1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Dissolvine® E-39

Chemical Name: Ethylenediaminetetraacetic acid, tetrasodium salt in water

Synonym(s): Tetrasodium EDTA

Product Use: Chelating agent

Manufacturer / Supplier: Akzo Nobel Functional Chemicals LLC
Chelates Americas
525 West Van Buren St., Chicago, IL  60607
Tel. 1-800-906-7979
www.dissolvine.com

Emergency Telephone Numbers:
CHEMICAL
CHEMTREC (24-hr) (800) 424-9300 (Toll-free in the U.S., Canada, and the U.S. Virgin Islands)
EMERGENCY (Spill, Leak, Fire, Exposure or Accident) (703) 527-3887 (For calls originating elsewhere / collect calls are accepted)
MEDICAL / HANDLING EMERGENCIES (914) 693-6946 [AkzoNobel – USA]

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
This material is considered hazardous by the OSHA Hazard Communication Standard [29 CFR 1910.1200]
- Corrosive to aluminum.
- Causes eye irritation.
- May cause skin and respiratory tract irritation.
- Contains material which may cause kidney damage and cancer, based on animal data.

Appearance and odor: Clear yellow liquid with a slight ammonia odor.

POTENTIAL HEALTH EFFECTS [See Section 11 for additional information]

Primary Route(s) of Exposure: Eye contact, skin contact and inhalation

Acute Exposure
Inhalation: Exposure to an excessive concentration of vapors, mist, fumes or aerosols may cause respiratory tract discomfort and/or mild irritation.

Skin Contact: May cause skin irritation.

Eye Contact: Eye contact causes moderate irritation.

Ingestion: This product is expected to have a low order of acute toxicity.

Carcinogenicity: This product and its components are not listed as known carcinogens or potential carcinogens by IARC (International Agency for Research on Cancer), ACGIH (American Conference of Governmental Industrial Hygienists), NTP (National Toxicology Program), OSHA (U.S. Occupational Safety & Health Administration) and EPA (U.S. Environmental protection Agency). However, Nitrilotriacetic acid (NTA) and its salts were determined to be “possibly carcinogenic to humans” (Group 2B) by IARC, a compound which “may reasonably be anticipated to be a carcinogen” by NTP and a “select carcinogen” by OSHA.
2. HAZARDS IDENTIFICATION (CONTINUED)

Chronic Effect / Developmental Toxicity
EDTA and its sodium salts caused birth defects in some animal studies in the presence of maternal toxicity.

Medical Conditions Aggravated by Exposure
Zinc deficiency may be aggravated by systemic exposure to EDTA and its sodium salts.

POTENTIAL ENVIRONMENTAL EFFECTS [See Section 12 for additional information]
Aquatic Toxicity
This product is not expected to be harmful to aquatic life, based on available data with related materials.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>CAS Number</th>
<th>% (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrasodium EDTA</td>
<td>64-02-8</td>
<td>37 – 41</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>0.5 – 1.9</td>
</tr>
<tr>
<td>Trisodium NTA</td>
<td>5064-31-3</td>
<td>0.5 – 2</td>
</tr>
<tr>
<td>Ethylenediaminetriacetic acid, trisodium salt (ED3ANa3)</td>
<td>19019-43-3</td>
<td>&lt; 0.8</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>53 – 59</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Inhalation**
Remove victim to fresh air. If irritation occurs or if breathing becomes difficult, get medical attention.

**Skin Contact**
Remove contaminated clothing, shoes and equipment. Wash all affected areas with soap and plenty of water. Wash contaminated clothing and shoes before reuse. Get medical attention if irritation occurs or persists.

**Eye Contact**
Flush eyes with large quantities of running water for a minimum of 15 minutes. If the victim is wearing contact lenses, remove them. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Do not let victim rub eye(s). Do not attempt to neutralize with chemical agents. Get medical attention.

**Ingestion**
ONLY induce vomiting at the instructions of a physician. If victim is conscious, rinse mouth and give water to drink. Never give anything by mouth to an unconscious person. Get medical attention if health effects occur.

