Safety Data Sheet

SECTION 1: Identification of the Substance/Mixture and of the Company.

1.1 Product Identification:

Product Name : Karl Fischer Solution

CAT Number : KEMICAS - relevant catalogue numbers

Reach Number : This product is a mixture.

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

Application of the Substance : Laboratory chemicals, not for food and drug

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier : KEMICAS

Email : info@kemicas.com

1.4: Emergency Telephone number

Emergency Number : +31(0)853012877

Section 2: Hazards Identification

2.1 Classification of the substance or mixture according to Regulation (EG 1272/2008)

Skin corrosion/irritation, Category 2, H315

Eye damage, Category 1, H318

Carcinogenicity, Category 2 H351

Reproductive toxicity, H360

Specific target organ toxicity – repeated exposure, Category 1, H372

For the full text of H-sentences mentioned, see Section 16

For the full text of R-sentences mentioned, see Section 16

2.2 GHS Label

GHS-Labelling Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word:

DANGER

Hazard Statements:

H315	Causes skin irritation.
H318	Causes serious eye damage**.**
H351	Suspected of causing cancer.
H360	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

P201	Obtain special instructions before use.
P280	Wear protective gloves, protective clothing, eye protection, face protection.
P314	Get medical advice/ attention if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Hazard Pictograms:

Signal word:

DANGER

Section 3: Composition / Information on Ingredients.

3.1 Substance

Component	CAS-No.	Concentration	Classification REGULATION (EC) No (1272/2008)
Karl Fischer Solution (Iodine, Imidazole, 2-Methylimidazole)	(7553-56-2, 288-32-4, 693-98-1)	According to the grade	Acute Tox. 4 Oral, H302 Acute Tox. 4 Dermal, H312 Skin Corr., H314 Skin Corr. 2, H315 Eye Dam. 1, H318 Eye Irrit. 2, H319 STOT SE 3, H335 Carc. 2, H351

			Repr. 1B, H360 STOT RE 1, H372 Aquatic Acute 1, H400

Section 4: First Aid Measures

4.1 Description of first aid measures

General Advice

First-aid personnel: ensure self-protection!

After inhalation: Fresh air. If breathing stops immediately apply mechanical ventilation, if necessary oxygen mask. Immediately call in physician.

After contact with skin: Wash off with plenty of water. Remove contaminated clothing.

After contact with eyes: Rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call in physician

After ingestion: Never give anything by mouth to an unconscious person. Make the victim drink plenty of water, do not induce vomiting. Call in physician.

4.2 Most Important symptoms and effects, both acute and delayed

Refer to labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

Section 5: Firefighting Measures.

5.1 Extinguishing media

Suitable Extinguishing Media

Use water, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from substance or mixture

Combustible. Vapours heavier than air. Forms explosive mixtures with air at ambient temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

5.4 Further information

No data available

Section 6: Accidental Release Measures.

6.1 Personal precautions, protective equipment and emergency procedures

Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

For personal protection, see section 8.

6.2 Environmental precautions

Do not allow to enter sewerage system.

6.3 Methods and materials for containment and cleaning up

Absorb on vermiculite, sand or a pillow from Chemical Spill Centre.

6.4 Reference to other sections

No information available

Section 7: Handling and Storage.

7.1 Precautions for safe handling

Keep away from sources of ignition. Take measures to prevent electrostatic charging. Work under hood. Do not inhale substance. For precautions, refer to section 2.2

7.2 Conditions for safe storage, including any incompatibilities

Closed in a well-ventilated place. Recommended storage temperature see product label.

7.3 Specific end use(s)

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

Section 8: Exposure Controls - Personal Protection.

8.1 Control parameters

No data available

8.2 Exposure controls

Engineering Measures

Protective clothing should be selected specifically for the working place, depending on concentration and

quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Individual Protection Measures

Immediately change contaminated clothing. Apply 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 substance.

Respiratory Protections

Required when vapours/aerosols are generated. The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye Protection

Required. Wear goggles.

Hand Protection

Required. Wear gloves

Body Protection

Required.

Environmental Exposure Controls

Do not allow to enter sewerage system, risk of explosion!

Section 9: Physical and Chemical Properties.

9.1 Information on basis physical

Appearance and Changes in Physical State

Form: Liquid

Color: Dark brown

Odour: No strong odour

Melting point: -

Boiling point: -

Flash point: -

Ignition temperature: -

Mol. Weight: -

Density: 1.19 g/cm3

pH value: -

Solubility in water: -

Relative density of saturated gas/air mixture : -

Explosion limits: -

Further information: -

9.2 Other data

No further relevant information available.

Section 10: Stability and Reactivity.

10.1 Reactivity

See section 10.3

10.2 Chemical stability

No further relevant information available.

