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

Date issued 30.08.2015

1.1. Product identifier
Product name Unger Resin UE (US-CA-MX / EN)
Article no. DI10V / DC225 / HP06T / HP12T / HP12C / HP24T / HP 24C / HP06K / HP06 / HPB24 / DIR22 / DIC22 / DCC25 / DCR22 / 17617 / 17567

1.2. Relevant identified uses of the substance or mixture and uses advised against
Function Ion exchange
Product group Cleaning agents
Use of the substance/preparation Demineralization
Uses advised against No specific uses advised against are identified.
The chemical can be used by the general public Yes

1.3. Details of the supplier of the safety data sheet
Company name Unger Enterprises LLC
Office address 425 Asylum Street
Postcode 06610
City Bridgeport, CT
Country United States of America
Tel +1 800 431 2324
Fax +1 800 367 1988
E-mail compliance@ungerglobal.com
Website http://www.ungerglobal.com

1.4. Emergency telephone number
Identification comments For Hazardous Materials [or Dangerous Goods] Incident - Spill, Leak, Fire, Exposure, or Accident - Call CHEMTREC Day or Night.
Within USA and Canada: 1-800-424-9300 CCN726541 or +1 703-527-3887 (collect calls accepted).
Within Mexico, please call + 1 203 366 4884 (collect calls accepted) between 8:30 am – 5:00 pm Eastern Time Zone (EST/EDT).

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

2.2. Label elements
Composition on the label Cation exchange resin:60 % wt/wt, Anion exchange resin:40 % wt/wt
Precautionary statements P102 Keep out of reach of children.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
2.3. Other hazards

Physico-chemical effects
Spilled resin is a slipping hazard.

Health effects
Resin can cause eye and skin irritations, avoid eye and skin contact.

Environmental effects
Cf. section 12 for information on ecology.

Symptoms and effects of potential misuse
No information required.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Substance</th>
<th>Identification</th>
<th>Classification</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cation exchange resin (US)</td>
<td>CAS no.: 69011-18-3 Synonyms: Ethylethenylbenzene, ethenylbenzene, diethenylbenzene polymer, methanaminium N,N,N-trimethyl hydroxide IUPAC name: Benzene, diethenyl-, polymer with ethenylbenzene and ethenylethylbenzene, chloromethylated, trimethylamine-quaternized, hydroxide</td>
<td>Eye Irrit. 2; H319</td>
<td>60 % wt/wt</td>
</tr>
<tr>
<td>Anion exchange resin (US)</td>
<td>CAS no.: 69011-20-7 Synonyms: Ethylbenzene, ethylethenylbenzene, diethenylenbenzene polymer, sulfonated IUPAC name: Benzene, diethenyl-, polymer with ethenylbenzene and ethenylethylbenzene, sulfonated</td>
<td>Skin Irrit. 2; H315 Eye Irrit. 2; H319</td>
<td>40 % wt/wt</td>
</tr>
</tbody>
</table>

Description of the mixture
Spherical particles 0.2-0.4 mm. Solid. Amber. 0% of the mixture consists of ingredients(s) of unknown toxicity.

SECTION 4: First aid measures

4.1. Description of first aid measures

General
Place unconscious person on the side in the recovery position and ensure breathing can take place. If medical advice is needed, have product container or label at hand.

Inhalation
Due to the physical form the risk of inhalation is minimal. IF INHALED: Move into fresh air and keep at rest.

Skin contact
Wash skin with soap and water.

Eye contact
Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

Ingestion
Immediately rinse mouth and drink plenty of water (7-10 fl. oz.). Never give liquid to an unconscious person. DO NOT INDUCE VOMITING! If medical advice is needed, have product container or label at hand.

4.2. Most important symptoms and effects, both acute and delayed

Acute symptoms and effects
Cf. section 11.1 - information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment needed

Specific details on antidotes
Decontamination, symptomatic treatment. No special antidote known.
SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Product doesn't ignite. Use fire-extinguishing media appropriate for surrounding materials.

