MULTI ION IC STANDARD - 6 COMPONENTS (Lithium (Li+) 0.5 mg/L; Sodium (Na+)2 mg/L; Ammonium (NH4+) 2.5 mg/L; Potassium (K+) 5 mg/L; Magnesium (Mg2+) 2.5 mg/L; Calcium (Ca2+) 5 mg/L in 0.1% Nitric Acid) - traceable to NIST

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 11/28/2024 Version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	MULTI ION IC STANDARD - 6 COMPONENTS (Lithium (Li+) 0.5 mg/L; Sodium (Na+)2 mg/L; Ammonium (NH4+) 2.5 mg/L; Potassium (K+) 5 mg/L; Magnesium (Mg2+) 2.5 mg/L; Calcium (Ca2+) 5 mg/L in 0.1% Nitric Acid) - traceable to NIST
Product code	:	F0057
Type of product	:	Solution

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

Relevant identified uses

Use of the substance/mixture	:	Laboratory chemicals Reagent

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663, F +91 22 6663 6699
info@lobachemie.com, www.lobachemie.com

1.4. Emergency telephone number

Emergency number	:	+ 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

May intensify fire; oxidiser.

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	NITRIC ACID 69% (7697-37-2)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
WATER	CAS-No.: 7732-18-5 EC-No.: 231-791-2	> 98	Not classified
NITRIC ACID 69%	CAS-No.: 7697-37-2 EC-No.: 231-714-2 EC Index-No.: 007-004-00-1	0.1	Ox. Liq. 3, H272 Skin Corr. 1, H314
SODIUM CHLORIDE	CAS-No.: 7647-14-5 EC-No.: 231-598-3	< 0.05	Not classified
POTASSIUM CHLORIDE	CAS-No.: 7447-40-7 EC-No.: 231-211-8	< 0.05	Not classified
MAGNESIUM CHLORIDE HEXAHYDRATE	CAS-No.: 7791-18-6 EC-No.: 232-094-6	< 0.05	Not classified
CALCIUM CARBONATE EXTRA PURE	CAS-No.: 471-34-1 EC-No.: 207-439-9	< 0.05	Not classified
LITHIUM CHLORIDE ANHYDROUS	CAS-No.: 7447-41-8 EC-No.: 231-212-3	< 0.05	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319
AMMONIUM CHLORIDE	CAS-No.: 12125-02-9 EC-No.: 235-186-4 EC Index-No.: 017-014-00-8	< 0.05	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider : First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation	:	Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	:	None under normal conditions.
Symptoms/effects after eye contact	:	None under normal conditions.
Symptoms/effects after ingestion	:	None under normal conditions.

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	:	Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	May intensify fire; oxidiser.
Explosion hazard	:	No direct explosion hazard.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	:	Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment.
Emergency procedures	:	Ventilate spillage area. No open flames, no sparks, and no smoking.

For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	:	Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	:	Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	:	Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	Keep cool. Protect from sunlight.
Incompatible materials	:	combustible materials.
Packaging materials	:	Store always product in container of same material as original container.

Switzerland

Storage class (LK)	:	LK 10/12 - Liquids

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

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:
Wear recommended personal protective equipment.
Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Chemical goggles or safety glasses

Skin protection

Skin and body protection:
Wear a mask

Hand protection:
Protective gloves

Respiratory protection

Respiratory protection:
Wear appropriate mask

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless.
Appearance	:	Clear liquid.
Odour	:	Odourless.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	≈ 0 °C
Boiling point	:	≈ 100 °C
Flammability	:	Non flammable.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Solubility	:	Water: Miscible with water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	≈ 1 g/cm³
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

May intensify fire; oxidiser.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Combustible materials.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified

WATER (7732-18-5)	
pH	6 – 8 at 25 °C

SODIUM CHLORIDE (7647-14-5)	
pH	5 – 8 at 20°C

POTASSIUM CHLORIDE (7447-40-7)	
pH	5.5 – 8.5 (2% Aqueous solution)

MAGNESIUM CHLORIDE HEXAHYDRATE (7791-18-6)	
pH	4.5 – 7 at 20°C

CALCIUM CARBONATE EXTRA PURE (471-34-1)	
pH	8 – 9 (10% solution at 25°C)

LITHIUM CHLORIDE ANHYDROUS (7447-41-8)	
pH	7 – 8

AMMONIUM CHLORIDE (12125-02-9)	
pH	4.5 – 5.5 (5% Aqueous solution at 25°C)

NITRIC ACID 69% (7697-37-2)	
pH	< 1 at 20°C

Serious eye damage/irritation : Not classified

WATER (7732-18-5)	
pH	6 – 8 at 25 °C

SODIUM CHLORIDE (7647-14-5)	
pH	5 – 8 at 20°C

POTASSIUM CHLORIDE (7447-40-7)	
pH	5.5 – 8.5 (2% Aqueous solution)

MAGNESIUM CHLORIDE HEXAHYDRATE (7791-18-6)	
pH	4.5 – 7 at 20°C

CALCIUM CARBONATE EXTRA PURE (471-34-1)	
pH	8 – 9 (10% solution at 25°C)

