SAFETY DATA SHEET

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Catalogue No.	:	W 12079
Product Name	:	Wijs' solution; iodine monochloride in acetic acid glacial
Manufacturer/supplier identification		
Company	:	NICE Chemicals (P) Ltd., Cochin, India Tel - 0484 2800212, 2802755
Contact for information	:	Tel. No.- 0484 2802536 Fax : 0484 2802483
Emergency Telephone No.	:	0484 2801583 Tele fax No. : 0484 2802483

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No	Hazardous
Iodine Monochloride	7790-99-0	Yes
Acetic Acid	64-19-7	Yes

3. Hazards Identification

Emergency Overview

poison. Corrosive. Liquid and mist cause severe burns to all body tissue. May be fatal if swallowed. Harmful if inhaled. Inhalation may cause lung and tooth damage. Flammable liquid and vapor. May cause allergic skin or respiratory reaction.

Potential Health Effects

Inhalation:
Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat, and lungs. Breathing difficulties may occur. Neither odor nor degree of irritation are adequate to indicate vapor concentration.

Ingestion:
Swallowing can cause severe injury leading to death. Symptoms include sore throat, vomiting, and diarrhea. Ingestion of as little as 1.0 ml has resulted in perforation of the esophagus.

Skin Contact:
Contact with concentrated solution may cause serious damage to the skin. Effects may include redness, pain, skin burns. High vapor concentrations may cause skin sensitization.

Eye Contact:
Eye contact with concentrated solutions may cause severe eye damage followed by loss of sight. Exposure to vapor may cause intense watering and irritation to eyes.

Chronic Exposure:
Repeated or prolonged exposures may cause darkening of the skin, erosion of exposed
front teeth, and chronic inflammation of the nose, throat, and bronchial tubes. Chronic exposure to iodine may cause insomnia, conjunctivitis, inflammation of the nasal mucous, bronchitis, tremor, rapid heart beat, diarrhea and weight loss. Allergic sensitization may occur.

Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders, eye problems, impaired respiratory function, or disease of the thyroid, lungs, or kidney may be more susceptible to the effects of the substance.

4. FIRST AID MEASURES

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion:
If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Fire:
Flash point: 40C (104F) CC
Autoignition temperature: 427C (801F)
Flammable limits in air % by volume:
lel: 5.4; uel: 16.0
Listed fire and explosion data is for Concentrated Acetic Acid. Flammable Liquid and Vapor!
Explosion:
Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Reacts with most metals to produce hydrogen gas, which can form an explosive mixture with air. Sensitive to static discharge.
Fire Extinguishing Media:
Water, dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures. Water diluted acid can react with metals to form hydrogen gas.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Use water spray to dilute spill to a nonflammable mixture. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Use non-sparking tools and equipment. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Protect from freezing. Store above 17C

(63F). Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment :
Respiratory protection : Required when vapours/aerosols are generated
Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. **MIndustrial hygiene** : Immediately change contminated ing. Apply cloth skin protective barrier cream. Wash hands and face after working with substance. Under no circumstances eat or drink at workplace. Work under hood. Do not inhale substanceaintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical data below refers to Acetic Acid Glacial.

Form	:	Liquid
Colour	:	Colourless
Odour	:	Pungent
pH value at 10 g/l H_2O (20^0 C)	:	~ 2.5
Melting temperature	:	17 ^{0}C
Boiling temperature	:	118 ^{0}C
Ignition temperature	:	485 ^{0}C
Flash point	:	40 ^{0}C
Explosion limits lower	:	4 Vol %
Upper	:	17 Vol %
Relative vapour density	:	Not available
Density (20^0 C)	:	1.05 g/cm^3
Solubility in water (20^0C)	:	Soluble

10. STABILITY AND REACTIVITY

Stability:
Stable under ordinary conditions of use and storage. Heat and sunlight can contribute to instability. Releases heat and toxic, irritating vapors when mixed with water. Acetic acid contracts slightly upon freezing which may cause the container to burst.
Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition. May also release toxic and irritating vapors.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
Acetic Acid is incompatible with chromic acid, nitric acid, ethylene glycol, perchloric acid, phosphorous trichloride, oxidizers, sodium peroxide, strong caustics, most metals (except aluminum), carbonates, hydroxides, oxides, and phosphates.
Conditions to Avoid:
Heat, flame, ignition sources, freezing, incompatibles

11. TOXICOLOGICAL INFORMATION

Toxicological Data:
For Acetic Acid Component:

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For Acetic Acid Component:
Oral rat LD50: 3310 mg/kg; skin rabbit LD50: 1.06 g/kg; inhalation mouse LC50: 5620ppm/1-hr; investigated as a mutagen, reproductive effector.

Iodine Monochloride Component:
No LD50/LC50 information found relating to normal routes of occupational exposure.
Reproductive Toxicity:
Occasional uses of iodides for asthma in pregnancy has resulted in fetal death, severe goiter, and cretinoid appearance of the newborn.

--------\Cancer Lists\----------

	---NTP Carcinogen---		
Ingredient	Known	Anticipated	IARC Category
Iodine Monochloride (7790-99-0)	No	No	None
Acetic Acid (64-19-7)	No	No	None

12. ECOLOGICAL INFORMATION

Environmental Fate:
For Acetic Acid Component:
When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into air, this material is expected to have a half-life between 10 and 30 days. When released into water, this material is expected to readily biodegrade. When released into the water, this material is expected to have a half-life between 1 and 10 days. Standard dilution BOD5/TOD = 58% When released into the soil, this material is expected to readily biodegrade. This material is not expected to significantly bioaccumulate. This material has an estimated bioconcentration factor (BCF) of less than 100.
Environmental Toxicity:
For Acetic Acid Component:
This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

For glacial acetic acid:
EC50 (wheat fumigation) = 23.3 mg/m3/2-hr, effect: leaf injury
LC50 (shrimp) = 100 - 300 mg/l/48-hr
LC50 (fathead minnow) = 88 mg/l/96-hr
This material may be toxic to aquatic life.

13. DISPOSAL METHOD

There are no uniform EC regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste .

Disposal in compliance with official regulations. Handle contaminated packaging as In the same way as the substance itself. If not officially specified differently , non – contaminated packaging may be treated like household waste or recycled.

14. TRANSPORT INFORMATION

Domestic (Land, D.O.T.)

Proper Shipping Name: CORROSIVE LIQUID, FLAMMABLE,N.O.S. (ACETIC ACID, IODINE MONOCHLORIDE)
Hazard Class: 8, 3
UN/NA: UN2920
Packing Group: II
Information reported for product/size: 4L

International (Water, I.M.O.)

Proper Shipping Name: CORROSIVE LIQUID, FLAMMABLE,N.O.S. (ACETIC ACID, IODINE MONOCHLORIDE)
Hazard Class: 8, 3
UN/NA: UN2920
Packing Group: II
Information reported for product/size: 4L

International (Air, I.C.A.O.)

Proper Shipping Name: CORROSIVE LIQUID, FLAMMABLE,N.O.S. (ACETIC ACID, IODINE MONOCHLORIDE)
Hazard Class: 8, 3
UN/NA: UN2920
Packing Group: II
Information reported for product/size: 4L

15. REGULATORY INFORMATION

Labeling according to EC Directives

Symbol	:	C	Corrosive
R- Phrases	:	10-35	Flammable. Causes severe burns
S-phrases	:	23-26-45	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves & eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (Show the label where possible).
Water pollution class	:	1	(slightly polluting substance)

16. OTHER INFORMATION

Reason for alteration:

General update

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.