Improper extinguishing media
Water jet.

5.2. Special hazards arising from the substance or mixture
Fire and explosion hazards
This product is not flammable.

Hazardous combustion products

5.3. Advice for firefighters
Personal protective equipment
In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures
Avoid dust formation. Avoid contact with eyes and skin.

Personal protection measures
Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

Hazardous combustion products
Cf. section 5

6.1.2. For emergency responders
For emergency responders
In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.

6.2. Environmental precautions
Environmental precautionary measures
Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Cleaning method
Sweepup or pickup with an industrial vacuum cleaner, store in closed container for disposal.

6.4. Reference to other sections
Other instructions
Cf. section 8 for personal protection, and section 13 for waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Handling
Observe good chemical hygiene practices. Avoid contact with eyes and prolonged skin contact. Avoid eating, drinking and smoking when using the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage
Store at moderate temperatures in dry, well ventilated area.

Conditions for safe storage
Requirements for storage rooms and vessels
Storage in gateways, passages, stairways, hallways open to public, roofs, attics, cellars and workrooms is not advisable.

Advice on storage compatibility
No incompatibilities known.

7.3. Specific end use(s)
Recommendations
Cf. section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
DNEL / PNEC
Recommended monitoring procedures
NIOSH 0500: Total particulates not otherwise regulated.
OSHA PV2121: Gravimetric determination.
8.2. Exposure controls

Precautionary measures to prevent exposure

Organisational measures to prevent exposure

- Thoroughly clean hands, forearms, and face after handling of the product, before eating, drinking and lavatory use, and at the end of the work shift.

Technical measures to prevent exposure

- Use engineering controls to reduce air contamination to permissible exposure level.

Respiratory protection

Respiratory protection

- Under normal conditions of use respiratory protection should not be required.
- In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2).

Hand protection

Hand protection

- For prolonged or repeated skin contact use suitable protective gloves.

Eye / face protection

Eye protection

- Wear approved chemical safety goggles where eye exposure is reasonably probable.

Skin protection

Skin protection (except hands)

- Generally regular work clothing sufficient.

Hygiene / Environmental

Specific hygiene measures

- No specific hygiene procedures noted, but good personal hygiene practices are always advisable. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Spherical particles 0.2-0.4 mm. Solid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Amber</td>
</tr>
<tr>
<td>Odour</td>
<td>Almost odourless</td>
</tr>
<tr>
<td>Comments, pH (as supplied)</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>pH (aqueous solution)</td>
<td>Value: 6-8</td>
</tr>
<tr>
<td>Method of testing: aqueous suspension</td>
<td></td>
</tr>
<tr>
<td>Comments, Melting point / melting range</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Comments, Boiling point / boiling range</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Value: &gt; 230 °C</td>
</tr>
<tr>
<td>Comments, Flash point</td>
<td>Dry product beginning to inflame</td>
</tr>
<tr>
<td>Comments, Evaporation rate</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Comments, Vapour pressure</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Comments, Vapour density</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>Value: 1.2 g/cm³</td>
</tr>
<tr>
<td>Test temperature: 20 °C</td>
<td></td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Unlimited miscible</td>
</tr>
<tr>
<td>Spontaneous combustability</td>
<td>Value: &gt; 500 °C</td>
</tr>
<tr>
<td>Comments, Decomposition temperature</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Comments, Viscosity</td>
<td>No data recorded.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not oxidizing</td>
</tr>
</tbody>
</table>

9.2. Other information

| Softening point | Comments: No data available |
| Content Of Voc | Comments: No data available |
Physical hazards
Comments, Particle size
No data recorded.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
Stable in normal conditions.

10.2. Chemical stability
Stability
Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
No hazardous reactions under regular storage and handlings conditions known.