LITHIUM CHLORIDE ANHYDROUS (7447-41-8)	
pH	7 – 8

AMMONIUM CHLORIDE (12125-02-9)	
pH	4.5 – 5.5 (5% Aqueous solution at 25°C)

NITRIC ACID 69% (7697-37-2)	
pH	< 1 at 20°C

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

WATER (7732-18-5)	
Viscosity, kinematic	0.894 mm²/s

SODIUM CHLORIDE (7647-14-5)	
Viscosity, kinematic	Not applicable

POTASSIUM CHLORIDE (7447-40-7)	
Viscosity, kinematic	Not applicable

MAGNESIUM CHLORIDE HEXAHYDRATE (7791-18-6)	
Viscosity, kinematic	Not applicable

CALCIUM CARBONATE EXTRA PURE (471-34-1)	
Viscosity, kinematic	Not applicable

LITHIUM CHLORIDE ANHYDROUS (7447-41-8)	
Viscosity, kinematic	Not applicable

AMMONIUM CHLORIDE (12125-02-9)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

12.2. Persistence and degradability

MULTI ION IC STANDARD - 6 COMPONENTS (Lithium (Li+) 0.5 mg/L; Sodium (Na+)2 mg/L; Ammonium (NH4+) 2.5 mg/L; Potassium (K+) 5 mg/L; Magnesium (Mg2+) 2.5 mg/L; Calcium (Ca2+) 5 mg/L in 0.1% Nitric Acid) - traceable to NIST	
Persistence and degradability	Rapidly degradable

WATER (7732-18-5)	
Persistence and degradability	Rapidly degradable

SODIUM CHLORIDE (7647-14-5)	
Persistence and degradability	Rapidly degradable

POTASSIUM CHLORIDE (7447-40-7)	
Persistence and degradability	Rapidly degradable

MAGNESIUM CHLORIDE HEXAHYDRATE (7791-18-6)	
Persistence and degradability	Rapidly degradable

CALCIUM CARBONATE EXTRA PURE (471-34-1)	
Persistence and degradability	Rapidly degradable

LITHIUM CHLORIDE ANHYDROUS (7447-41-8)	
Persistence and degradability	Rapidly degradable

AMMONIUM CHLORIDE (12125-02-9)	
Persistence and degradability	Rapidly degradable

NITRIC ACID 69% (7697-37-2)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

LITHIUM CHLORIDE ANHYDROUS (7447-41-8)	
Partition coefficient n-octanol/water (Log Pow)	-2.7

NITRIC ACID 69% (7697-37-2)	
Partition coefficient n-octanol/water (Log Pow)	-2.3 (OECD 107: Shake Flask Method)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	:	Disposal must be done according to official regulations.
Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Disposal must be done according to official regulations.
Additional information	:	Do not re-use empty containers.

SECTION 14: Transport information

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

14.1. UN number or ID number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	Not regulated
Proper Shipping Name (IMDG)	:	Not regulated
Proper Shipping Name (IATA)	:	Not regulated
Proper Shipping Name (ADN)	:	Not regulated
Proper Shipping Name (RID)	:	Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

ADN

Transport hazard class(es) (ADN) : Not regulated

RID

Transport hazard class(es) (RID) : Not regulated

14.4. Packing group

Packing group (ADR)	:	Not regulated
Packing group (IMDG)	:	Not regulated
Packing group (IATA)	:	Not regulated

Packing group (ADN) : Not regulated
Packing group (RID) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(a)	MULTI ION IC STANDARD - 6 COMPONENTS (Lithium (Li+) 0.5 mg/L; Sodium (Na+)2 mg/L; Ammonium (NH4+) 2.5 mg/L; Potassium (K+) 5 mg/L; Magnesium (Mg2+) 2.5 mg/L; Calcium (Ca2+) 5 mg/L in 0.1% Nitric Acid) - traceable to NIST ; NITRIC ACID 69%
3(b)	NITRIC ACID 69%

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)
ANNEX I RESTRICTED EXPLOSIVES PRECURSORS
List of substances which are not to be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported within 24 hours.

Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Nitric acid	7697-37-2	3 % w/w	10% w/w	ex 2808 00 00	ex 3824 99 96

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

France

Occupational diseases	
Code	Description
RG 67	Nasal septum lesions caused by potassium chloride dust in potash mines and their dependencies
RG 78	Diseases caused by sodium chloride in salt mines and their dependencies

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK) : WGK nwg, Non-hazardous to water (Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : MAGNESIUM CHLORIDE HEXAHYDRATE is listed
SZW-lijst van mutagene stoffen : MAGNESIUM CHLORIDE HEXAHYDRATE is listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : LITHIUM CHLORIDE ANHYDROUS is listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : LITHIUM CHLORIDE ANHYDROUS is listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : LITHIUM CHLORIDE ANHYDROUS is listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative

Abbreviations and acronyms:	
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
Ox. Liq. 3	Oxidising Liquids, Category 3
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

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.