

## Product Bulletin

### STEPANOL® WA-EXTRA

|                                       |   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
|---------------------------------------|---|---------------------------|--------------|---------------------------|-------|-----------------------------|------|--------------------------|------|-------------------------|------|-----------------------|------|---------------------------------------|----|-------------------------------|----|-------------------------------|---|------------------------------------|---------|---------------------------|---------|-----------------------------------|------------|-------------------------------------|-------------|------------------------------|-------------|-----------------------------|--------|-------------------------|---|
| Product Name                          |   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Chemical Structure                    | $\text{CH}_3(\text{CH}_2)_{10}\text{CH}_2\text{OSO}_3\text{Na}$   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| INCI Name                             | Sodium Lauryl Sulfate   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| CAS Registry No.                      | 68585-47-7 (Alternate CAS No. 151-21-3, 85586-07-8)   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Chemical Description                  | STEPANOL WA-EXTRA is a sodium lauryl sulfate produced from the sulfation of fatty alcohol via Stepan's $\text{SO}_3$ process. This process allows the consistent production of a high purity product such as STEPANOL WA-EXTRA.   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Applications                          | STEPANOL WA-EXTRA can be used in a wide variety of personal care and detergent applications in which copious amounts of foam and excellent viscosity building properties are desired. Because of its high purity, STEPANOL WA-EXTRA can be used for formulations that are sensitive to levels of inorganic salts and free oil. It can be incorporated into shampoos, handsoaps, bath products, shaving creams and medicated ointments. STEPANOL WA-EXTRA can also be used in rug shampoos, light duty liquid detergents and fine fabric wash.   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Typical Properties                    | <table border="0"> <tr> <td>Appearance at 25 °C .....</td> <td>Clear liquid</td> </tr> <tr> <td>Actives, (MW 302) % .....</td> <td>28.95</td> </tr> <tr> <td>Unulfated Material, % .....</td> <td>0.25</td> </tr> <tr> <td>Sodium Chloride, % .....</td> <td>0.01</td> </tr> <tr> <td>Sodium Sulfate, % .....</td> <td>0.10</td> </tr> <tr> <td>pH, 10% Aqueous .....</td> <td>8.03</td> </tr> <tr> <td>Color, %Transmittance at 420 nm .....</td> <td>94</td> </tr> <tr> <td>Viscosity at 25 °C, cps .....</td> <td>27</td> </tr> <tr> <td>Viscosity at 60 °C, cps .....</td> <td>7</td> </tr> <tr> <td>Cloud Point (as is), °C (°F) .....</td> <td>10 (50)</td> </tr> <tr> <td>Pour Point, °C (°F) .....</td> <td>13 (55)</td> </tr> <tr> <td>Flash Point (PMCC), °C (°F) .....</td> <td>&gt;94 (&gt;201)</td> </tr> <tr> <td>Density, g/ml (lbs/U.S. gal.) .....</td> <td>1.04 (8.65)</td> </tr> <tr> <td>Boiling Point, °C (°F) .....</td> <td>&gt;100 (&gt;212)</td> </tr> <tr> <td>Freeze Point, °C (°F) .....</td> <td>8 (46)</td> </tr> <tr> <td>RVOC, U.S. EPA, % .....</td> <td>0</td> </tr> </table> | Appearance at 25 °C ..... | Clear liquid | Actives, (MW 302) % ..... | 28.95 | Unulfated Material, % ..... | 0.25 | Sodium Chloride, % ..... | 0.01 | Sodium Sulfate, % ..... | 0.10 | pH, 10% Aqueous ..... | 8.03 | Color, %Transmittance at 420 nm ..... | 94 | Viscosity at 25 °C, cps ..... | 27 | Viscosity at 60 °C, cps ..... | 7 | Cloud Point (as is), °C (°F) ..... | 10 (50) | Pour Point, °C (°F) ..... | 13 (55) | Flash Point (PMCC), °C (°F) ..... | >94 (>201) | Density, g/ml (lbs/U.S. gal.) ..... | 1.04 (8.65) | Boiling Point, °C (°F) ..... | >100 (>212) | Freeze Point, °C (°F) ..... | 8 (46) | RVOC, U.S. EPA, % ..... | 0 |
| Appearance at 25 °C .....             | Clear liquid  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Actives, (MW 302) % .....             | 28.95   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Unulfated Material, % .....           | 0.25  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Sodium Chloride, % .....              | 0.01  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Sodium Sulfate, % .....               | 0.10  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| pH, 10% Aqueous .....                 | 8.03  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Color, %Transmittance at 420 nm ..... | 94  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Viscosity at 25 °C, cps .....         | 27  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Viscosity at 60 °C, cps .....         | 7   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Cloud Point (as is), °C (°F) .....    | 10 (50)   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Pour Point, °C (°F) .....             | 13 (55)   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Flash Point (PMCC), °C (°F) .....     | >94 (>201)  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Density, g/ml (lbs/U.S. gal.) .....   | 1.04 (8.65)   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Boiling Point, °C (°F) .....          | >100 (>212)   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Freeze Point, °C (°F) .....           | 8 (46)  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| RVOC, U.S. EPA, % .....               | 0   |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Environmental Effects                 | Product is readily biodegradable. A detailed biodegradability statement is available upon request.  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Health Effects                        | STEPANOL WA-EXTRA is slightly toxic orally ( $\text{LD}_{50}$ is between 0.8 to 1.1 g/kg) and causes moderate to severe skin and eye irritation at 10% active.  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |
| Storage & Handling                    | <p>Normal safety precautions (i.e., gloves and safety goggles) should be employed when handling STEPANOL WA-EXTRA. Contact with the eyes and prolonged contact with the skin should be avoided. Wash thoroughly after handling material.</p> <p>It is recommended that STEPANOL WA-EXTRA be stored in sealed containers and kept at temperatures between 60 °F (16 °C) and 110 °F (43.3 °C). Avoid overheating or freezing. If material is frozen, mild heat and agitation are recommended to ensure the material is homogeneous before use.</p>  |                           |              |                           |       |                             |      |                          |      |                         |      |                       |      |                                       |    |                               |    |                               |   |                                    |         |                           |         |                                   |            |                                     |             |                              |             |                             |        |                         |   |



Storage & Handling

**Bulk Storage Information:** Tanks made of 316 stainless steel or fiberglass with an Atlac 382 corrosion liner are recommended. Gear pumps and piping should be 316 stainless steel. Recommended storage for bulk tanks is 90-125 °F (32-52 °C).

**Standard Packaging:** STEPANOL WA-EXTRA is available in bulk and 55 gallon drums (net weight 450 lb/204 kg).

Workplace Exposure

Occupational exposure can occur primarily through skin contact or via inhalation of vapors and mists. Engineering controls, personal protective equipment, and other workplace practices should be used to control these exposures.

Clearances

All components of STEPANOL WA-EXTRA are listed in the following countries; the registration numbers for the active ingredients are included in parentheses: Europe (EINECS 205-788-1), Japan (ENCS 2-1679), Canada (DSL 151-21-3), Australia (AICS 151-21-3), United States (TSCA 151-21-5), Philippines (PICCS 151-21-3), Korea (ECL Serial No. KE-21884), China (IECSC 151-21-3) and New Zealand (NZIoC 151-21-3).

STEPANOL WA-EXTRA is available as Kosher Certified.

**It is the responsibility of the formulator to review the chemical control regulations for each country where the end product is intended to be sold or used.**

Product Stewardship

This product bulletin has been written in accordance with ACC's Product Stewardship guidelines.

Additional Safety Information

A Safety Data Sheet is available upon request.



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