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R.O. & Factory Address:-

Plot No.38 - 39 GIDC Sojitra - 387240 Dist. Anand
Gujarat - India Tel / Fax : ++91-2697- 234987

A MATERIAL SAFETY DATA SHEET

IODINE

1.1 Product Identifiers:

Product Name : Iodine
CAS No : 7553-56-2

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Supplier: Infinium Pharmachem Pvt. Ltd. (AN ISO 9001:2008 CERTIFIED CO.)
38, G.I.D.C, Sojitra

Dist: ANAND

Gujarat, India

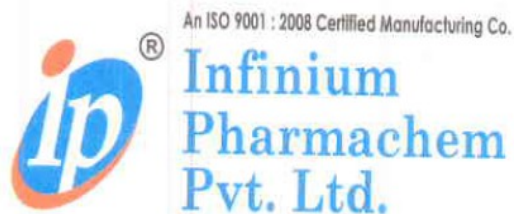
Tel : 0091-2697-234987

Fax : 0091-2697-234987

Email : info@infiniumpharmachem.com

Synonyms : Eranol, Iodin (French), Iodine Colloidal, Iodine Crystals, Iodine Sublimed, Iodine-127, Iodio (Italian), Jod (German, Polish), Jood (Dutch), Iode, Iodum, Jodum, Yodo.

CAS No. : 7553-56-2



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Molecular Weight : 253.81 g/mol

Chemical Formula : I₂

3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Specific target organ toxicity - repeated exposure, Oral (Category 1), Thyroid, H372

Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn Harmful R20/21

N Dangerous for the environment R50

For the full text of the R-phrases mentioned in this Section, see Section 16.

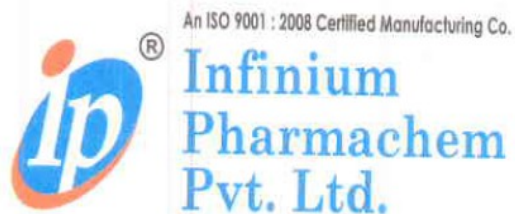
3.2 Label elements

Labeling according Regulation (EC) No 1272/2008



Pictogram

Signal word Danger



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Hazard statement(s)

H312 + H332	Harmful in contact with skin or if inhaled
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H372	Causes damage to organs (Thyroid) through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.

Precautionary statement(s)

P261	Avoid breathing dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/ attention if you feel unwell.

Supplemental Hazard Statements None

3.3 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

4.1 Description of first aid measures

General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled



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If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most Important symptoms & efforts, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 3.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5.1 Extinguishing Media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Hydrogen Iodide

5.3 Advice for firefighters

Wear self contained breathing apparatus for fighting if necessary.

5.4 Further Information

No data available.



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6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13

7.1 Precautions for safe Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe Storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Handle and store under inert gas. Hygroscopic.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8.1 Control parameters

Components with workplace control Parameters.

8.2 Exposure Controls



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Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9.1 Information on Basic physical & chemical properties

a) Appearance	Form: solid
b) Odor	pungent
c) Odor Threshold	no data available
d) pH	5.4
e) Melting point/freezing Point	Melting point/range: 113°C - lit
f) Initial boiling point and	184 °C- lit



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Boiling range	
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower Flammability or explosive limits	no data available
k) Vapor pressure	0.41 hPa at 25 °C
l) Vapor density	8.76 – (air = 1.0)
m) Relative density	4.930 g/cm³
n) Water solubility	0.3 g/l at 20°C – slightly soluble
o) Partition coefficient: n-octanol /water	log Pow: 2.49 at 20 °C
p) Auto ignition Temperature	no data available
q) Decomposition Temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

9.2 Other safety Information

Relative vapour density 8,76 - (Air = 1.0)

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

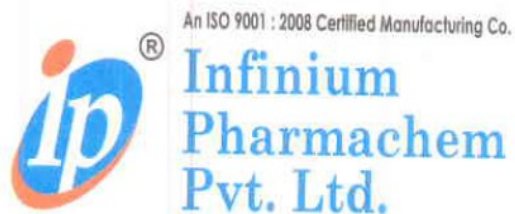
no data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Rubber, Plastics, Iron and iron salts., Sulphur compounds, Ammonia, Magnesium, Zinc, Aluminum, Metals, Alkalis, Antimony salts, Arsenites, bromides, chlorides, iodides, thiocyanates, ferrous salts, hypophosphites, morphine salts, oils, creosote, phosphates,



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tannins, tartrates, Mixing iodine, antimony, and ammonia resulted in an explosion. A violent reaction occurs between iodine and acetaldehyde, Acetylene, Acetaldehyde, Strong oxidizing agents.

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 14.000 mg/kg

Remarks: Diarrhoea

LC50 Inhalation - Rat - 4 h - > 4,588 mg/l

(OECD Test Guideline 403)

Remarks: Cough Respiratory disorder

LC50 Dermal - Rat - male - 1.425 mg/kg

(OPPTS 870.1200)

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: Moderate skin irritation

Serious eye damage/eye irritation

Moderate eye irritation

Respiratory or skin sensitization

- Mouse

Result: Does not cause skin sensitisation.

(OECD Test Guideline 429)

Germ cell mutagenicity

Hamster



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Embryo

Result: negative

Mutagenicity (micronucleus test)

Mouse - male and female

Result: negative

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory system.

Specific target organ toxicity - repeated exposure

Oral - Causes damage to organs through prolonged or repeated exposure. - Thyroid

Aspiration hazard

no data available

Additional Information

RTECS: NN1575000

Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include: skin rash, running nose, headache and irritation of the mucous membrane. For severe cases the skin may show pimples, boils, hives, blisters and black and blue spots. Iodides are readily diffused across the placenta. Neonatal deaths from respiratory distress secondary to goiter have been reported. Iodides have been known to cause drug-induced fevers, which are usually of short duration.

12.1 Persistence and degradability

no data available

12.2 Bioaccumulative potential



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no data available

12.3 Mobility in soil

no data available

12.4 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic(PBT), or very persistent and very bioaccumulative (vPvB0) at levels of 0.1 % or higher.

12.5 Toxicity

Toxicity to fish h	LC50 -Oncorhynchus mykiss (rainbow trout) - 1,7 mg/l - 96,0
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0,2 mg/l - 48 h
Toxicity to algae	Growth inhibition EC50 - Desmodesmus subspicatus (green algae) – 0.13 mg/l (OECD Test Guideline 201)

12.6 Other adverse effects

Very toxic to aquatic life.

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: -3495

IMDG: -3495

IATA: -3495

14.2 UN proper shipping name

ADR/RID: IODINE

IMDG : IODINE

IATA : Iodine

14.3 Transport hazard class(es)

ADR/RID: - (6.1) 8

IMDG: - (6.1)8

IATA: - (6.1)8

14.4 Packaging group



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ADR/RID: - III

IMDG: -III

IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

no data available

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

15.2 Chemical Safety Assessment

no data available

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Eye Irrit.	Eye irritation
H312	Harmful in contact with skin.
H312 + H332	Harmful in contact with skin or if inhaled
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE S	pecific target organ toxicity - single exposure

Full text of R-phrases referred to under sections 2 and 3

N	Dangerous for the environment
Xn	Harmful
R20/21	Harmful by inhalation and in contact with skin.
R50	Very toxic to aquatic organisms.



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MSDS Creation Date: 01-01-2015

Revision #1 Date: 31-12-2017

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