

## 1. Identification

**Product identifier** RE-JUV-NAL

**Other means of identification**

**SDS number** 543N-29A  
**Product code** HIL00166  
**Product registration number** 1839-169-1658

**Recommended use** Disinfectant/Cleaner

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Manufacturer**

**Company name**

HILLYARD INDUSTRIES

**Address**

302 North Fourth St.  
St. Joseph, MO 64501

**Contact person**

Regulatory Affairs

**Telephone number**

(816) 233-1321 (Ext. 8285)

**Fax**

(816) 383-8485

**E-mail**

regulatoryaffairs@hillyard.com

**Emergency telephone #**

(800) 424-9300

(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation 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** Causes skin irritation. Causes serious eye damage. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention** Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves. Wear eye/face protection.

**Response** If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.

**Storage** Store away from incompatible materials.

|                                                  |                                                                                                                                                                                                                        |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Disposal</b>                                  | Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements. |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.                                                                                                                                                                                                            |
| <b>Supplemental information</b>                  | None.                                                                                                                                                                                                                  |

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name                                    | Common name and synonyms | CAS number | %        |
|--------------------------------------------------|--------------------------|------------|----------|
| Alkyl dimethyl benzyl ammonium chloride (C12-16) |                          | 68424-85-1 | 1 - < 3  |
| Decyldimethyloctylammonium chloride              |                          | 32426-11-2 | 1 - < 3  |
| Didecyl dimethyl ammonium chloride               |                          | 7173-51-5  | < 1      |
| Dimethyldioctylammonium chloride                 |                          | 5538-94-3  | < 1      |
| Other components below reportable levels         |                          |            | 90 - 100 |

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

### 4. First-aid measures

|                                                                               |                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                                                             | Move to fresh air. Call a physician if symptoms develop or persist.                                                                                                                                                                                                                                                                                                    |
| <b>Skin contact</b>                                                           | Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.                                                                                                                                                                                                    |
| <b>Eye contact</b>                                                            | 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 immediately.                                                                                                                                                                                            |
| <b>Ingestion</b>                                                              | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Drink water as a precaution. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.                                                                                                                                                              |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.                                                                                                                                                                                                                                                 |
| <b>General information</b>                                                    | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.                                                                                                                                                                                                                                                       |

### 5. Fire-fighting measures

|                                                                      |                                                                                               |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).                                   |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.                                         |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire fighting equipment/instructions</b>                          | Move containers from fire area if you can do so without risk.                                 |
| <b>Specific methods</b>                                              | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| <b>General fire hazards</b>                                          | No unusual fire or explosion hazards noted.                                                   |

### 6. Accidental release measures

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. 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**

This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. 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. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

**7. Handling and storage****Precautions for safe handling**

Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). **DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.** **PESTICIDE STORAGE** – Store in original container in a cool (temperature no lower than 50°F or higher than 120°F), dry and locked storage area inaccessible to children.

**8. Exposure controls/personal protection****Occupational exposure limits**

No exposure limits noted for ingredient(s).

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**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.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

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.

**9. Physical and chemical properties****Appearance**

Clear, red liquid

**Physical state**

Liquid.

**Form**

Liquid.

**Color**

Red

**Odor**

Floral fragrance

**Odor threshold**

Not available

**pH**

6 - 7 Concentrate

**Melting point/freezing point**

Not applicable / Not available

**Initial boiling point and boiling range**

> 201 °F (> 93.89 °C)

**Flash point**

> 201.0 °F (> 93.9 °C) Pensky-Martens Closed Cup

**Evaporation rate**

< 1 Ethyl ether = 1

**Flammability (solid, gas)**

Not available.

