



11 July 2017

Subject: REACH Substances of Very High Concern and Ashland

Dear Customer,

The following information is provided in response to your request for Ashland's position concerning the presence of Substances of Very High Concern (SVHCs) in the products we manufacture, market and sell to customers in the European Union (EU).

Ashland can confirm that:

- Procedures are in place to ensure compliance with the REACH obligations of a supplier (see appendix 1) for proactively and reactively informing our customers in situations where SVHCs are present in our products. Additionally, as a general rule, Ashland will provide you with the latest version of the Safety Data Sheet (SDS) upon product purchase. If an SVHC is present in any of the products you purchase from Ashland, the substance will be listed on the European SDS (at "any known concentration" equal to or greater than 0.1 %).
- The following SVHC substances are present in Ashland products (see appendix 2 for specific Commercial Unit products);
 - 1-methyl-2-pyrrolidone (June 2011)
 - bis(pentabromophenyl) ether, cyclohexane-1,2-dicarboxylic anhydride and 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (December 2012)
 - 4-nonylphenol, branched and linear, ethoxylated (June 2013)
- Propylene oxide (methyl oxirane), which was added in December 2012, is not present in our products at levels of 0.1%, or higher. The propylene oxide in our products is bound (to polymers or other substances) and will not be released.
- Please see appendix 2 for an overview of the Ashland products involved. Where applicable, you will see these substances identified on the European SDS for the product. Although not legally required, Ashland is working on the reformulation of (some of) these products, where there is a benefit from reformulation to Ashland and our customers. In specific cases, you may be contacted to review the options.
- As additional SVHCs are placed on the candidate list, we will review the formulations of our product portfolio to phase out these substances from our products, where possible.

If you have questions regarding any REACH-related subject, please contact Ashland via your representative or send an e-mail to REACH@ashland.com.

Kind regards,

Sandor Zuurendonk
Manager - REACH

IMPORTANT DISCLAIMER: While it is our intention to Pre-Register and Register those substances manufactured and imported by Ashland in the EU, we cannot guarantee or absolutely commit to future Registration. Ashland's product portfolio is subject to continual evaluation and optimization based on market and customer needs, including market size and profitability. Ashland is dependent on what information is received from its suppliers about the presence of SVHCs contained in purchased materials that compose Ashland's products. Ashland retains the right to discontinue any product, and no rights can be derived from this publication and Ashland disclaims any liability for any errors or omissions.

Appendix 1

SVHC

SVHCs, also known as "Annex XIV substances," are clearly described in Article 57 of Regulation (EC) No 1907/2006 (the "REACH Regulation"). These substances are identified according to ECHA (European Chemicals Agency):

- **CMR** substances; Carcinogenic, Mutagenic or toxic to Reproduction, meeting the criteria for classification in category 1 or 2 in accordance with Directive 67/548/EEC,
- **PBT** substances; Persistent, Bioaccumulative and Toxic according to the criteria in Annex XIII of the REACH regulation, or
- **vPvB** substances; very Persistent and very Bioaccumulative according to the criteria in Annex XIII of the REACH Regulation, and/or
- Identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to human health or the environment of an equivalent level of concern as those above (e.g., endocrine disrupters).

In July 2017, ECHA updated the candidate list of SVHCs, which now contains 174 substances. The list is incomplete and more substances may be added. Please use the following link to see the latest version of the candidate list:

<http://www.echa.europa.eu/web/guest/candidate-list-table>

These substances may become subject to Authorisation. As result the following obligations apply;

Obligations

ARTICLES

- **From 28 Oct., 2008**, EU and European Economic Area (EEA) suppliers of articles which contain substances on the Candidate List in a concentration above 0.1% (w/w) **must**
 - **provide sufficient information, available to them, to their customers and on request to consumers within 45 days of the receipt of this request.** This information must ensure safe use of the article and, as a minimum, include the name of the substance.
 - **notify the Agency**, according to article 7 (2), **if the substance is present in those articles** in quantities totaling over 1 tonne per producer or importer per year.

SUBSTANCES

- **From 28 Oct., 2008**, EU and EEA suppliers of a substance have to **provide a safety data sheet to their customers** when the substance is on the Candidate List.

PREPARATIONS

- **From 28 Oct., 2008**, EU and EEA suppliers of a preparation not classified as dangerous according to Directive 1999/45/EC have to **provide the recipients, at their request, with a safety data sheet** if the preparation contains at least one substance on the Candidate List and its individual concentration is at least 0.1% (w/w) for non-gaseous preparations and at least 0.2% by volume for gaseous preparations.

Ashland's products, in general, are preparations (mixtures of several substances).

Appendix 2

The tables below present an overview of those Ashland products currently on the European market, containing SVHCs. Although not legally required, we are working on the reformulation of (some of) these products, where reformulation would be valuable to both Ashland and our customers. In specific cases we will contact you to review the options.

* Under Article 56(3) use of substances in scientific research and development is exempt from Authorisation. According to the definition of REACH, scientific research and development means any scientific experimentation, analysis or chemical research carried out under **controlled conditions** in volume less than one tonne per year. On the basis of this, it is likely that the use of substances as test reagent or indicator **in laboratory settings** is exempt.

