SAFETY DATA SHEET

1. Identification

Product identifier: NovoRez 351 - Side B

Other means of identification

SKU#: NR350H

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name: ITW Engineered Polymers
Address: 130 Commerce Drive
Montgomeryville, PA 18936
United States

Telephone: Customer Service 215-855-8450
Website: www.itwengineeredpolymers.com
E-mail: orders.na@itwep.com
Contact person: EHS Department

Emergency phone number

CHEMTREC 800-424-9300
International 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards

Acute toxicity, oral Category 4
Acute toxicity, dermal Category 4
Acute toxicity, inhalation Category 4
Skin corrosion/irritation Category 1
Serious eye damage/eye irritation Category 1
Sensitization, skin Category 1

Environmental hazards

Hazardous to the aquatic environment, acute hazard Category 2
Hazardous to the aquatic environment, long-term hazard Category 2

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful if inhaled. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention: Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response
If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.

Storage
Store locked up.

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

Hazard(s) not otherwise classified (HNOC)
None known.

Supplemental information
51.65% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 65.89% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

3. Composition/information on ingredients
MIXTURES

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol</td>
<td></td>
<td>100-51-6</td>
<td>30 - 60</td>
</tr>
<tr>
<td>TRIETHYLENETETRAMINE</td>
<td></td>
<td>112-24-3</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Other components</td>
<td></td>
<td></td>
<td>30 - 60</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures
Inhalation
Move to fresh air. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. Chemical burns must be treated by a physician. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures
Suitable extinguishing media
Alcohol resistant foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
No unusual fire or explosion hazards noted.
6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Use water spray to reduce vapors or divert vapor cloud drift. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**
Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

**Occupational exposure limits**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol (CAS 100-51-6)</td>
<td>TWA</td>
<td>44.2 mg/m³</td>
</tr>
<tr>
<td>TRIETHYLENETETRAMINE E (CAS 112-24-3)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

**Biological limit values**
No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

**US WEEL Guides: Skin designation**
TRIETHYLENETETRAMINE (CAS 112-24-3) Can be absorbed through the skin.

**Appropriate engineering controls**
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Wear safety glasses with side shields (or goggles) and a face shield. Face shield is recommended.

**Skin protection**

**Hand protection**
Wear appropriate chemical resistant gloves.

**Other**
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**
In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**
Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations
Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance
- Liquid.

Physical state
- Liquid.

Form
- Liquid.

Color
- Amber.

Odor
- Slight.

Odor threshold
- Not available.

pH
- Not available.

Melting point/freezing point
- Not available.

Initial boiling point and boiling range
- Not available.

Flash point
- 208.0 °F (97.8 °C) Pensky-Martens Closed Cup

Evaporation rate
- Not available.

Flammability (solid, gas)
- Not applicable.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%)
  - Not available.

- Flammability limit - upper (%)
  - Not available.

- Explosive limit - lower (%)
  - Not available.

- Explosive limit - upper (%)
  - Not available.

Vapor pressure
- Not available.

Vapor density
- Not available.

Relative density
- Not available.

Solubility(ies)
- Not available.

Solubility (water)
- Not available.

Partition coefficient (n-octanol/water)
- Not available.

Auto-ignition temperature
- Not available.

Decomposition temperature
- Not available.

Viscosity
- Not available.

Other information
- Density
  - 9.00 lb/gal

- Explosive properties
  - Not explosive.

- Flammability class
  - Combustible IIIB estimated

- Oxidizing properties
  - Not oxidizing.

- Specific gravity
  - 1.08

- VOC
  - < 25 g/l Mixed components

10. Stability and reactivity

Reactivity
- The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
- Material is stable under normal conditions.

Possibility of hazardous reactions
- Hazardous polymerization does not occur.

Conditions to avoid
- Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
- Peroxides. Phenols.

