic and will absorb water by contact with the moisture in the air. Protect from moisture. Protect from sunlight.

Possibility of hazardous reactions: Not applicable.

Conditions to avoid: Avoid exposure to high temperatures or direct sunlight. Water, moisture.

Incompatible materials:

Materials To Avoid: Strong oxidising substances. Powdered metal. Bromine Trifluoride (BrF₃), Chlorine Trifluoride (ClF₃). Strong acids. Water, moisture.

Hazardous decomposition products: Hydrogen iodide. Iodine compounds.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity: Acute Toxicity (Oral LD₅₀)
> 2000 mg/kg Rat

Test method(s): Journal of Pharmacology and Experimental Therapeutics. Vol. 120, Pg. 171, 1957.
Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC₅₀): Data lacking.

Skin Corrosion/Irritation: Based on available data the classification criteria are not met.

Serious eye damage/irritation: Slightly Irritating. Test method(s): Toxicology of the Eye. 2nd ed. Springfield, Illinois: Charles C. Thomas, 1974. P.586. Based on available data the classification criteria are not met.

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Respiratory or skin sensitisation: Based on available data the classification criteria are not met.

Germ cell mutagenicity: Based on available data the classification criteria are not met.

Carcinogenicity: Based on available data the classification criteria are not met.

Reproductive Toxicity:

Reproductive Toxicity – Fertility: Data lacking.

As a treatment for Asthma in pregnancy, Iodides were found to cause fatal death and deformity. Conclusive data but not sufficient for classification. Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure:

Target Organs: Thyroid.

Causes damage to organs through prolonged or repeat exposure.

Aspiration hazard:

Viscosity: Not relevant

Inhalation: Dust may irritate throat and respiratory system and cause coughing.

Ingestion: May cause chemical burns in mouth, oesophagus and stomach.

Skin contact: Powder may irritate skin.

Eye contact: Particles in the eyes may cause irritation and smarting.

Health Warnings: Prolonged or repeated exposure may cause: Gastrointestinal symptoms, including upset stomach. Exhaustion and weakness. Insomnia.
May cause irritation to mucous membranes. Laryngeal oedema. Thyroid hormone imbalance.

12. ECOLOGICAL INFORMATION

Ecotoxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Toxicity:

Acute Toxicity – Fish: LC50 96 hours 896 mg/l Onchorhynchus mykiss (Rainbow trout)

LC50 96 hours 1788.85 mg/l Scophthalmus maximus (Turbot)

Acute Toxicity - Aquatic Invertebrates: EC50 24 hours 226 mg/l Freshwater invertebrates

Persistence and degradability:

Degradability: The product solely consists of inorganic compounds which are not biodegradable.

Bioaccumulative potential: Bioaccumulation of this product is not expected to occur.

Partition coefficient: log Pow 0.04

Mobility in soil:

Mobility: The product is soluble in water.

Results of PBT and vPvB assessment: This product does not contain any PBT or vPvB substances.

Other adverse effects: None known.

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Dispose of waste and residues in accordance with local authority requirements. Contact specialist disposal companies. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions

14. TRANSPORT INFORMATION

General: The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Road Transport Notes: Not Classified

Rail Transport Notes: Not classified.

Sea Transport Notes: Not classified.

Air Transport Notes: Not classified.

UN number: Not applicable.

UN proper shipping name: Not applicable.

Transport hazard class (es): Not applicable.

Packing group: Not applicable.

Environmental hazards:

Environmentally Hazardous Substance/Marine Pollutant: No.

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

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

EU Legislation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. 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 with amendments.

Water hazard classification: WGK 1

Chemical Safety Assessment: No chemical safety assessment has been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

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16. OTHER INFORMATION

Hazard Statements in Full: H372 Causes damage to organs <<Organs>> through prolonged or repeated exposure if swallowed.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.