**Solution SBRs** are gradually replacing emulsion SBRs for summer and winter tire treads requiring low rolling resistance tires without compromising grip especially in the high performance sector. It is sometimes blended with NR and BR (Buna™ CB) to improve the balance of properties of the final product.

As a component in the polymer blend of car tire treads, grip and rolling resistance will be enhanced by controlling the glass transition temperature and shape of the tan delta curve.

The LANXESS Buna™ VSL portfolio offers solution styrene butadiene rubbers that have different styrene and vinyl levels which allows the glass transition temperature of the tread compound to be adjusted in order to steer the end properties required by the application.

Additionally we offer a range of S-SBRs called Buna™ SL that have a similar glass transition temperature to that of natural rubber. This makes them particularly suitable, especially when blended with Buna™ CB and Buna™ Nd EZ high cis Butadiene Rubbers, for the truck tread application due to the excellent abrasion resistance offered by these S-SBR’s.

---

### High Vinyl Solution Styrene Butadiene Rubber (HV SBR)

<table>
<thead>
<tr>
<th>Name</th>
<th>Plant</th>
<th>Mooney¹ (MU)</th>
<th>Vinyl (%)</th>
<th>Styrene (%)</th>
<th>TDAE (phr)</th>
<th>Tg (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buna™ VSL 5025-2 HM</td>
<td>POJ</td>
<td>62</td>
<td>50</td>
<td>25</td>
<td>37.5</td>
<td>-29</td>
</tr>
<tr>
<td>Buna™ VSL 4526-2</td>
<td>POJ</td>
<td>50</td>
<td>44.5</td>
<td>26</td>
<td>37.5</td>
<td>-30</td>
</tr>
<tr>
<td>Buna™ VSL 4526-2 HM</td>
<td>POJ</td>
<td>62</td>
<td>44.5</td>
<td>26</td>
<td>37.5</td>
<td>-30</td>
</tr>
<tr>
<td>Buna™ VSL 5228-2</td>
<td>POJ</td>
<td>50</td>
<td>52</td>
<td>28</td>
<td>37.5</td>
<td>-20</td>
</tr>
</tbody>
</table>

### High Styrene Solution Styrene Butadiene Rubber (HS SBR)

<table>
<thead>
<tr>
<th>Name</th>
<th>Plant</th>
<th>Mooney² (MU)</th>
<th>Vinyl (%)</th>
<th>Styrene (%)</th>
<th>TDAE (phr)</th>
<th>Tg (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buna™ VSL 2538-2</td>
<td>POJ</td>
<td>50</td>
<td>25</td>
<td>38</td>
<td>37.5</td>
<td>-31</td>
</tr>
<tr>
<td>Buna™ VSL 2438-2 HM</td>
<td>POJ</td>
<td>80</td>
<td>24</td>
<td>38</td>
<td>37.5</td>
<td>-32</td>
</tr>
<tr>
<td>Buna™ VSL 3038-2 HM</td>
<td>POJ</td>
<td>80</td>
<td>30</td>
<td>38</td>
<td>37.5</td>
<td>-26</td>
</tr>
</tbody>
</table>

### Low Vinyl Solution Styrene Butadiene Rubber (LV SBR)

<table>
<thead>
<tr>
<th>Name</th>
<th>Plant</th>
<th>Mooney¹ (MU)</th>
<th>Styrene (%)</th>
<th>Oil (phr)</th>
<th>Tg (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buna™ SL 4525-0</td>
<td>CAB</td>
<td>45</td>
<td>25</td>
<td>-</td>
<td>-69</td>
</tr>
<tr>
<td>Buna™ SL 4518-4</td>
<td>CAB</td>
<td>45</td>
<td>18</td>
<td>HN (37.5)</td>
<td>-71</td>
</tr>
<tr>
<td>Buna™ SL 7518-4</td>
<td>CAB</td>
<td>75</td>
<td>18</td>
<td>HN (15.0)</td>
<td>-73</td>
</tr>
</tbody>
</table>

¹ML (1+4) @ 100 °C
WE ARE HAPPY TO SUPPORT YOUR BUSINESS

NAFTA
Technical Service
Judy Douglas
E-mail: judy.douglas@arlanxeo.com
Phone: +1 412 809 3547

Sales
John Sawaya
E-mail: john.sawaya@arlanxeo.com
Phone: +1 412 809 1530

APAC
Technical Service
Esther Han
E-mail: esther.han@arlanxeo.com
Phone: +65 6725 5709

Sales
JooSang Kim
E-mail: joosang.kim@arlanxeo.com
Phone: +65 6725 5872

EMEA
Technical Service
Luc ter Bogt
E-mail: luc.terbogt@arlanxeo.com
Phone: +49 221 8885 3998

Sales
Marco Eira
E-mail: marco.eira@arlanxeo.com
Phone: +41 26 422 8354

LATAM
Technical Service
Marcus Moutinho
E-mail: marcus.moutinho@arlanxeo.com
Phone: +55 21 2677 1219

Sales
Sergio Botafogo
E-mail: sergio.botafogo@arlanxeo.com
Phone: +55 21 2677 1344

Please contact us for additional information or visit us at www.tsr.arlanxeo.com

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

Health and Safety Information: Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling the ARLANXEO products mentioned in this publication. For materials mentioned which are not ARLANXEO products, appropriate Industrial hygiene and other safety precautions recommended by their manufacturers should be followed. Before working with any of these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., safety data sheets and product labels. Consult your ARLANXEO representative or contact the Product Safety and Regulatory Affairs Department.

X_Buty® is a registered trademark of ARLANXEO Switzerland S.A.
Note: The information contained in this publication is current as of May 2017.
Please contact ARLANXEO USA LLC to determine if this publication has been revised.