SAFETY DATA SHEET

1. Identification

Identification
Product name: Busch R 560

Additional identification
Chemical name: Mixture

Recommended use and restriction on use
Recommended use: Not determined.
Restrictions on use: Not determined.

Details of the supplier of the safety data sheet
Supplier
Company Name: Busch LLC
Address: 516 Viking Drive
Virginia Beach, VA 23452
US
Telephone: (757) 463-7800

Emergency telephone number:
FOR TRANSPORT EMERGENCY CALL CHEMTREC (800) 424-9300 OR BUSCH LLC (757) 463-7800 FOR NON-EMERGENCIES.

2. Hazard(s) identification

Hazard Classification

Health Hazards
Toxic to reproduction Category 2
Specific Target Organ Toxicity - Repeated Exposure Category 2

Unknown toxicity
Acute toxicity, oral 0.0 %
Acute toxicity, dermal 0.0 %
Acute toxicity, inhalation, vapor 99.0 %
Acute toxicity, inhalation, dust or mist 52.0 %

Label Elements:

Hazard Symbol:

Signal Word: Warning
Hazard Statement: Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust or mists. Avoid release to the environment.

Response: If exposed or concerned: Get medical advice/attention. Collect spillage.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None identified.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Percent by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tricresyl phosphate</td>
<td>1330-78-5</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Substituted aromatic amine</td>
<td>68259-36-9</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Alkarylamine</td>
<td>68411-46-1</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

4. First-aid measures

General information: Get medical advice/attention if you feel unwell.

Ingestion: Treat symptomatically. Get medical attention.

Inhalation: Remove exposed person to fresh air if adverse effects are observed.

Skin Contact: Wash with soap and water. If skin irritation occurs, get medical attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

Most important symptoms/effects, acute and delayed

Symptoms: See section 11.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.
Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: CO2, dry chemical, foam, water spray, water fog.

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

Specific hazards arising from the chemical: A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Recommend wearing self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe dust/fume/gas/mist/vapors/spray. Observe good industrial hygiene practices. Provide adequate ventilation. Use personal protective equipment as required. Launder contaminated clothing before reuse. Avoid environmental contamination.

Maximum Handling Temperature: Not determined.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. See section 10 for incompatible materials.

Maximum Storage Temperature: Not determined.
8. Exposure controls/personal protection

Control Parameters:

**Occupational Exposure Limits**

None of the components have assigned exposure limits.

**Appropriate engineering controls:**

No special requirements under ordinary conditions of use and with adequate ventilation.

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

**General information:**
Use personal protective equipment as required.

**Eye/face protection:**
If contact is likely, safety glasses with side shields are recommended.

**Skin Protection**

**Hand Protection:** Neoprene. Suitable gloves can be recommended by the glove supplier.

**Other:** Gloves, coveralls, apron, boots as necessary to minimize contact.

**Respiratory Protection:**
Use respirator with an organic vapor cartridge if exposure limit is exceeded. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.

**Hygiene measures:**
Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

9. Physical and chemical properties

**Appearance**

**Physical state:** liquid

**Form:** liquid

**Color:** Amber

**Odor:** Mild

**Odor threshold:** No data available.

**pH:** No data available.

**Freezing point:** No data available.

**Boiling Point:** No data available.

**Flash Point:** 275 °F (135 °C) (Test method unavailable)

**Evaporation rate:** No data available.

**Flammability (solid, gas):** No data available.

**Upper/lower limit on flammability or explosive limits**

**Flammability limit - upper (%):** No data available.

**Flammability limit - lower (%):** No data available.

**Explosive limit - upper (%):** No data available.

**Explosive limit - lower (%):** No data available.

**Vapor pressure:** No data available.

**Vapor density:** No data available.

**Relative density:** 0.966 68 °F (20 °C)

**Solubility(ies)**

**Solubility in water:** Insoluble in water
Solubility (other): No data available.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

10. Stability and reactivity

Reactivity: No data available.
Chemical Stability: Material is stable under normal conditions.
Possibility of Hazardous Reactions: Will not occur.
Conditions to Avoid: Not determined.
Hazardous Decomposition Products: Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

11. Toxicological information

Information on likely routes of exposure
Inhalation: No data available.
Ingestion: No data available.
Skin Contact: No data available.
Eye contact: No data available.