**Upper/lower flammability or explosive limits**

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

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

**Vapor pressure** 17.67 mm Hg

**Vapor density** 0.632 Air =1

**Relative density** 1.009 at 77°F

**Solubility(ies)**

**Solubility (water)** 100 % Complete

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

**Auto-ignition temperature** Not available

**Decomposition temperature** Not available

**Viscosity** Not available

**Other information**

**Density** 8.34 lb/gal

**Percent volatile** 91.5 - 92.5 %

**VOC (Weight %)** 0.68 %

**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** No dangerous reaction known under conditions of normal use.

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

**Incompatible materials** Strong oxidizing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

**Inhalation** Prolonged inhalation may be harmful.

**Skin contact** Causes skin irritation.

**Eye contact** Causes serious eye damage.

**Ingestion** Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

**Information on toxicological effects****Acute toxicity**

| Product                                   | Species    | Test Results                      |
|-------------------------------------------|------------|-----------------------------------|
| RE-JUV-NAL                                |            |                                   |
| <b>Acute</b><br><i>Inhalation</i><br>LC50 | Mouse      | 10000 mg/l, 2 Hours estimated     |
|                                           |            | 3468.1724 mg/l, 4 Hours estimated |
|                                           | Rat        | 20500 mg/l, 0.5 Hours estimated   |
|                                           |            | 12000 mg/l, 4 Hours estimated     |
| <i>Oral</i><br>LD50                       | Guinea pig | 748.9635 g/kg estimated           |
|                                           | Mouse      | 26428.2754 mg/kg estimated        |
|                                           | Rat        | 9243.4229 mg/kg estimated         |

| Components                                         | Species | Test Results |
|----------------------------------------------------|---------|--------------|
| Didecyl dimethyl ammonium chloride (CAS 7173-51-5) |         |              |
| <b>Acute</b>                                       |         |              |
| <i>Dermal</i>                                      |         |              |
| LD50                                               | Rabbit  | 2730 mg/kg   |
| <i>Oral</i>                                        |         |              |
| LD50                                               | Mouse   | 268 mg/kg    |
|                                                    | Rat     | 84 mg/kg     |

\* Estimates for product may be based on additional component data not shown.

|                                                                           |                                                                                                                  |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Skin corrosion/irritation</b>                                          | Causes skin irritation.                                                                                          |
| <b>Serious eye damage/eye irritation</b>                                  | Causes serious eye damage.                                                                                       |
| <b>Respiratory or skin sensitization</b>                                  |                                                                                                                  |
| <b>Respiratory sensitization</b>                                          | Not a respiratory sensitizer.                                                                                    |
| <b>Skin sensitization</b>                                                 | This product is not expected to cause skin sensitization.                                                        |
| <b>Germ cell mutagenicity</b>                                             | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| <b>Carcinogenicity</b>                                                    | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.                                  |
| <b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b> |                                                                                                                  |
| Not listed.                                                               |                                                                                                                  |
| <b>Reproductive toxicity</b>                                              | This product is not expected to cause reproductive or developmental effects.                                     |
| <b>Specific target organ toxicity - single exposure</b>                   | Not classified.                                                                                                  |
| <b>Specific target organ toxicity - repeated exposure</b>                 | Not classified.                                                                                                  |
| <b>Aspiration hazard</b>                                                  | Not an aspiration hazard.                                                                                        |
| <b>Chronic effects</b>                                                    | Prolonged inhalation may be harmful.                                                                             |

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

| Product    |      | Species | Test Results                        |
|------------|------|---------|-------------------------------------|
| RE-JUV-NAL |      |         |                                     |
| Aquatic    |      |         |                                     |
| Crustacea  | EC50 | Daphnia | 15727.9961 mg/l, 48 hours estimated |
| Fish       | LC50 | Fish    | 71.1621 mg/l, 96 hours estimated    |
| Components |      | Species | Test Results                        |

Alkyl dimethyl benzyl ammonium chloride (C12-16) (CAS 68424-85-1)

|                                                    |      |                                          |                             |
|----------------------------------------------------|------|------------------------------------------|-----------------------------|
| <b>Aquatic</b>                                     |      |                                          |                             |
| Fish                                               | LC50 | Striped bass (Morone saxatilis)          | 10.4 - 19.1 mg/l, 96 hours  |
| Didecyl dimethyl ammonium chloride (CAS 7173-51-5) |      |                                          |                             |
| <b>Aquatic</b>                                     |      |                                          |                             |
| Fish                                               | LC50 | White sturgeon (Acipenser transmontanus) | 0.001 - 0.01 mg/l, 96 hours |