Hazardous decomposition products
- No hazardous decomposition products are known.
11. Toxicological information

Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Causes digestive tract burns. Harmful if swallowed.</td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.</td>
</tr>
</tbody>
</table>

Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

Respiratory or skin sensitization

<table>
<thead>
<tr>
<th>Sensitization</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>Not a respiratory sensitizer.</td>
</tr>
<tr>
<td>Skin</td>
<td>May cause an allergic skin reaction.</td>
</tr>
</tbody>
</table>

Germ cell mutagenicity

<table>
<thead>
<tr>
<th>Mutagenic property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available</td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
</tbody>
</table>

Carcinogenicity

<table>
<thead>
<tr>
<th>Carcinogenicity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed</td>
<td>This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.</td>
</tr>
</tbody>
</table>

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic to aquatic life</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

Persistence and degradability

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available</td>
<td>No data is available on the degradability of this product.</td>
</tr>
</tbody>
</table>

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient</td>
<td>Benzyl Alcohol 1.1</td>
</tr>
</tbody>
</table>

Mobility in soil

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

Other adverse effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photochemical ozone</td>
<td>The product contains volatile organic compounds which have a photochemical ozone creation potential.</td>
</tr>
</tbody>
</table>

13. Disposal considerations

Disposal instructions

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect and reclaim</td>
<td>Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.</td>
</tr>
</tbody>
</table>

Local disposal regulations

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispose in accordance</td>
<td>Dispose in accordance with all applicable regulations.</td>
</tr>
</tbody>
</table>

Hazardous waste code

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The waste code should</td>
<td>The waste code should be assigned in discussion between the user, the producer and the waste disposal company.</td>
</tr>
</tbody>
</table>

Waste from residues / unused products

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions)</td>
<td></td>
</tr>
</tbody>
</table>
14. Transport information

**DOT**

- **UN number**: UN3066
- **UN proper shipping name**: Paint
- **Transport hazard class(es)**:
  - Class: 8
  - Subsidiary risk: -
  - Label(s): 8
- **Packing group**: III
- **Special precautions for user**: Read safety instructions, SDS and emergency procedures before handling.
- **Special provisions**: B52, IB3, T4, TP1, TP29
- **Packaging exceptions**: 154
- **Packaging non bulk**: 173
- **Packaging bulk**: 241

**IATA**

- **UN number**: UN3066
- **UN proper shipping name**: Paint
- **Transport hazard class(es)**:
  - Class: 8
  - Subsidiary risk: -
  - Label(s): 8
- **Packing group**: III
- **Environmental hazards**: No.
- **Special precautions for user**: Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

- **UN number**: UN3066
- **UN proper shipping name**: Paint
- **Transport hazard class(es)**:
  - Class: 8
  - Subsidiary risk: -
  - Label(s): 8
- **Packaging group**: III
- **Environmental hazards**: No.
- **EmS**: Not available.
- **Special precautions for user**: Not established.
- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**: Not established.

---

Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

---

DOT

![Corrosive Material]
15. Regulatory information

**US federal regulations**

This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

- TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  - Not regulated.
- CERCLA Hazardous Substance List (40 CFR 302.4)
  - Not listed.
- SARA 304 Emergency release notification
  - Not regulated.
  - Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

- Immediate Hazard - Yes
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

**Hazard categories**

- SARA 302 Extremely hazardous substance
  - Not listed.
- SARA 311/312 Hazardous chemical
  - No
- SARA 313 (TRI reporting)
  - Not regulated.

**Other federal regulations**

- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
  - Not regulated.
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
  - Not regulated.
- Safe Drinking Water Act (SDWA)
  - Not regulated.

**US state regulations**

- WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Listed date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide (CAS 75-21-8)</td>
<td>July 1, 1987</td>
</tr>
<tr>
<td>Formaldehyde (CAS 50-00-0)</td>
<td>January 1, 1988</td>
</tr>
</tbody>
</table>

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Listed date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide (CAS 75-21-8)</td>
<td>August 7, 2009</td>
</tr>
</tbody>
</table>

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Listed date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide (CAS 75-21-8)</td>
<td>February 27, 1987</td>
</tr>
</tbody>
</table>

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Listed date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide (CAS 75-21-8)</td>
<td>August 7, 2009</td>
</tr>
</tbody>
</table>

**International Inventories**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

---

Material name: NovoRez 351 - Side B

NR350H  Version #: 02  Revision date: 09-23-2016  Issue date: 11-06-2013
<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s). A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Issue date</th>
<th>11-06-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>09-23-2016</td>
</tr>
<tr>
<td>Version #</td>
<td>02</td>
</tr>
</tbody>
</table>

**HMIS® ratings**
- Health: 3
- Flammability: 1
- Physical hazard: 0

**NFPA ratings**
- Health: 3
- Flammability: 1
- Instability: 0

**Disclaimer**
ITW Engineered Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision information**
This document has undergone significant changes and should be reviewed in its entirety.