**Note to Physician**
Attending physician should treat exposed patients symptomatically.

5. FIRE FIGHTING MEASURES

**Flammable Properties**
Not flammable or combustible

**Extinguishing Media**
Use water fog or spray, dry chemical, foam or carbon dioxide extinguishing agents.

**Fire Fighting Procedures**
As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate all non-essential personnel from the fire area. Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

**Fire & Explosion Hazards**
This product is not defined as flammable or combustible and should not be a fire hazard. Under fire conditions, it does not contribute any unusual hazards.

**Hazardous Combustion Products**
Thermal decomposition products may release toxic and/or hazardous fumes and gases, including nitrogen oxides, carbon oxides and metal oxide fumes.

**NFPA Hazard Rating**
Health: 2 / Fire: 1 / Instability: 0 / Other: None
[0 – Minimal / 1 – Slight / 2 – Moderate / 3 – High / 4 – Extreme]
6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
All personnel involved in spill cleanup should avoid skin and eye contact by wearing appropriate personal protective equipment.

**Methods for Containment**
Safely stop source of spill. Dike area to prevent spill from spreading. Restrict non-essential personnel from area.

**Environmental Precautions**
Collect as much as possible in a clean container for reuse (if not contaminated) or disposal (if contaminated).

**Methods for Clean-up**
Soak up liquid residue with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Then flush area with water. CAUTION – The spill area may be slippery.

**Other Information**
See also Section 13 for disposal information.

7. HANDLING AND STORAGE

**Handling**
Avoid inhalation of vapors or fumes as well as prolonged and/or repeated skin and eye contact.

**Storage**
Keep containers closed and dry. This material is suitable for any general chemical storage area. Isolate from incompatible materials such as strong oxidizing agents. Store in PVC, PE, stainless steel or bituminized tanks. Avoid contact with aluminum, copper, copper alloys, nickel and zinc.

**Recommended Storage Temperature**
Store in sealed or original containers in a cool and dry place at ambient temperatures (below 77°F / 25°C).

**General Comments**
Containers should not be opened until ready for use. It is recommended that products be retested if stored for more than 3 years. Under ideal storage conditions, the shelf-life is almost indefinite.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA – PELs (mg / m³)</th>
<th>ACGIH – TLVs (mg / m³)</th>
<th>NIOSH – RELs (mg / m³)</th>
<th>AIHA – WEELs (mg / m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL / CEIL(C)</td>
<td>TWA</td>
<td>STEL / CEIL(C)</td>
</tr>
<tr>
<td>Tetrasodium EDTA</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>2.0</td>
<td>N/D</td>
<td>2.0 (C)</td>
<td>N/D</td>
</tr>
<tr>
<td>Trisodium NTA</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
</tr>
<tr>
<td>Trisodium ED3A</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
</tr>
<tr>
<td>Water</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
</tr>
</tbody>
</table>


**Legend:**
- **CEIL:** Ceiling Exposure Limit
- **PEL:** Permissible Exposure Limit
- **REL:** Recommended Exposure Limit
- **STEL:** Short Term Exposure Limit
- **TLV:** Threshold Limit Value
- **TWA:** Time-Weighted Average
- **N/D:** Not Determined
- **WEEL:** Workplace Environmental Exposure Level

**Immediately Dangerous to Life or Health Concentrations (IDLH / NIOSH):**
Sodium hydroxide = 10 mg/m³
8. Exposure Controls / Personal Protection (continued)

Engineering Controls & Ventilation
Special ventilation is usually not required under normal use conditions. Ensure that existing ventilation is sufficient to prevent the circulation and/or accumulation of vapors in the air.

Personal Protective Equipment (PPE)

Respiratory
Use of respiratory protection is generally not required. However, if use conditions generate vapors, aerosols or fumes and adequate ventilation (e.g., outdoor or well-ventilated area) is not available, use a NIOSH-approved organic vapor respirator with HEPA (High Efficiency Particulate Air) filters to reduce potential for inhalation exposure. Where exposure potential necessitates a higher level of protection, use a NIOSH-approved, positive-pressure/pressure-demand, air-supplied respirator. When using respirator cartridges or canisters, they must be changed frequently (following each use or at the end of the work shift) to assure breakthrough exposure does not occur.

Skin
Skin contact with the product should be minimized or prevented through the use of suitable protective clothing, gloves and footwear selected according to use condition exposure potential. For permanent (>8 hours) full contact use, 100% Viton gloves are recommended.

