

February 19, 2020

## REACH Directive

On June 1, 2007 the European Union REACH regulation (EC) No 1907/2006 went into force. The REACH regulation deals with the **Registration, Evaluation, Authorization, and Restriction of Chemical substances**.

### What is REACH?

REACH addresses the production and use of chemical substances and their potential impacts on human health and the environment. REACH requires all companies manufacturing or importing chemical substances into the European Union in quantities of one ton or more per year to register these substances with the European Chemicals Agency (ECHA). There are over 143,000 chemical substances registered with the ECHA.

### Substances of Very High Concern

REACH also regulates substances which are of particular concern because they may have very serious effects on human health and the environment. These substances are listed on the “Candidate List of Substances of Very High Concern for Authorization” (SVHC) Annex XIV. If a substance listed on the candidate list above a concentration of 0.1% by weight is contained in articles, this may trigger additional obligations for companies producing, importing, and supplying these articles.

Batteries (except lithium type), lights, and chargers sold by Energizer do not contain any of the substances listed in the candidate list of substances of very high concern included in Annex XIV (list of substances subject to authorization).

**About Bis(2-methoxyethyl) ether (Diglyme) CAS#111-96-6:** In August 2014, this substance was added to the Authorization list (Annex XIV). This substance can be used as a solvent in lithium batteries. Energizer does not place on the market any lithium batteries that use this substance as a solvent. Therefore, no Energizer battery uses a substance listed in Annex XIV.

**About ENERGIZER Lithium primary batteries:** The information here after is provided per article 33 of REACH regulation 1907/2006 from European Commission:

EGDME (Ethylene Glycol Dimethyl Ether) was under review to be placed on the list of substances that could become candidate to Authorization for a specific use.

1. Substance name: 1,2 DimethoxyEthane
2. EC Number: 203-794-9
3. CAS Number: 110-71-4





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4. Content: above 0,1% weight by weight
5. EGMDE use description: Incorporated in Lithium Primary Batteries as electrolyte solvent, is not released during normal or reasonably foreseeable conditions of use of batteries.
6. Conditions of use of batteries remain unchanged: Do not open, do not disassemble, do not damage, do not expose to fire, do not charge, do not insert incorrectly, keep out of reach of children, do not short circuit, do not mix types, do not mix old and new batteries.
7. Communication to consumers: Upon request of a consumer, above information 1. To 6. Has to be provided per article 33(2) of REACH regulation within 45 calendar days of the request and free of charge.

**EGDME was not placed on the Authorization list but is listed on the Candidate List for Authorization.**

#### **Additions to Annex XIV**

New substances may be added to the Annex XIV. Authorities in any one of the member states may identify substances for addition to the Annex XIV. This list of proposed substances is prioritized to determine which ones will be subject to authorization by the authorities. Once interested parties provide comment, the ECHA determines if the substance is added to the candidate list of Substances of Very High Concern for inclusion into Annex XIV. If the substance is added to the list, then companies who want to continue to manufacture or import the substance must apply for an authorization to continue to use the substance.

#### **Annex XVII (Restricted List)**

Restrictions are a tool to protect human health and the environment from unacceptable risks posed by chemicals. Restrictions may limit or ban the manufacture, placing on the market or use of a substance. A restriction applies to any substance on its own, in a mixture or in an article, including those that do not require registration.

Batteries, lights, and chargers sold by Energizer do not contain any of the substances listed in the Restricted List Annex XVII.

#### **Covered Items under REACH**

The REACH regulation applies to substance, containers, and Articles intended for sale in Europe. The REACH regulation defines Articles as “an object which during production is given a special shape, surface, or design, which determines its function to a greater degree than its chemical composition.”

Energizer batteries, lights, and chargers sold in Europe are classified as Articles per latest available Draft Final Technical Guidance document on requirements for substances in articles



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from Reach Implementation Project (so-  
published in December 2007 and the EU Court of Justice Rule on REACH Articles definition  
announced on September 10, 2015. called RIP 3.8)

Additionally, the REACH regulation applies to substances that are intended to be released from an article. Substances may be intended to be released from articles in order to provide an “added value”, where this accessory function is not directly linked to the main function. For example a fragrance may be released from an article to provide added value, fragrance, to the product.

Energizer batteries, lights, and chargers sold in Europe are not intended to release any substance under normal or reasonably foreseeable conditions of use (ECHA guidance document on requirements for substances in Articles, May 2008, p 73, table 5).

### **Conclusion**

Currently, Energizer batteries, lights, and chargers do not contain any of the substances listed in the Substances of Very High Concern list more than 0.1% by weight per the latest regulation. Energizer continues to monitor any substances that are included in the priority list for inclusion into Annex XIV.



