

Printing date 07/30/2016

Reviewed on 07/30/2016

1 Identification

- **Product name**
- **Trade name:** Tris(n-propylcyclopentadienyl)yttrium (99.9%-Y) (REO)
- **Item number:** 39-5100
- **CAS Number:**
329735-73-1
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Strem Chemicals, Inc.
7 Mulliken Way
NEWBURYPORT, MA 01950
USA
info@strem.com
- **Information department:** Technical Department
- **Emergency telephone number:**
EMERGENCY: CHEMTREC: + 1 (800) 424-9300
During normal opening times: +1 (978) 499-1600

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Sol. 1 H228 Flammable solid.

- **Label elements**
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**
H228 Flammable solid.
- **Precautionary statements**

P231	Handle under inert gas.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P422	Store contents under inert gas.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

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Safety Data Sheet according to OSHA HCS

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	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 No. Description**
329735-73-1 Tris(n-propylcyclopentadienyl)yttrium (99.9%-Y) (REO)

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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. Then consult a doctor.
- **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 Fire-fighting 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**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** No special measures required.

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- **Methods and material for containment and cleaning up:**
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:** Handle under inert gas.
- **Precautions for safe handling** Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** Store contents under inert gas.
- **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.
Store in cool, dry conditions in well sealed receptacles.
- **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:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **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.

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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:** Safety glasses

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Solid
Color:	Yellow

Odor:	Characteristic
Odor threshold:	Not determined.

pH-value:	Not applicable.
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- **Change in condition**

Melting point/Melting range:	no data °C
Boiling point/Boiling range:	no data °C

Flash point:	Not applicable.
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Flammability (solid, gaseous):	Flammable.
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- **Ignition temperature:**

Decomposition temperature:	Not determined.
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Auto igniting:	Not determined.
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Danger of explosion:	Not determined.
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- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

Vapor pressure:	no data hPa
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Density:	Not determined.
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Relative density	Not determined.
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Vapor density	Not applicable.
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Evaporation rate	Not applicable.
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- **Solubility in / Miscibility with**

Water:	Insoluble.
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Partition coefficient (n-octanol/water):	Not determined.
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- **Viscosity:**

Dynamic:	Not applicable.
Kinematic:	Not applicable.

- **Solvent content:**

Organic solvents:	0.0 %
VOC content:	0.0 g/l / 0.00 lb/gl

Solids content:	100.0 %
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· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **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.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

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

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

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:** Not known to be hazardous to water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **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

· UN-Number	UN1325
· DOT, IMDG, IATA	
· UN proper shipping name	Flammable solids, organic, n.o.s.
· DOT, IATA	FLAMMABLE SOLID, ORGANIC, N.O.S.
· IMDG	
· Transport hazard class(es)	
· DOT	
	
· Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives
· Label	4.1
· IMDG	
	
· Class	4
· Label	4.1
· IATA	
	
· Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives
· Label	4.1
· Packing group	
· DOT, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· EMS Number:	F-A,S-G

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- | | |
|--|--|
| · Stowage Category | B |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · DOT | |
| · Quantity limitations | On passenger aircraft/rail: 15 kg
On cargo aircraft only: 50 kg |
| · UN "Model Regulation": | UN 1325 FLAMMABLE SOLIDS, ORGANIC, N.O.S., 4.1, II |

15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**

Substance is not listed.

- **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

- **TSCA (Toxic Substances Control Act):**

Substance is not listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity:**

Substance is not listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02

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Trade name: Tris(n-propylcyclopentadienyl)yttrium (99.9%-Y) (REO)

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- **Signal word** *Danger*
- **Hazard statements**
H228 *Flammable solid.*
- **Precautionary statements**
 - P231 *Handle under inert gas.*
 - P210 *Keep away from heat/sparks/open flames/hot surfaces. No smoking.*
 - P305+P351+P338 *If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 - P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*
 - P422 *Store contents under inert gas.*
 - P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **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 SDS:** *Technical Department.*
- **Contact:** *Technical Director*
- **Date of preparation / last revision** *07/30/2016 / -*
- **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*
 - ACGIH: *American Conference of Governmental Industrial Hygienists*
 - CAS: *Chemical Abstracts Service (division of the American Chemical Society)*
 - NFPA: *National Fire Protection Association (USA)*
 - HMIS: *Hazardous Materials Identification System (USA)*
 - VOC: *Volatile Organic Compounds (USA, EU)*
 - PBT: *Persistent, Bioaccumulative and Toxic*
 - vPvB: *very Persistent and very Bioaccumulative*
 - NIOSH: *National Institute for Occupational Safety*
 - OSHA: *Occupational Safety & Health*
 - TLV: *Threshold Limit Value*
 - PEL: *Permissible Exposure Limit*
 - REL: *Recommended Exposure Limit*
 - Flam. Sol. 1: *Flammable solids, Hazard Category 1*