Information on toxicological effects
Acute toxicity
Oral Product: Not classified for acute toxicity based on available data. Ingestion of this material can result in neurotoxicity. Signs and symptoms include increased sweating of hands and feet, numbness, tingling and weakness in extremities, unsteady gait and decreased reflexes.

Dermal Product: ATEmix > 5000 mg/kg
Skin absorption of components of this material will cause systemic effects; note toxicity in other sections.

Inhalation Product: Not classified for acute toxicity based on available data. High concentrations may cause headaches, dizziness, fatigue, nausea, vomiting, drowsiness, stupor, other central nervous system effects leading to visual impairment, respiratory failure, unconsciousness and death.

Skin Corrosion/Irritation: Prolonged or repeated contact may cause irritation.
Remarks: Not classified as a primary skin irritant.
**Serious Eye Damage/Eye Irritation:**
Product:  
Remarks: Not classified as a primary eye irritant.

**Respiratory sensitization:**
No data available

**Skin sensitization:**
Substituted aromatic amine
Classification: Not a skin sensitizer. (Read across) Not a skin sensitizer.
Alkarylamine
Classification: Not a skin sensitizer. (Literature) Not a skin sensitizer.

**Specific Target Organ Toxicity - Single Exposure:**
Tricresyl phosphate
If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Alkarylamine
If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

**Aspiration Hazard:**
No data available

**Chronic Effects**

**Carcinogenicity:**
No data available

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**
No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**
No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**
No carcinogenic components identified

**Germ Cell Mutagenicity:**
Alkarylamine
The Ames Salmonella test for mutagenicity was negative for this product.

**Reproductive toxicity:**
Tricresyl phosphate
Suspected of damaging fertility. This material has been shown to impair fertility and cause adverse reproductive effects in rats and mice.

**Specific Target Organ Toxicity - Repeated Exposure:**
Tricresyl phosphate
Repeated occupational exposure to tricresyl phosphate over a prolonged period of time may cause delayed neurotoxicity characterized by ataxia and tremors.
Alkarylamine  
Repeated overexposure may result in liver and kidney damage. 
Oral: Target Organ(s): Liver, Kidney

### 12. Ecological information

**Ecotoxicity**

<table>
<thead>
<tr>
<th>Category</th>
<th>Substance</th>
<th>Parameter</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fish</strong></td>
<td>Tricresyl phosphate</td>
<td>LC 50 (Rainbow Trout, 4 Days)</td>
<td>0.6 mg/l</td>
</tr>
<tr>
<td></td>
<td>Tricresyl phosphate</td>
<td>NOEC (Rainbow Trout, 4 Days)</td>
<td>0.56 mg/l</td>
</tr>
<tr>
<td></td>
<td>Alkarylamine</td>
<td>LC 50 (Zebra Fish, 4 d)</td>
<td>&gt; 100 mg/l</td>
</tr>
<tr>
<td><strong>Aquatic Invertebrates</strong></td>
<td>Tricresyl phosphate</td>
<td>EC 50 (Water flea (Daphnia magna), 2 d)</td>
<td>0.146 mg/l</td>
</tr>
<tr>
<td></td>
<td>Alkarylamine</td>
<td>EC 50 (Water flea (Daphnia magna), 2 d)</td>
<td>51 mg/l</td>
</tr>
<tr>
<td><strong>Toxicity to Aquatic Plants</strong></td>
<td>Tricresyl phosphate</td>
<td>EC 50 (Alga, 3 Days)</td>
<td>0.4042 mg/l</td>
</tr>
<tr>
<td></td>
<td>Alkarylamine</td>
<td>EC 50 (Green algae (Scenedesmus quadricauda), 3 d)</td>
<td>&gt; 100 mg/l</td>
</tr>
<tr>
<td><strong>Toxicity to soil dwelling organisms</strong></td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sediment Toxicity</strong></td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Toxicity to Terrestrial Plants</strong></td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Toxicity to Above-Ground Organisms</strong></td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Toxicity to microorganisms</strong></td>
<td>Tricresyl phosphate</td>
<td>LC 50 (Sludge, 0.1 Days)</td>
<td>&gt; 1,000 mg/l</td>
</tr>
<tr>
<td></td>
<td>Alkarylamine</td>
<td>EC 50 (Sludge, 0.1 d)</td>
<td>&gt; 100 mg/l</td>
</tr>
</tbody>
</table>
| **Persistence and Degradability**
| **Biodegradation** | Tricresyl phosphate | OECD TG 301 D, 24.2 %, 28 d, Not readily degradable. |
|                   | Alkarylamine     | OECD TG 301 B, 1 %, 28 d, Not readily degradable. |
| **Bioaccumulative Potential**
| **Bioconcentration Factor (BCF)** | No data available |
| **Partition Coefficient n-octanol / water (log Kow)** | Tricresyl phosphate | Log Kow: 5.93 (Measured) |
| **Mobility**       | No data available |
| **Other Adverse Effects** | No data available |
13. Disposal considerations

