

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/10/2010

Reviewed on 05/10/2010

1 Identification of substance

Product details

- Trade name: Custom Claritas Standard
- Article number: ZPURDIN-52-100
- Application of the substance / the preparation Certified Reference Material
- Manufacturer/Supplier:
SPEX CertiPrep
203 Norcross Avenue
Metuchen, NJ 08840
USA
- Information department: product safety department
- Emergency information:
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Composition/Data on components

- Chemical characterization
- Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

7697-37-2	nitric acid	Danger: 3.2/1A	10.0%
7440-61-1	Uranium from Uranyl Nitrate Hexahydrate	Danger: 3.1.O/2, 3.1.I/2 Warning: 3.9/2 4.1.C/2	0.1%

Chemical identification of the substance/preparation

7732-18-5	water, distilled, conductivity or of similar purity		88.4%
7440-45-1	Cerium from Cerium(III) nitrate hexahydrate	Danger: 3.3/1	0.1%
7429-91-6	Dysprosium from Didysprosium trioxide		0.1%
7440-52-0	Erbium from Erbium(III) oxide	Warning: 3.2/2, 3.3/2A, 3.8/3	0.1%
7440-53-1	Europium from Europium(III) oxide	Warning: 3.2/2, 3.3/2A, 3.8/3	0.1%
7440-54-2	Gadolinium from Digadolinium trioxide		0.1%
7440-60-0	Holmium from Holmium oxide		0.1%
7439-91-0	Lanthanum from Lanthanum(III) nitrate hexahydrate	Warning: 3.2/2, 3.3/2A, 3.8/3	0.1%
7439-94-3	Lutetium from Lutetium (III) Oxide	Warning: 3.2/2, 3.3/2A, 3.8/3	0.1%
7440-00-8	Neodymium from Neodymium Oxide		0.1%
7440-10-0	Praseodymium from Praseodymium(III,IV) oxide	Warning: 3.2/2, 3.3/2A, 3.8/3	0.1%
7440-19-9	Samarium from Samarium (III) oxide		0.1%
7440-27-9	Terbium from Terbium (III,IV) oxide		0.1%
7440-29-1	Thorium from Thorium nitrate hydrate	Danger: 3.1.O/3, 3.2/2, 3.3/2A, 3.8/3 Warning: 3.9/2	0.1%
7440-30-4	Thulium from Thulium oxide	Warning: 3.2/2, 3.3/2A, 3.8/3	0.1%
7440-65-5	Yttrium from Yttrium oxide		0.1%

3 Hazards identification

Hazard description:



Corrosive

- Information pertaining to particular dangers for man and environment:
The product has to be labelled due to the calculation procedure of international guidelines.
Harmful by inhalation and if swallowed.
Causes severe burns.

Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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· NFPA ratings (scale 0 - 4)



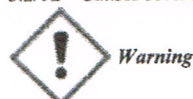
· HMIS-ratings (scale 0 - 4)

HEALTH	4	Health = 4
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· GHS label elements



3.2/1B - Causes severe skin burns and eye damage.



3.1/4 - Harmful if swallowed.

· Prevention:

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

· Response:

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

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

Immediately call a POISON CENTER or doctor/physician.

· Storage:

Store locked up.

· Disposal:

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

4 First aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

5 Fire fighting measures

· Suitable extinguishing agents: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.

· Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.

· Measures for cleaning/collecting:

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

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

7697-37-2 nitric acid

PEL 5 mg/m³, 2 ppmREL Short-term value: 10 mg/m³, 4 ppmLong-term value: 5 mg/m³, 2 ppmTLV Short-term value: 10 mg/m³, 4 ppmLong-term value: 5.2 mg/m³, 2 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

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.

- **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:**



Tightly sealed goggles

9 Physical and chemical properties

- **General Information**

Form: Fluid
 Color: According to product specification
 Odor: Characteristic

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 83°C (181°F)

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· Flash point:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor pressure at 20°C (68°F):	23 hPa (17 mm Hg)
· Density:	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Solvent content:	
Organic solvents:	0.0 %
Water:	88.4 %
· Solids content:	1.6 %

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Dangerous reactions: No dangerous reactions known.
- Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:
- Primary irritant effect:
 - on the skin: Strong caustic effect on skin and mucous membranes.
 - on the eye: Strong caustic effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

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

12 Ecological information

- General notes:

Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- Product:
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- DOT regulations:



- Hazard class: 8
- Identification number: UN3264
- Packing group: III
- Proper shipping name (technical name): CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

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· Label 8

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



· ADR/RID class: 8 Corrosive substances
 · Danger code (Kemler): 80
 · UN-Number: 3264
 · Packaging group: III
 · Label: 8
 · Description of goods: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

· Maritime transport IMDG:



· IMDG Class: 8
 · UN Number: 3264
 · Label: 8
 · Packaging group: III
 · EMS Number: F-A,S-B
 · Marine pollutant: No
 · Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class: 8
 · UN/ID Number: 3264
 · Label: 8
 · Packaging group: III
 · Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

· UN "Model Regulation": UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III

15 Regulations

· Sara

· Section 355 (extremely hazardous substances):

7697-37-2 nitric acid

· Section 313 (Specific toxic chemical listings):

7697-37-2 nitric acid

· TSCA (Toxic Substances Control Act):

7732-18-5 water, distilled, conductivity or of similar purity

7697-37-2 nitric acid

7429-91-6 Dysprosium from Didysprosium trioxide

7440-52-0 Erbium from Erbium(III) oxide

7440-53-1 Europium from Europium(III) oxide

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7440-30-4 Thulium from Thulium oxide

7440-65-5 Yttrium from Yttrium oxide

• **Proposition 65**• **Chemicals known to cause cancer:**

None of the ingredients is listed.

• **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)**

None of the ingredients is listed.

• **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

• **NTP (National Toxicology Program)**

None of the ingredients is listed.

• **TLV (Threshold Limit Value established by ACGIH)**

7440-61-1 Uranium from Uranyl Nitrate Hexahydrate

A1

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

7440-61-1 Uranium from Uranyl Nitrate Hexahydrate

• **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

• **Product related hazard informations:** The product has been classified and marked in accordance with directives on hazardous materials.• **Hazard symbols:**Corrosive₂• **Hazard-determining components of labelling:**Uranium from Uranyl Nitrate Hexahydrate
nitric acid• **Risk phrases:**Harmful by inhalation and if swallowed.
Causes severe burns.• **Safety phrases:**Keep locked up and out of the reach of children.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Dispose of this material and its container to hazardous or special waste collection point.**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:**SPEX CertiPrep Inc.
732-549-7144• **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)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

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