

Safety Data Sheet

According to OSHA and ANSI

Printing date 01/31/2013

Reviewed on 01/22/2007

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

Product identifier

Product name: Yttrium, plasma standard solution, Specpure[®],
Y 10000 µg/ml

Stock number: 14422

EC number:

231-714-2

Index number:

007-004-00-1

Details of the supplier of the safety data sheet
Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



C; Corrosive

R34: Causes burns.

Information concerning particular hazards for human and environment: Not applicable

Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms


GHS05

Signal word Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description:
WHMIS classification

D2B - Toxic material causing other toxic effects

E - Corrosive material



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Classification system**HMIS ratings (scale 0-4)****(Hazardous Materials Identification System)**

HEALTH	1
FIRE	0
REACTIVITY	0

Health (acute effects) = 1

Flammability = 0

Reactivity = 0

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

3 Composition/information on ingredients

Chemical characterization: Substances**CAS# Description:**Yttrium, plasma standard solution, Specpure[®],
Y 10000 µg/ml**Identification number(s):****EC number:** 231-714-2**Index number:** 007-004-00-1**Additional information:**Elements and concentrations in micrograms/milliliter are as follows (balance is water):
Y 10000

4 First aid measures

Description of first aid measures**General information** Immediately remove any clothing soiled by the product.**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek medical treatment.**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**

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Nitrogen oxides (NOx)

Advice for firefighters**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

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Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Reference to other sections
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

Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires: No information known.

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:

Store away from metals.
Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.

Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

Nitric acid

	ppm
ACGIH TLV	2; 4-STEL
Austria MAK	2
Belgium TWA	2; 4-STEL
Denmark TWA	2
Finland TWA	2; 5-STEL (skin)
France VME	2; 5-VLE
Germany MAK	2
Hungary STEL	5
Japan OEL	2
Korea TLV	2; 4-STEL
Netherlands TWA	2
Norway TWA	2
Poland TWA	5 mg/m ³ ; 10 mg/m ³ -STEL
Russia TWA	2; 2-STEL (skin)
Sweden NGV	2; 5-KTV
Switzerland TWA	2; 4-STEL
United Kingdom LTEL	2; 4-STEL
USA PEL	2

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Yttrium and compounds, as Y
mg/m³

ACGIH TLV	1
Austria MAK	1
Belgium TWA	1
Denmark TWA	1
Finland TWA	1
France VME	1
Germany MAK	5
Korea TLV	1
Netherlands MAC-TGG	1
Norway TWA	1
Poland TWA	1
Switzerland MAK-W	1
United Kingdom TWA	1; 3-STEL
USA PEL	1

Additional information: No data**Exposure controls****Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection:

Tightly sealed goggles

Full face protection

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Liquid
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value:	Not determined.
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Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Approx. 1 °C (Approx. 34 °F)
Sublimation temperature / start:	Not determined

Flash point:	Not applicable
Flammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.

Danger of explosion:	Product does not present an explosion hazard.
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Explosion limits:

Lower:	Not determined
Upper:	Not determined

Vapor pressure:	Not determined
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Density at 20°C (68 °F):	Approx. 1 g/cm ³ (Approx. 8.345 lbs/gal)
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Relative density	Not determined.
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Vapor density	Not determined.
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Evaporation rate	Not determined.
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Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic:

Not determined.

kinematic:

Not determined.

Other information

No further relevant information available.

10 Stability and reactivity

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions

Water reacts violently with alkali metals.

Reacts with alkali and metals

Incompatible materials:

Bases

Sulfides

Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.

Hazardous decomposition products: Nitrogen oxides

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral: LDLo: 430 mg/kg (hmn) (HNO₃)

Unreported: LDLo: 110 mg/kg (man) (HNO₃)

Primary irritant effect:

on the skin:

Irritant to skin and mucous membranes.

Corrosive effect on skin and mucous membranes.

on the eye:

Irritating effect.

Strong corrosive effect.

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:

Nitric acid causes burns on contact. Eye contact may cause blindness. Vapors are irritating and cause upper respiratory irritation which may be severe. Corrosive to the teeth and digestive tract on ingestion. Dilute solutions have reduced effects.

Yttrium is similar to the lanthanons and may have an anticoagulant effect on blood. Exposure to lanthanons may also lead to sensitivity to heat, itching, increased awareness of odor and taste, and liver damage.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

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:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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Other adverse effects No further relevant information available.

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13 Disposal considerations

Waste treatment methods

Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number

DOT, ADR, IMDG, IATA

UN3264

UN proper shipping name

DOT

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Nitric acid)

ADR

3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Nitric acid)

IMDG, IATA

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

Transport hazard class(es)

DOT



Class

8 Corrosive substances.

Label

8

ADR



Class

8 (C1) Corrosive substances

Label

8

IMDG, IATA



Class

8 Corrosive substances.

Label

8

Packing group

DOT, ADR, IMDG, IATA

III

Environmental hazards:

Marine pollutant:

No

Special precautions for user

Warning: Corrosive substances

Danger code (Kemler):

80

Segregation groups

Acids

Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code

Not applicable.

UN "Model Regulation":

UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC,
N.O.S. (Nitric acid), 8, III

15 Regulatory information

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

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

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Information about limitation of use:

For use only by technically qualified individuals.

This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57

Substance is not listed.

REACH - Pre-registered substances Substance is not listed.

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

16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact:

Zachariah C. Holt

Global EHS Manager

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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

USA