1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

<table>
<thead>
<tr>
<th>Trademark:</th>
<th>Arichem STB-FR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Code:</td>
<td>Arichem STB-FR</td>
</tr>
<tr>
<td>Product Description:</td>
<td>Sodium Trichlorobenzensulfonate [CAS 53423-65-7] CAS name: Sodium-2,4,5-Trichlorobenzensulfonate</td>
</tr>
<tr>
<td>Product Type:</td>
<td>Commercial Product</td>
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<tr>
<td>Recommended use:</td>
<td>May be used as a flame retardant in polycarbonate resin formulations</td>
</tr>
<tr>
<td>Company:</td>
<td>Arichem LLC</td>
</tr>
<tr>
<td></td>
<td>187 Sloss Industrial Road</td>
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<td></td>
<td>Ariton, AL 36311</td>
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<td></td>
<td>USA</td>
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<tr>
<td>Manufacturer:</td>
<td>Arichem LLC</td>
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<tr>
<td></td>
<td>187 Sloss Industrial Road</td>
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<td></td>
<td>Ariton, AL 36311</td>
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<td></td>
<td>USA</td>
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<tr>
<td>Emergency Telephone Number:</td>
<td>CHEMTREC (+1) 1-800-424-9300</td>
</tr>
<tr>
<td></td>
<td>8 am – 4:30 pm Monday-Friday: 334-762-2314</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:BrendaHyatt@Arichem.com">BrendaHyatt@Arichem.com</a></td>
</tr>
</tbody>
</table>
2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

White crystalline powder
No characteristic odor
Spilled material may create slipping hazard
Can burn in a fire producing toxic smoke
Decomposition products are toxic.
No other significant fire, explosion or health hazard.

Skin Contact: May cause minor skin irritation
Eye Contact: Powder particles may be irritating to the eyes
Inhalation: Powder particles may be irritating – avoid inhalation
Ingestion: Effects unknown. If ingested, get trained medical help.
Other Information: For skin or eye contact, flush affected areas with water continuing for 20 minutes

3. COMPOSITION / INFORMATION ON INGREDIENTS

Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 99/45/EC unless indicated.

4. FIRST AID MEASURES

If inhaled: Move to fresh air in the event of inhalation of concentrated dust. Give artificial respiration if not breathing; Give oxygen if breathing is difficult. Call for trained medical help.
On skin contact: Flush contacted skin areas with water for 20 minutes
On eye contact: Flush eyes with water for 20 minutes
On ingestion: Effects unknown. If ingested, get trained medical help.
Precautions: In all cases, get trained medical help immediately.
5. FIRE FIGHTING MEASURES

Autoignition Temperature: Not established

Explosive Limits: Not a significant explosion hazard.
   Upper Not established
   Lower Not established

Suitable Extinguishing Media: Use dry chemical, CO₂, water fog, or regular foam.

Unsuitable Extinguishing Media: Solid water stream not recommended.

Hazardous Decomposition Products: Vapors containing SOₓ and chlorides

Special Protective Equipment for Firefighters: Self-contained breathing apparatus (NEN-EN137) and full protective fire fighting clothing

Specific Hazards: Flash Point: 950 °F (496 °C)
   Vapors are toxic

6. ACCIDENTAL RELEASE MEASURES

Clean up: Collect for recycle into suitable containers for disposal.

Personal precautions: See Section 8

Environmental Precautions: Do not release into waterways or the environment

7. HANDLING AND STORAGE

Handling: Handle in a well-ventilated area. If adequate ventilation is not possible, use a NIOSH/MSHA or other approved dust/mist respirator or airline supplied respirator depending on concentrations. See section 8. Eye protection. Rubber gloves.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits: No information unless noted below

Engineering Measures to Reduce Exposure PEL for nuisance dust is 15 mg/m³ for total dust and 5 mg/m³ for the respirable fraction. Ventilate use area to maintain dust concentrations below the PEL. If such ventilation fails or is not available, use NIOSH/MSHA dust/mist respirator (or equivalent). Use good industrial safety practices.

Hand Protection: Rubber gloves (NEN-EN 374)

Eye Protection: Safety glasses with side shields (NEN-EN 165-166).

Respiratory Protection: Self contained breathing apparatus in case of abnormal conditions and suitable respiratory equipment in case of insufficient ventilation (NEN-EN 149)

Body Protection: Long sleeved clothing (NEN-EN 340-369-465)

Hygiene Measures: When using, avoid eating, drinking, smoking.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid
Appearance: Crystalline Powder
Color: White
Odor: None

Melting Point/Range: Not established
Autoignition Temperature: Not established
Vapor Pressure: Not established

Water Solubility: 3.5 g/100 ml at 77 °F (25 °C)
Evaporation Rate: Not established

Specific Gravity: >1 (water = 1)
VOC content (%): Negligible

Explosive Limits: Not a significant explosion hazard.
Upper Not established
Lower Not established
10. STABILITY AND REACTIVITY

Stability: Stable under ambient conditions. Hazardous polymerization does not occur.
Conditions to avoid: Avoid elevated temperatures (950 °F or 496 °C) Do not use without adequate ventilation.
Hazardous Decomposition Products: Decomposition vapors include SOx and chlorides

11. TOXICOLOGICAL INFORMATION

LD50/oral/rat: Not established
LD50/dermal/rabbit: Not established
Subchronic toxicity: No information available
Primary Irritation: Skin
IARC: Not listed
OSHA: Not listed
NTP: Not listed
Remarks: Toxicological data has been taken from products of similar composition
Special Studies: None

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects: Do not flush into surface water or sanitary sewer system
Ecotoxicity – Invertebrate Data: Ecological damages are not known or expected under normal use
Germany VCI (WGK): 0

13. DISPOSAL CONSIDERATIONS

Waste from residues/ unused products: Recycle if possible. Dispose in accordance with local regulations.
EWC waste disposal number: Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with regional waste company.
14. TRANSPORT INFORMATION

Transport Classification: Not regulated as hazardous for shipment, unless noted below, under current transportation regulations.

ADR/RID/AND Not regulated
IMDG Not regulated
ICAO-TI/IATA Not regulated
USA DOT Not regulated
USA DOT/IMO Not regulated

15. REGULATORY INFORMATION

EU Regulations: Annex I, part 1 + 2: not mentioned.
With regard to possible decomposition products, see Section 10.

National Regulations
TSCA (USA) Listed*
EINECS (Europe) Listed

REACH Information Pre-registered

Does not intentionally contain banned chemicals.

* “Listed” means all chemical components are on respective inventory list and/or a qualifying exemption exists for one or more components. “Not listed” indicates that one or more components is restricted into that country or region.

16. OTHER INFORMATION

Arichem STB-FR is a trademark of Arichem LLC.

MSDS Scope: This document conforms to Regulation EC No 1907/2006 REACH
This document is applicable to other countries and regions.

Prepared by: Arichem LLC

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