

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 04/14/2011

Reviewed on 04/14/2011

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

- Product identifier
- Trade name: **ICAP 6000 Multi-element test solution**
- Article number: 430122821401
- Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the preparation Certified Reference Material
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
Thermo Fisher Scientific
Solaar House
19 Mercers Row
CAMBRIDGE
Cambridgeshire
CB5 8BZ
- Information department: product safety department
- Emergency telephone number:
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazards identification

- Classification of the substance or mixture The product is not classified according to the Globally Harmonized System (GHS).
- Label elements
- GHS label elements Void
- Hazard pictograms Void
- Signal word Void
- Hazard statements Void
- Classification system:
- NFPA ratings (scale 0 - 4)



- HMIS-ratings (scale 0 - 4)



- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.
- Dangerous components: Void

Chemical identification of the substance/preparation

7697-37-2	nitric acid	⚠ H272; ⚠ H314	0.2%
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate		0.001%
7440-02-0	nickel	⚠ H351; ⚠ H317	0.001%
7440-09-7	Potassium from Potassium nitrate		0.001%
7429-90-5	aluminium		0.0001%
7440-50-8	copper		0.0001%
7439-96-5	manganese		0.0001%
7732-18-5	water, distilled, conductivity or of similar purity		99.798%

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4 First aid measures*Description of first aid measures*

- *General information: No special measures required.*
- *After inhalation: Supply fresh air; consult doctor in case of complaints.*
- *After skin contact: Generally the product does not irritate the skin.*
- *After eye contact: Rinse opened eye for several minutes under running water.*
- *After swallowing: If symptoms persist consult doctor.*
- *Information for doctor:*
- *Most important symptoms and effects, both acute and delayed No further relevant information available.*
- *Indication of any immediate medical attention and special treatment needed No further relevant information available.*

5 Firefighting measures*Extinguishing media*

- *Suitable extinguishing agents: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*
- *Special hazards arising from the substance or mixture No further relevant information available.*
- *Advice for firefighters*
- *Protective equipment: No special measures required.*

6 Accidental release measures*Personal precautions, protective equipment and emergency procedures Not required.*

- *Environmental precautions: Do not allow to enter sewers/ surface or ground water.*
- *Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*
- *Reference to other sections*
- *No dangerous substances are released.*
- *See Section 7 for information on safe handling.*
- *See Section 8 for information on personal protection equipment.*
- *See Section 13 for disposal information.*

7 Handling and storage*Handling:*

- *Precautions for safe handling*
- *No special measures required.*
- *Follow good laboratory practices.*
- *Information about protection against explosions and fires: No special measures required.*
- *Conditions for safe storage, including any incompatibilities*
- *Storage:*
- *Requirements to be met by storerooms and receptacles: No special requirements.*
- *Information about storage in one common storage facility: Not required.*
- *Further information about storage conditions: None.*
- *Specific end use(s) No further relevant information available.*

8 Exposure controls/personal protection*Additional information about design of technical systems: No further data; see item 7.**Control parameters**Components with limit values that require monitoring at the workplace:*

- *The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*
- *Additional information: The lists that were valid during the creation were used as basis.*

*Exposure controls**Personal protective equipment:*

- *General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.*

*Breathing equipment: Not required.**Protection of hands:*

- *The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Color:	According to product specification
Odor:	Characteristic
Odour threshold:	Not determined.

pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100°C

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure at 20°C: 23 hPa

Density at 20°C:	1,00107 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

Segregation coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	0.0 %
Water:	99.8 %

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity

· Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: No irritating effect.

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· Sensitization: No sensitizing effects known.

12 Ecological information

· Toxicity

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.

· Additional ecological information:

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

· DOT regulations:

Hazard class: -

· Land transport ADR/RID (cross-border):

ADR/RID class: -

· Maritime transport IMDG:

IMDG Class: -

· Marine pollutant: No

· Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -

· UN "Model Regulation": -

- 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

· Sara

· Section 355 (extremely hazardous substances):

7697-37-2 | nitric acid

· Section 313 (Specific toxic chemical listings):

7697-37-2 | nitric acid

7440-02-0 | nickel

7429-90-5 | aluminium

7440-50-8 | copper

7439-96-5 | manganese

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

7440-02-0 | nickel

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· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

7440-50-8 copper D

7439-96-5 manganese D

· IARC (International Agency for Research on Cancer)

7440-02-0 nickel 2B

· NTP (National Toxicology Program)

7440-02-0 nickel R

· TLV (Threshold Limit Value established by ACGIH)

7440-02-0 nickel A5

7429-90-5 aluminium A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

7440-02-0 nickel

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing MSDS: product safety department

· Contact:

Thermo Fisher Scientific

+44 (0) 1223-347400

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

USA