

Printing date 09/12/2018

Reviewed on 09/12/2018

## 1 Identification

- **Product identifier**
- **Trade name:** TEVA Resin - C
- **Article number:**  
TE-C20-A, TE-C50-A, TE5-C20-A, TE8-C20-A, TE10-C20-A, SA-TE-C01-A, PSF-TE-C01-A
- **Application of the substance / the mixture** Selective resin for actinides (IV) and Tc separation
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Triskem International SAS  
ZAC de l'Eperon  
3 rue des Champs Géons  
35170 Bruz  
FRANCE  
contact@triskem.fr
- **Information department:** Product safety department
- **Emergency telephone number:**  
+33 2 99050009 (Office hours)  
+01-800-424-9300 (CHEMTREC)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.

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



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
Trioctylmethylammonium chloride
- **Hazard statements**  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.
- **Precautionary statements**  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves / eye protection / face protection.  
If swallowed: Call a poison center/doctor if you feel unwell.  
Rinse mouth.  
If on skin: Wash with plenty of water.

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Specific treatment (see on this label).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If eye irritation persists: Get medical advice/attention.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
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: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

polymeric support	2.5-10%
HNO <sub>3</sub> pH2	50-100%
63393-96-4 Trioctylmethylammonium chloride	2.5-10%

## 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, 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:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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· **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide (CO)

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Particular danger of slipping on leaked/spilled product.

· **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb liquid components with liquid-binding material.

Dispose contaminated material as waste according to item 13.

Pick up mechanically.

· **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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

63393-96-4 Trioctylmethylammonium chloride

2.3 mg/m<sup>3</sup>

· **PAC-2:**

63393-96-4 Trioctylmethylammonium chloride

25 mg/m<sup>3</sup>

· **PAC-3:**

63393-96-4 Trioctylmethylammonium chloride

150 mg/m<sup>3</sup>

## 7 Handling and storage

· **Handling:**

· **Precautions for safe handling** No special precautions are necessary if used correctly.

· **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:**

Keep receptacle tightly sealed.

Protect from exposure to the light.

· **Specific end use(s)**

The resin is preconditioned in a 0.01M HNO<sub>3</sub> solution.

Advised temperature of use: 20-25°C

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## 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:**  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.  
Do not eat, drink, smoke or sniff while working.
- **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. 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.
- **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:**

<b>Form:</b>	Powder in suspension
<b>Color:</b>	White
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.
- **pH-value at 20 °C (68 °F):** 2
- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.
- **Flash point:** Not applicable.

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- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:** 250 °C (482 °F)
- **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:** Not applicable.
- **Density at 20 °C (68 °F):** 0.35 g/cm<sup>3</sup> (2.92 lbs/gal)
- **Relative density** Not determined.
- **Vapor density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with**
  - Water:** Insoluble.
- **Particle size** 100-150µm
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not applicable.
  - Kinematic:** Not applicable.
- **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**
  - Reacts with strong oxidizing agents.
  - Reacts with flammable substances.
  - Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - on the skin:** No irritant effect.
  - on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
  - The product shows the following dangers according to internally approved calculation methods for preparations:
  - Irritant

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- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**  
None of the ingredients is listed.
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**  
None of the ingredients is 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.
- **Ecotoxical effects:**
- **Remark:** Toxic for fish
- **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.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **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:**  
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**
  - **DOT, ADR, IMDG, IATA**
  - **UN proper shipping name**
  - **DOT**
  - **ADR**
- UN3077  
-  
Environmentally hazardous substances, solid, n.o.s.  
(NITRIC ACID 0.01M, Trioctylmethylammonium chloride)  
3077 Environmentally hazardous substances, solid, n.o.s.  
(NITRIC ACID 0.01M, Trioctylmethylammonium chloride)

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· **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (NITRIC ACID 0.01M, Trioctylmethylammonium chloride), MARINE POLLUTANT

· **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (NITRIC ACID 0.01M, Trioctylmethylammonium chloride)

· **Transport hazard class(es)**

· **DOT, ADR, IMDG, IATA**



· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**

-

· **DOT, ADR, IMDG, IATA**

III

· **Environmental hazards:**

Product contains environmentally hazardous substances: Trioctylmethylammonium chloride

· **Marine pollutant:**

Yes

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **Special precautions for user**

Symbol (fish and tree)

· **Danger code (Kemler):**

Warning: Miscellaneous dangerous substances and articles

· **EMS Number:**

90

· **Stowage Category**

F-A,S-F

· **Stowage Code**

A

SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

· **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: No limit

On cargo aircraft only: No limit

· **Remarks:**

Special marking with the symbol (fish and tree).

· **ADR**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **IMDG**

· **Limited quantities (LQ)**

5 kg

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (NITRIC ACID 0.01M, TRIOCTYLMETHYLAMMONIUM CHLORIDE), 9, III

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## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):**  
None of the ingredients is listed.
- **Section 313 (Specific toxic chemical listings):**  
None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act):**  
63393-96-4 Trioctylmethylammonium chloride
- **TSCA new (21st Century Act) (Substances not listed)**  
HNO3 pH2  
Acrylic copolymer
- **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.
- **TLV (Threshold Limit Value established by ACGIH)**  
None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**  
None of the ingredients is listed.
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
Trioctylmethylammonium chloride
- **Hazard statements**  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.
- **Precautionary statements**  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.

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Wear protective gloves / eye protection / face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

Specific treatment (see on this label).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If eye irritation persists: Get medical advice/attention.

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:** Product safety department

· **Date of preparation / last revision** 09/12/2018 / 4

· **Abbreviations and acronyms:**

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

ICAO: International Civil Aviation Organisation

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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

· **\* Data compared to the previous version altered.**

US