10.3 Possibility of hazardous reactions

Exothermic reaction with: Strong oxidizing agents

Generates dangerous gases or fumes in contact with: Aluminium

Possible formation of: Hydrogen

Violent reactions possible with: Metals, Acid chlorides, Acid anhydrides, Acids, Strong oxidizing agents, Iron, in powder form

Risk of explosion with: Reducing agents, Alkali metals, Acetylene, Ammonia, Potassium, copper compounds, sodium, oxyhalogenic compounds, Boron, halogen oxides, iodides, azides, ammonium compounds antimony, mercury oxide, with Methanol and ethanol

Risk of ignition or formation of inflammable gases or vapours with: Powdered metals, Zinc, semimetals, halogen-halogen compounds, Non-metals, non-metallic oxides, alkali salts, Iron, Fluorine, Formaldehyde Hydrides, sodium phosphite, Phosphorus, sulphur, Titanium, powdered aluminium, Acetylidene, powdered magnesium, Petrol, butadiene, tert-Butyldimethylsilyl (S)-(+)-glycidyl ether, Diethyl ether, with Aluminium

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Aluminium, artificial and/or natural resins, Copper

10.6 Hazardous decomposition products

Peroxides

Section 11: Toxicological Information.

11.1 Information on toxicological effects

Acute oral toxicity	: LD50 orl. rat >2.00 mg/kg
Acute inhalation toxicity	: 4 h - > 5 mg/l
Acute dermal toxicity	: > 2.000 mg/kg
Skin irritation	: Mixture causes skin irritation.
Eye irritation	: Mixture causes serious eye damage.
Sensitisation	: No further relevant information available.
Germ cell mutagenicity	: No further relevant information available.
Carcinogenicity	: No further relevant information available.
Reproductive toxicity	: May harm the unborn child.
Teratogenicity	: No further relevant information available
Specific target organ toxicity - single exposure	: No further relevant information available.
Specific target organ toxicity - repeated exposure	: Mixture causes damage to organs through prolonged or repeated exposure. - Thyroid
Aspiration hazard	: No further relevant information available.

11.2 Further information

Handle in accordance with good industrial hygiene and safety practice. The substance should be handled with particular care.

Components

Iodine

Imidazole

2-Methylimidazole

Section 12: Ecological Information.

12.1 Toxicity

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bio accumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

No further relevant information available.

12.6 Other adverse effects

Do not allow to enter waters, wastewater, or soil!

Section 13: Disposal Considerations.

Product : Chemicals must be disposed of in compliance with the respective national regulations.

Packaging : KEMICAS product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

Section 14: Transport Information.

Land Transport (ADR/RID)

14.1 UN number	: -
14.2 Proper shipping name	: -
14.3 Class	: -
14.4 Packing	: -
14.5 Environmentally hazardous	: -
14.6 Special precautions for user	: No
14.7 Tunnel restriction code	: -

Inland waterway transport (ADN)

Not relevant

Air Transport (IATA)

14.1 UN number	: -
14.2 Proper shipping name	: -
14.3 Class	: -
14.4 Packing	: -
14.5 Environmentally hazardous	:-

14.6 Special precautions for user : No

Sea Transport (IMDG)

14.1 UN number : -

14.2 Proper shipping name : -

14.3 Class : -

14.4 Packing : -

14.5 Environmentally hazardous : -

14.6 Special precautions for user : No

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

Section 15: Regulatory Information.

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

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

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII). : Imidazole

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : 2-Methylimidazole

15.2 Chemical Safety Assessment

For this product, an assessment was not carry out.

Section 16: Other Information.

The information and recommendations in this SDS are to the best of KEMICAS knowledge, information and belief. KEMICAS cannot be held responsible for any damage resulting from any possible error in this publication.

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

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes severe skin burns and eye damage.
H318	May cause respiratory irritation
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

Exposure Scenario 1 (Industrial Use)

1. Industrial use Reagent for analysis, (Chemical production)

Sectors of end-use

SU 3 : Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 9 : Manufacture of fine chemicals

SU10 : Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)

Chemical product category

PC19 : Removed from PC list and relocated in the technical function list (Table R.12- 15)24.

PC21 : Laboratory chemicals

Process categories

PROC 1 : Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC 2 : Chemical production or refinery in closed

PROC 2 : Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC 3 : Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC 4 : Chemical production where opportunity for exposure arises

PROC 5 Mixing or blending in batch processes

PROC 8a : Transfer of substance or mixture (charging and discharging) at non- dedicated facilities 26

PROC 8b : Transfer of substance or mixture (charging and discharging) at dedicated facilities26

PROC 9 : Transfer of substance or mixture into small containers (dedicated filling line, weighing)

PROC10 : Roller application or brushing

PROC15 : Use as laboratory reagent

Environmental Release Categories

ERC 1 : Manufacture of the substance

ERC 2 : Formulation into mixture

ERC 4 : Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC 6a : Use of intermediate

ERC 6b : Use of reactive processing aid at industrial site (no inclusion into or onto article)

Exposure Scenario 2 (Professional Use)

1. Industrial use Reagent for analysis, (Chemical production)

Sectors of end-use

SU22 : Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category

PC21 : Laboratory chemicals

Process categories

PROC15 : Use as laboratory reagent

Environmental Release Categories

ERC 2 : Formulation into mixture

ERC 6a : Use of intermediate

ERC 6b : Use of reactive processing aid at industrial site (no inclusion into or onto article)

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