Eyes/face
Since eye contact may cause irritation, chemical goggles and/or a face shield should be worn when handling this product.

Hygiene Measures
All food and smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking and smoking, hands and face should be thoroughly washed.

9. Physical and Chemical Properties

Appearance

Form clear liquid
Color yellow
Odor slight ammonia odor

Boiling Point 224.6°F (107°C)
Bulk Density not applicable
Evaporation Rate (Butyl Acetate=1) not determined
Melting Point < 0°F (-18°C) / freezing point
Odor Threshold not determined
pH ~ 11.5 (1% solution) ; 13.5 (as is)
Partition Coefficient (n-octanol/water) Log P_{ow} < 0
Solubility in Water miscible
Solubility in Other Solvents not determined
Specific Gravity 1.25 – 1.33
Vapor Density (Air = 1) same as water
Vapor Pressure same as water
Viscosity 20 mPa.s (@ 20°C)
Volatiles (% by weight) not determined
Other decomposition temperature : > 392°F / > 200°C (solid) ; >224.6°F / >107°C (water loss)
Flammability not flammable or combustible
Flash Point (Method) not applicable
Upper Flammable Limit (% by volume) not applicable
Lower Flammable Limit (% by volume) not applicable
9. PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

Auto-Ignition
Temperature
< : less than  > : greater than  ≈ : approximately

10. STABILITY AND REACTIVITY

Chemical Stability
This product is stable under recommended storage and handling conditions (see section 7). It is not self-reactive and is not sensitive to physical impact.

Incompatible Materials
This product is incompatible with strong oxidizers.

Conditions to Avoid
Avoid contact with aluminum, nickel, zinc, copper and copper alloys. Aqueous solution in contact with aluminum evolves hydrogen. Do not expose product to elevated temperatures for extended periods of time.

Hazardous Decomposition Products
Under fire conditions the product may support combustion and decomposes to give off carbon oxides fumes (CO, CO₂), nitrogen oxides and water vapor.

Possibility of Hazardous Reactions
Hazardous polymerization is not expected to occur under normal temperatures and pressures.

11. TOXICOLOGICAL INFORMATION

Inhalation - Acute
The acute LC₅₀ for this product is not available. There were no clinical signs of toxicity when rats were exposed for 8 hours to an atmosphere enriched with Tetrasodium EDTA. The LC₅₀ for Trisodium NTA component is greater than 5 mg/L (rats / 4-hr test).

Inhalation - Chronic
No known effects for the mixture.

Skin - Acute
Dermal toxicity for this product is not available. Skin irritation has not been determined for this product. Solutions containing either 40 or 80% Na₄ EDTA were reported to be not irritating to rabbit skin after a 4-hour exposure. NaOH may be corrosive or irritating to skin depending on the concentration.

Skin - Chronic
Repeated or prolonged contact may cause irritation.

Eyes
Eye irritation has not been determined for this product. A 40% solution of Na₄ EDTA was reported to be moderately irritating to rabbit eyes. Corneal opacity, iritis and moderate to severe conjunctivitis were reported. NaOH may be corrosive or irritating to eyes depending on the concentration.

Ingestion - Acute
The oral LD₅₀ is greater than 2,000 mg/kg (rat) for a 40% solution of Tetrasodium EDTA.

Ingestion - Chronic
No other known effects for the mixture. Chronic ingestion of NTA and its trisodium salt has been shown to cause kidney toxicity.

Sensitization
Not determined.

Carcinogenicity
This product does not contain any carcinogens or potential carcinogens as listed by IARC, NTP, ACGIH or OSHA. However, Nitrilotriacetic acid (NTA) and its salts were determined to be “possibly carcinogenic to humans” (Group 2B) by IARC, a compound which “may reasonably be anticipated to be a carcinogen” by NTP and a “select carcinogen” by OSHA.

Mutagenicity
Tetrasodium EDTA component is not mutagenic in a series of tests, including the Ames Assay, the Chromosomal Aberration and the Mouse Lymphoma.

NTA and its sodium salts were not genotoxic in experimental systems in vivo. Neither the acid nor its salts were genotoxic in mammalian cells in vitro and they were not mutagenic to bacteria. However, trisodium NTA has been shown to be positive in the BALB/c3T3 transformation assay when tested up to 7.8 mM.