\* Estimates for product may be based on additional component data not shown.

|                                      |                                                                                                                                                                                         |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Persistence and degradability</b> | No data is available on the degradability of this product.                                                                                                                              |
| <b>Bioaccumulative potential</b>     |                                                                                                                                                                                         |
| <b>Mobility in soil</b>              | No data available.                                                                                                                                                                      |
| <b>Other adverse effects</b>         | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

### 13. Disposal considerations

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Disposal instructions</b>                 | PESTICIDE DISPOSAL - Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Local disposal regulations</b>            | Dispose in accordance with all applicable regulations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Hazardous waste code</b>                  | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Waste from residues / unused products</b> | 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).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Contaminated packaging</b>                | CONTAINER DISPOSAL – Non-refillable container. Do not reuse or refill this container. Clean container promptly after emptying. After rinsing container, offer empty metal drums or plastic containers for recycling if available or puncture and dispose of in a sanitary landfill or by incineration. RINSING INSTRUCTIONS - Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. |

### 14. Transport information

#### DOT

Not regulated as dangerous goods.

### 15. Regulatory information

|                                                                           |                                                                                                                                                                                     |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>US federal regulations</b>                                             | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.<br>All components are on the U.S. EPA TSCA Inventory List or Exempt. |
| <b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>      | Not regulated.                                                                                                                                                                      |
| <b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>                     | Not listed.                                                                                                                                                                         |
| <b>SARA 304 Emergency release notification</b>                            | Not regulated.                                                                                                                                                                      |
| <b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b> | Not listed.                                                                                                                                                                         |
| <b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>        |                                                                                                                                                                                     |
| <b>Hazard categories</b>                                                  | Immediate Hazard - Yes<br>Delayed Hazard - No<br>Fire Hazard - No<br>Pressure Hazard - No<br>Reactivity Hazard - No                                                                 |
| <b>SARA 302 Extremely hazardous substance</b>                             | Not listed.                                                                                                                                                                         |
| <b>SARA 311/312 Hazardous chemical</b>                                    | No                                                                                                                                                                                  |
| <b>SARA 313 (TRI reporting)</b>                                           | Not regulated.                                                                                                                                                                      |
| <b>Other federal regulations</b>                                          |                                                                                                                                                                                     |
| <b>Safe Drinking Water Act (SDWA)</b>                                     | Not regulated.                                                                                                                                                                      |

## FIFRA Information

FIFRA: This product is a U.S. EPA Registered pesticide, EPA Reg. No. 1839-169-1658, and is subject to certain labeling requirements under Federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide products. The hazard information required on the pesticide label is reproduced here.

### PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS. DANGER

KEEP OUT OF REACH OF CHILDREN. CORROSIVE. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin or on clothing. May be fatal if absorbed through the skin. Harmful if swallowed. Wear goggles or face shield, rubber gloves, and protective clothing. Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

FIRST AID Have the product container or label with you when calling a poison control center or doctor, or going for treatment. If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

## US state regulations

### US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

### US. Massachusetts RTK - Substance List

Not regulated.

### US. New Jersey Worker and Community Right-to-Know Act

Not listed.

### US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

### US. Rhode Island RTK

Not regulated.

### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## International Inventories

| Country(s) or region        | Inventory name                                | On inventory (yes/no)* |
|-----------------------------|-----------------------------------------------|------------------------|
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes                    |

\*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

|               |                                                    |
|---------------|----------------------------------------------------|
| Issue date    | 03-11-2015                                         |
| Version #     | 01                                                 |
| HMIS® ratings | Health: 3<br>Flammability: 0<br>Physical hazard: 0 |

### Disclaimer

No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.