4-nonylphenol, branched and linear, ethoxylated (EC# not specified)		
Ashland Product Number	Product Name	Business
777761, 777762, 777855, 777856	DEXTROL OC-20	Ashland Specialty Ingredients
764809, 414416, 425887, 764809, 776752, 776753, 776789, 776800	DEXTROL OC-50 INT	
830570	PARTS READY DEGREASER	
818648, 818649, 854998	PURERAD 18667E UV PSA	
845320	PURERAD L8000E UV PSA	
624049	PURERAD 17921 UV PSA	
617695, 737803, 624091	PURERAD 18667 UV PSA	
818650, 818711	PURERAD 18670E UV PSA	
846911	PURERAD L8010E UV PSA	
644643, 624093	PURERAD 18670 UV PSA	
133243	PURETHANE A 1078 ADHESIVE	
162040	PURETHANE A 1083 ADHESIVE	
833495, 833496	PURERAD 17921E UV PSA	
819600	PURERAD DP8700E UV PSA DIGITAL	
818712, 818713	PURERAD 19013E UV PSA	
846912	PURERAD L8020E UV PSA	

1-methyl-2-pyrrolidone (EC#212-828-1)		
Ashland Product Number	Product Name	Business
826099	AGSOLEX 1	Ashland Specialty Ingredients
830697, 830698, 830699, 839217	PHARMASOLVE	
830701, 830703	PHARMASOLVE V	
829774, 839067, 839068	MICROFLEX 1	
829921, 829927, 829928, 829929, 829930, 829931, 829932, 829933, 829934, 837351, 839089	M-PYROL	Ashland Performance Materials
829838, 829841, 829842, 829843, 829844, 829845, 857892	MICROPURE EG	
829847, 829848, 857893, 857894	MICROPURE ULTRA II	
828306, 828307	GAFSOLVER TMP	
831639, 856019	SHIPSHAPE RESIN CLEANER	
827892	FOAMFLUSH URETHANE REMOVER	
830570, 856214	PARTSREADY DEGREASER	

4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (EC# not specified)		
Ashland Product Number	Product Name	Business
651141	PURETHANE 20914 LAM ADH	Ashland Specialty Ingredients

bis(pentabromophenyl) ether (EC#214-604-9)		
Ashland Product Number	Product Name	Business
312941, 329694	ENGUARD AE 00026A GC	Ashland Performance Materials
305359, 315409	ENGUARD AE 00714A GC	
614141, 608948	ENGUARD AE 00715AV6 GC	
348325, 364641, 321331	ENGUARD AE 00960A GC	
314146, 315780	ENGUARD AE 01046A GC	
333323, 362979	ENGUARD AE 01046ATMV3 GC	
834228, 834229	ENGUARD AE 01046ATMV6 GC	
314914, 363992	ENGUARD AE 01066AV3 GC	
809258	ENGUARD AE 01078A GC	
330280, 333608, 348178	ENGUARD AE 10090AA6 GC	
832754, 832753	ENGUARD AE 28057A GC	
638553, 638872, 799176	ENGUARD AE 80524AV3 GC	
354790, 354204, 354429	ENGUARD AE 80555 AV3	
317128, 315419	ENGUARD CE 00729A GC	
354690, 354109	ENGUARD CE 01268A GC	
873831, 873832	ENG AE 10503AV3 GC	
329644, 331154, 818591, 332784, 353990	HETRON F 240 TF RESIN	
721437, 731652, 723254, 732022	HETRON F 250 TFE RESIN	
746782, 746909, 857959	HETRON F 255 TFE RESIN	
769488, 769487	HETRON F 260 TFE RESIN	
331133, 320875, 365422, 362120	HETRON F 804 TF RESIN	
856285, 856287	HETRON F 240 TFE RESIN	
345707	SF TH151GC	

cyclohexane-1,2-dicarboxylic anhydride (EC#201-604-9)		
Ashland Product Number	Product Name	Business
776150, 776181	PURERAD 3400470 LOW MIGR LAM ADH	Ashland Specialty Ingredients
813084, 813085	PURERAD 3400865 LM PET LA	
624871, 813753	PURERAD 52574 F LAM ADH	
624872, 704392	PURERAD 52575 LAM ADH	
765680, 765851	PURERAD 52575D LOW MIGR LAM ADH	
745256, 805521, 745257, 812559	PURERAD 52575E LOW MIGR LAM ADH	
627197, 771860, 812334	PURERAD 53330 UV LAM ADH	
695924, 695923	PURERAD 53560 UV LAM ADH	
743384, 769912, 771310	PURERAD 53637 PET LAM ADH	
782004, 783298	PURERAD 60025 LOW MIGR ADH	
782077	PURERAD 60030 LOW MIGR ADH	
782078	PURERAD 60035 LOW MIGR ADH	
617189, 617190	PURERAD FA331FLA LAM ADH	
845211, 862056, 862609	PURERAD L7000E HB LAM ADH	
845214	PURERAD L7070E PET LAM ADH	
875590, 875651	PURERAD 52575F LOW MIGR LAM ADH	
617516	NWC 52574 F LAM ADH	
883052, 883053, 885291, 895777	PureRad L7200E	