Cytotoxicity
Tetrasodium EDTA did not damage normal rat kidney cells at doses of 0.1 to 20 μM. Long-term exposure to 0.1 or 5.0 μM was not toxic and did not inhibit DNA synthesis.
11. TOXICOLOGICAL INFORMATION (CONTINUED)

**Reproductive Toxicity / Teratogenicity / Embryotoxicity**

No data available for the mixture.

EDTA and its sodium salts have been reported, in some studies, to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus.

Tetrasodium EDTA component is not teratogenic under conditions of the test [Pregnant female rats were administered 1374 mg Na₄EDTA /kg/day on gestation days 7 to 14 in half the dose, twice daily. Clinical signs of maternal toxicity included diarrhea, reduced weight gain and depressed activity.]

Trisodium NTA is not teratogenic and did not induce reproductive toxicity.

**Other Effects**

Tetrasodium EDTA, administered to mice in drinking water at a dose of 25 mM, caused a reduction of calcium in bone, liver and muscle. Zinc was reduced in kidneys, muscle and liver. Magnesium was reduced in bones and liver but was increased in the kidneys.

**Target Organs**

Eyes and reproductive system (in presence of maternal toxicity).

12. ECOLOGICAL INFORMATION

**Ecotoxicity**

No data available on the mixture. The following data is available on the component Tetrasodium EDTA:

<table>
<thead>
<tr>
<th>Test</th>
<th>Exposure / Duration</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daphnia Magna</td>
<td>24-h</td>
<td>EC₅₀ = 610 mg/L</td>
</tr>
<tr>
<td>Fish (bluegill sunfish)</td>
<td>96-h (static)</td>
<td>LC₅₀ = 157 mg/L, 1030 mg/L and 2070 mg/L for product containing 39% tetrasodium EDTA in very soft water, medium hard water and very hard water respectively. LC₅₀ = 486 mg/L for solid Tetrasodium EDTA tested in very hard water</td>
</tr>
<tr>
<td>Bacteria (Protozoa Chilomonas paramaecium) – Growth inhibition</td>
<td>Unknown</td>
<td>EC₅₀ = 663 mg/L</td>
</tr>
</tbody>
</table>

**Biodegradation**

Following data relates to Tetrasodium EDTA component:

- Tetrasodium EDTA (39% in water) was not biodegraded over 28 days in the Sturm CO2 evolution test.
- Tetrasodium EDTA was not biodegradable in the Closed Bottle Test conducted with natural seawater.

**Bioaccumulation**

Log Pₐw = - 13.17 (calculated by EPIWIN/KOWWIN model)

**Other Ecotoxicity information**

Tetrasodium EDTA component:

- Algae (Cell multiplication inhibition test): toxicity threshold of Tetrasodium EDTA to the green algae and the blue-green algae was 11 mg/L and 76 mg/L respectively.
- Chemical Fate: Tetrasodium EDTA is not expected to undergo hydrolysis. The substance is not expected to enter the atmosphere significantly due to its high water solubility.

13. DISPOSAL CONSIDERATIONS

**Waste Disposal**

The characteristic of corrosivity per RCRA would be exhibited by unused product if it becomes a waste material. It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristic or listing. Dispose in accordance with all local, state and federal regulations.

NOTE – State and local regulations may be more stringent than federal regulations.
13. DISPOSAL CONSIDERATIONS (CONTINUED)

Container Disposal: Containers should be cleaned of residual product before disposal or return. Since emptied containers retain product residue, follow label warnings even after container is emptied. Empty containers should be disposed of or shipped in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>UN Number</th>
<th>Proper Shipping Name</th>
<th>Class</th>
<th>PG</th>
<th>Label</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>US DOT (Land)</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>This product is not regulated as hazardous by DOT, per 49CFR §173.154 (d) exception for materials corrosive to metals (steel and/or aluminum).</td>
</tr>
<tr>
<td>US DOT (Air) Canada TDG IMDG IATA / ICAO</td>
<td>UN3267</td>
<td>Corrosive liquid, basic, organic, n.o.s. (Tetrasodium EDTA, Sodium hydroxide)</td>
<td>8</td>
<td>III</td>
<td>Corrosive</td>
<td></td>
</tr>
</tbody>
</table>