10.4. Conditions to avoid
Conditions to avoid
Heating.

10.5. Incompatible materials
Materials to avoid
Strong oxidising substances.

10.6. Hazardous decomposition products
Hazardous decomposition products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Carbon monoxide (CO), Carbon dioxide (CO2), Nitrous gases (NOx), Sulphurous gases (SOx). Organic decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Potential acute effects
Inhalation
No specific health warnings noted.
Skin contact
No specific health warnings noted. Prolonged contact may cause redness and irritation.
Eye contact
No specific health warnings noted. Prolonged contact may cause redness and/or tearing.
Ingestion
No specific health warnings noted. The product causes irritation of mucous membranes and may cause abdominal discomfort if swallowed. Ingestion may cause irritation of the gastrointestinal tract, vomiting and diarrhea.
Aspiration hazard
Depending on the product's properties - solid spherical particles of 0.2-0.4 mm - aspiration is technically not feasible.

Delayed effects / repeated exposure
Sensitisation
No specific health warnings noted.
STOT-single exposure
No data available, probably no subchronic toxicity
STOT-repeated exposure
No data available, probably no chronic toxicity

Carcinogenic, Mutagenic or Reprotoxic
Carcinogenicity
No specific health warnings noted.
Mutagenicity
No specific health warnings noted.
Teratogenic properties
No specific health warnings noted.
Reproductive toxicity
No specific health warnings noted.

SECTION 12: Ecological information

12.1. Toxicity

12.2. Persistence and degradability
Persistence and degradability
The product is not biodegradable.

12.3. Bioaccumulative potential
Bioaccumulative potential
The product is not bioaccumulating.

12.4. Mobility in soil
12.5. Results of PBT and vPvB assessment

PBT assessment results

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Comments, Ozone depletion potential

Ozone depletion potential not known

Comments, Photochemical ozone creation

Ozone formation potential not known

Comments Global warming potential

Global greenhouse effect not known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal

Dispose of waste and residues in accordance with local authority requirements. No specific disposal method required.

Relevant waste regulation

USA: Federal waste regulation: 40 CFR 261
Canada: Canadian Environmental Protection Act (CEPA 1999; s.s..1999, c.33) Part 7 Controlling Pollution and Managing Wastes.

Product classified as hazardous waste

No

Packaging classified as hazardous waste

No

SECTION 14: Transport information

14.1. UN number

Comments

No recommendation given.

14.2. UN proper shipping name

Comments

No recommendation given.

14.3. Transport hazard class(es)

Comments

No recommendation given.

14.4. Packing group

Comments

No recommendation given.

14.5. Environmental hazards

Comments

No recommendation given.

14.6. Special precautions for user

Special safety precautions for user

No recommendation given.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name

No recommendation given.

Additional information.

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

ADR / RID - Other information

ADR Other information

No recommendation given.

ADN - Other information

Other information

No recommendation given.

IMDG / ICAO / IATA Other information

IMDG Other information

No recommendation given.

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

USA: All compounds are listed on the TSCA Inventory
Canada: All components are listed either on the DSL or NDSL.

Regulations of the United States of America:


US Federal Regulations:

SARA 313:
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories:
Acute Health Hazard Yes
Chronic Health Hazard No
Fire Hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act):
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65:
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations:
This product does not contain any substances regulated by state right-to-know regulations.

Regulations of Canada:

15.2. Chemical safety assessment

Chemical safety assessment performed: No

Chemical Safety Assessment: No data recorded.

Exposure scenarios for mixture: No

Exposure Scenario Comments: No recommendation given.

SECTION 16: Other information

Supplier's notes: The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

List of relevant H-phrases (Section 2 and 3): H315 Causes skin irritation. H319 Causes serious eye irritation.

Training advice: Not relevant.

Recommended restrictions on use: Not relevant.

User notes: In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material, as far as not expressly stated otherwise.

Version: 1

Responsible for safety data sheet: Unger Enterprises LLC