Disposal instructions: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

Contaminated Packaging: Container packaging may exhibit hazards.

14. Transport information

DOT
- UN Number: UN 3082
- UN Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Tricresyl phosphate, Trixylenyl phosphate)
- Transport Hazard Class(es)
  - Class: 9
  - Label(s): 9
- Packing Group: III
- Marine Pollutant: Yes
- Special precautions for user: None established

IMDG
- UN Number: UN 3082
- UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricresyl phosphate, Trixylenyl phosphate)
- Transport Hazard Class(es)
  - Class: 9
  - Label(s): 9
  - EmS No.: F-A, S-F
- Packing Group: III
- Marine Pollutant: Yes
- Limited quantity 5.00L
- Excepted quantity E1
- Special precautions for user: None established

IATA
- UN Number: UN 3082
- Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Tricresyl phosphate, Trixylenyl phosphate)
- Transport Hazard Class(es)
  - Class: 9
  - Label(s): 9MI
- Marine Pollutant: Yes
- Packing Group: III
- Limited quantity 30.00KG
- Excepted quantity E1

Environmental Hazards
- Marine Pollutant
- Special precautions for user: None established
- Other information
Passenger and cargo aircraft: Allowed.
Cargo aircraft only: Allowed.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
None known.

Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. Review classification requirements before shipping materials at elevated temperatures.

15. Regulatory information

US Federal Regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
None known.

SARA 302 Extremely Hazardous Substance
SARA 304 Emergency Release Notification
SARA 311/312 Hazardous Chemical
SARA 313 (TRI Reporting)
This product may contain chemical(s) regulated under the Superfund Amendments and Reauthorization Act (SARA). For additional information please contact Busch LLC.

US State Regulations
US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

Inventory Status
Australia (AICS)
This product requires notification before sale in Australia.

Canada (DSL/NDSL)
All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

China (IECSC)
All components of this product are listed on the Inventory of Existing Chemical Substances in China.

European Union (REACH)
To obtain information on the REACH compliance status of this product, please contact Busch LLC.

Japan (ENCS)
This product requires notification in Japan.

Korea (ECL)
All components are in compliance in Korea.

New Zealand (NZIoC)
All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)
All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).
Switzerland (SWISS)  
All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

Taiwan (TCSCA)  
All components of this product are listed on the Taiwan inventory.

United States (TSCA)  
All components of this material are on the US TSCA Inventory.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

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

HMIS Hazard ID

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>* 1</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazards</td>
<td>0</td>
</tr>
</tbody>
</table>

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 06/01/2015
Version #: 1.0
Source of information: Internal company data and other publically available resources.
Further Information: Contact supplier (see Section 1)
Disclaimer: As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.