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Environmentally Hazardous Substances [49 CFR 172.101, Appendix A] Sodium hydroxide: RQ = 1000 lbs (454 kg)

15. REGULATORY INFORMATION

Regulatory Lists / Inventories: The components are subject to the following regulatory lists and inventories:

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAA</th>
<th>CERCLA</th>
<th>IARC</th>
<th>US STATE RIGHT-TO-KNOW LISTS</th>
<th>CA PROP 65</th>
<th>SARA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrasodium EDTA</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>N/R</td>
<td>X</td>
<td>N/R</td>
<td>CA / FL / IL / MA / MN / NJ / PA / RI</td>
<td>N/R</td>
<td>N/R</td>
</tr>
<tr>
<td>Trisodium NTA</td>
<td>N/R</td>
<td>N/R</td>
<td>X</td>
<td>MA</td>
<td>X</td>
<td>N/R</td>
</tr>
<tr>
<td>(See note 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trisodium ED3A</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
</tr>
<tr>
<td>Water</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
</tr>
</tbody>
</table>

Note 1: A related product “Trisodium NTA monohydrate” [CAS #18662-53-8] is known to the State of California to cause cancer and is reportable under Proposition 65.

National Chemical Inventories Status:

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>US TSCA</th>
<th>Canada</th>
<th>EU EINECS</th>
<th>Australia AICS</th>
<th>New Zealand NZIoC</th>
<th>Japan ENCS</th>
<th>Korea KECI</th>
<th>Philippines PICCS</th>
<th>China IECSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrasodium EDTA</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Water</td>
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<tr>
<td>Sodium hydroxide</td>
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<td>X</td>
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<td>X</td>
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<td>X</td>
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</tr>
<tr>
<td>Trisodium NTA</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Trisodium ED3A</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION (CONTINUED)

Legend
AICS Australian Inventory of Chemical Substances
CA LIST California – Directors List of Hazardous Substances
CA PROP 65 California Proposition 65
CAA Clean Air Act, Section 112
CERCLA CERCLA Hazardous Substances
DSL Domestic Substances List – Canada
EINECS European Inventory of Existing Commercial Chemical Substances
ENCs Japan Existing and New Chemical Substances
FL LIST Florida – Substance List
IARC International Agency for Research on Cancer – Carcinogens – Groups 1, 2A or 2B
IECSC China – Inventory of Existing Chemical Substances
IL LIST Illinois Toxic Substances Disclosure to Employees Act
KECI Korea Existing Chemicals Inventory
LA LIST Louisiana Right-to-Know Reporting List
MA LIST Massachusetts – R-T-K Substance List
MN LIST Minnesota – Hazardous Substance List
NDSL Non-Domestic Substances List – Canada
NJ R-T-K New Jersey – R-T-K Hazard List
NRC Non Regulated
NZIoC New Zealand Inventory of Chemicals
PA LIST Pennsylvania Hazardous Substance List
PICCS Philippines Inventory of Chemicals and Chemical Substances
RI LIST Rhode Island – Hazardous Substance List
SARA SARA Title III, Section 302 / 313
TSCA Toxic Substances Control Act – USA
X Listed and/or Regulated

CANADA – WHMIS (Workplace Hazardous Materials Information System)

Class D2A Other toxic effects
Class E Corrosive to metal

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Other Regulatory Information

The Cosmetic Ingredient Review (CIR) Expert Panel has determined that EDTA and its salts are safe as used in cosmetic formulations.

Contact AkzoNobel for additional information regarding the use and approval of Dissolvine E-39 (Tetrasodium EDTA) as a direct or indirect food additive.

16. OTHER INFORMATION

HMIS RATING
Health: 2*/ Flammability: 0/ Physical Hazard: 0/ Other: none
(0 – Minimal / 1 – Slight / 2 – Moderate / 3 – High / 4 – Extreme / *- Chronic Health Hazard (see Section 11))

Trademark
Dissolvine® is a registered trademark of Akzo Nobel Chemicals B.V.

Date of Issue / Revision
July 21, 2009

Revision #
21.0

Changes
Sections 2, 11, 15

Prepared by
AkzoNobel, Technology & Engineering, Regulatory Toxicology
Tel. 613.273.8095

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