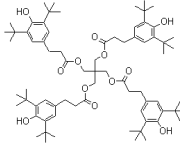
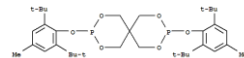
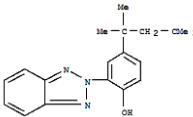
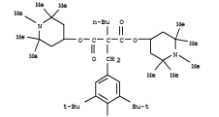


Recommendations on additives for KURARITY™

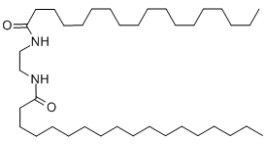
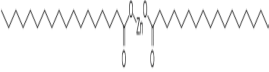
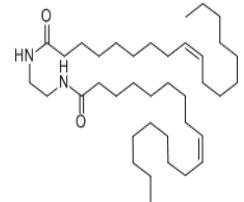
KURARITY business promotion dept.
Elastomer Division

Stabilizers for KURARITY™

| | Recommendation | Equivalent Material | Amount | CAS No. | |
|----------------------------------|-------------------------------|----------------------|---------|------------|---|
| Antioxidant Hindered phenol type | ADKSTAB™ AO-60 (ADEKA) | Irganox® 1010 (BASF) | 0.1 phr | 6683-19-8 |  |
| Antioxidant Phosphite Type | ADKSTAB™ PEP-36 (ADEKA) | NA | 0.1 phr | 80693-00-1 |  |
| UVA | VIOSORB™ 583 (KYODO CHEMICAL) | TINUVIN® 329 (BASF) | 0.2 phr | 3147-75-9 |  |
| HALS | TINUVIN® 144 (BASF) | | 0.2 phr | 63843-89-0 |  |

- ✓ Any antioxidants are not applied to KURARITY™ in production since the weatherability of KURARITY™ is excellent.
- ✓ In general, additives are not required. Just in case of using KURARITY™ in a severe circumstance, it is recommended to use the above two antioxidants to prevent coloring under long-term heat exposure in extruders or hot-melt tanks. We recommend to use both antioxidants at once in order to maximize the antioxidant effects.
- ✓ In addition to the anti oxidants, adding the UVA and HALS like the above will reinforce the excellent weatherability of KURARITY™

Other applicable additives for KURARITY™

| | Recommendation | Amount | CAS No. | |
|---------------------|------------------------------------|---------------|----------|---|
| Anti-Blocking Agent | ALFLOW® H-50T (NOF CORPORATION) | 0.03-0.1 phr | 110-30-5 |  |
| | N,N'-Ethylenebis(stearamide) | | | |
| Demolding Agent | Zinc stearate | 0.01-0.05 phr | 557-05-1 |  |
| Slipping Agent | Etylene bis oleic amide | 0.01-0.05 phr | 110-31-6 |  |
| | N,N'-Ethylenebis(oleic amide) | | | |

*ALFLOW is a registered trademark of NOF corporation

- ✓ The anti-blocking agent, ALFLOW®, is already applied to below grades of KURARITY™ :
LA2140, LA2330, LA3320 and LA2250. No anti-blocking agents are applied to LA2114, LA2270 and LA4285.
- ✓ You can add the above recommended amount of the anti-blocking agent in case you need to reinforce the anti-blocking performance of KURARITY™.
- ✓ Demolding agent helps to demold the components without losing smooth surface.
- ✓ The slipping agent is recommended in case you feel the surface of the molded components is sticky.
This slipping agent is also useful to protect the surface from scratches by certain degrees.

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Precautions should be taken in handling and storage. Please refer to the appropriate Safety Data Sheet for further safety information. In using KURARITY™, please confirm related laws and regulations, and examine its safety and suitability for the application.

For medical, health care and food contact applications, please contact your Kuraray representative for specific recommendations. Even so, users must conduct their own assessment, revisions, registrations as well rely in their own technical and legal judgment to establish the safety and efficacy of their compound and/or end product with KURARITY™ for any application. KURARITY™ should not be used in any devices or materials intended for implantation in the human body. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.

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