Energizer



## A. Candidate List Table, last updated July 16, 2019

<https://echa.europa.eu/candidate-list-table>

## B. Lists of SVHC to be prioritized for inclusion into Annex XIV:

### B1. ECHA's 1<sup>st</sup> Recommendation for inclusion in Annex XIV (Authorization) – June 1 2009:

Substance name	EC number	CAS number
4,4'-Diaminodiphenylmethane (MDA)	202-974-4	101-77-9
5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	201-329-4	81-15-2
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins - SCCPs)	287-476-5	85535-84-8
Benzyl butyl phthalate (BBP)	201-622-7	85-68-7
Bis(2-ethylhexyl) phthalate (DEHP)	204-211-0	117-81-7
Dibutyl phthalate (DBP)	201-557-4	84-74-2
Hexabromocyclododecane HBCDD), and all major diastereoisomers identified, i.e.: alpha-, beta- and gamma- hexabromocyclododecane	247-148-4 and 221-695-9	25637-99-4 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)

### B.2. ECHA's 2<sup>nd</sup> Recommendation for inclusion in Annex XIV (Authorization) – Dec. 17, 2010:

Substance name	EC number	CAS number
2,4-dinitrotoluene (2,4-DNT)	204-450-0	121-14-2
Diarsenic pentaoxide	215-116-9	1303-28-2
Diarsenic trioxide	215-481-4	1327-53-3
Diisobutylphthalate (DIBP)	201-553-2	84-69-5
Lead chromate	231-846-0	7758-97-6
Lead chromate molybdate sulphate red - C.I. Pigment Red 104	235-759-9	12656-85-8
Lead sulfochromate yellow - C.I. Pigment Yellow 34	215-693-7	1344-37-2
Tris(2-chloroethyl)phosphate (TCEP)	204-118-5	115-96-8



**B.3. ECHA's 3<sup>rd</sup> Recommendation for inclusion in Annex XIV (Authorization) –  
Dec. 20, 2011:**

Substance name	EC number	CAS number
Ammonium dichromate	232-143-1	7789-09-5
Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.	231-801-5; 236-881-5	7738-94-5; 13530-68-2
Chromium trioxide	215-607-8	1333-82-0
Cobalt dichloride	231-589-4	7646-79-9
Cobalt(II) carbonate	208-169-4	513-79-1
Cobalt(II) diacetate	200-755-8	71-48-7
Cobalt(II) dinitrate	233-402-1	10141-05-6
Cobalt(II) sulphate	233-334-2	10124-43-3
Potassium chromate	232-140-5	7789-00-6
Potassium dichromate	231-906-6	7778-50-9
Sodium chromate	231-889-5	7775-11-3
Sodium dichromate	234-190-3	7789-12-0; 10588-01-9
Trichloroethylene	201-167-4	79-01-6

**B.4. ECHA's 4th Recommendation for inclusion in Annex XIV (Authorization) –  
June 20, 2012:**

Substance name	EC number	CAS number
Pentazinc chromate octahydroxide	256-418-0	49663-84-5
Arsenic acid	231-901-9	7778-39-4
Formaldehyde, oligomeric reaction products with aniline (technical MDA)	500-036-1	25214-70-4
Potassium hydroxyoctaoxodizincatedichromate	234-329-8	11103-86-9
Strontium chromate	232-142-6	7789-06-2
1,2-Dichloroethane (EDC)	203-458-1	107-06-2
Dichromium tris(chromate)	246-356-2	24613-89-6
2,2'-dichloro-4,4'-methylenedianiline (MOCA)	202-918-9	101-14-4
N,N-Dimethylacetamide (DMAC)	204-826-4	127-19-5
Bis(2-methoxyethyl) ether (Diglyme)	203-924-4	111-96-6



**B.5 ECHA's 5th Recommendation for inclusion in Annex XIV (Authorization) –  
June 23, 2013:**

Substance name	EC number	CAS number
Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	214-604-9	1163-19-5
Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight		
Aluminosilicate Refractory Ceramic Fibres (Al-RCF) are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight		
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)	204-650-8	123-77-3
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (4-tert-OPnEO) [covering well-defined substances and UVCB substances, polymers and homologues]		
N,N-dimethylformamide (DMF)	200-679-5	68-12-2

**B.6 ECHA's 6th Recommendation for inclusion in Annex XIV (Authorization) –  
June 13, 2017:**

Substance name	EC number	CAS number
1-bromopropane (n-propyl bromide)	203-445-0	106-94-5
diisopentylphthalate	210-088-4	605-50-5
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1	71888-89-6



1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6	68515-42-4
1,2-benzenedicarboxylic acid, dipentylester	284-032-2	84777-06-0
bis(2-methoxyethyl) phthalate	204-212-6	117-82-8
dipentylphthalate	205-017-9	131-18-0
N-pentyl-isopentylphthalate		776297-69-9
benzo[a]pyrene	200-028-5	50-32-8
pitch, coal tar, high temp.		
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated		
4-nonylphenol, branched and linear, ethoxylated (including substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof)	203-199-4 268-359-8	25154-52-3 104-40-5 68081-86-7

### C. Authorization list (Annex XIV)

<http://echa.europa.eu/web/guest/addressing-chemicals-of-concern/authorisation/recommendation-for-inclusion-in-the-authorisation-list/authorisation-list>

