

# TEGO® Rad 2300

## Radiation-Curing additive

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## 1. Inventory Information

TEGO® Rad 2300 respectively its ingredients are listed in the following inventories:

Inventory	Country
EINECS	Europe
TSCA	USA
DSL	Canada
ENCS	Japan
AICS	Australia
ECL	South Korea
PICCS	Philippines
IECSC	China
NZIoC	New Zealand

## 2. Food Contact Status

The food contact status of TEGO® Rad 2300 is currently under re-evaluation.

In case you urgently require information regarding food contact status of TEGO® Rad 2300 you are welcome to contact us.

## 3. Further Regulatory Information referring to final materials or articles

### 2009/543/EC; 2009/544/EC (Community Eco-label for outdoor / indoor paints and varnishes)

The below listed chemicals are part of those substances restricted by 2009/543/EC and 2009/544/EC. <sup>i</sup>

We do not intentionally add the following substances to produce our TEGO® Rad 2300: <sup>ii</sup>

- Heavy metals
  - Cadmium
  - Lead
  - Chromium VI
  - Mercury
  - Arsenic
  - Barium (except Barium sulphate)
  - Selenium
  - Antimony
  - Cobalt

- APEOs (alkylphenolethoxylates)
- Isothiazolinone
- PFAS (perfluorinated alkyl sulfonates)
- PFCA (perfluorinated carboxylic acids)
- PFOA (perfluorooctanoic acid)
- Formaldehyde
- Halogenated organic solvents
- Phthalates
  - DNOP (di-n-octyl phthalate) (CAS 117-84-0)
  - DINP (di-iso-nonyl phthalate) (CAS 28553-12-0 or 68515-48-0)
  - DIDP (di-iso-decyl phthalate) (CAS 68515-49-1 or 26761-40-0)
  - DEHP (di-2-ethylhexyl phthalate) (CAS 117-81-7)
  - DBP (di-butyl phthalate) (CAS 84-74-2)
  - BBP (benzyl-butyl phthalate) (CAS 85-68-7)
- Methyl ethyl ketoxime (CAS 96-29-7)
- Ammonium or alkyl ammonium compounds

For information regarding classification and labelling of TEGO® Rad 2300 as well as for information regarding hazardous components please refer to chapter 2 respectively 3 of our Safety Data Sheet.<sup>iii</sup>

#### **Directive 2011/65/EC (RoHS)**

##### **DIN EN 71-3 (safety of toys)**

We do not intentionally add substances mentioned in Directive 2011/65/EC and DIN EN 71-3 to produce our TEGO® Rad 2300. <sup>ii</sup>

#### **Green Seal™ Standard**

The below listed chemicals are part of those substances restricted by GS-11 (Green Seal™ Standard for Paints and Coatings) – third edition. <sup>i</sup>

We do not intentionally add the following substances to produce our TEGO® Rad 2300: <sup>ii</sup>

- Ozone depleting compounds according U.S. EPA list of Class I and Class II Ozone-Depleting Substances
- 1,2-dichlorobenzene (CAS 95-50-1)
- APEO (alkylphenolethoxylates)
- Formaldehyde-donors

- Heavy metals
  - Cadmium
  - Lead
  - Chromium (VI)
  - Mercury
  - Antimony
- Phthalates
- Triphenyl tins
- Tributyl tins

Please note that all aforementioned regulations, directives and standards refer to final materials or articles. Verification of compliance with the mentioned regulations, directives or standards should be carried out in accordance with the rules laid down there. We would like to point out that it is in the sole responsibility of the manufacturer of the final material or article to assure the compliance with the mentioned regulations, directives or standards.

#### 4. REACH Information

##### **(Pre-) Registration**

Many of our products are either polymers or mixtures consisting of substances/polymers we manufacture or which are blended in. You can be sure that we are aware of our obligations, which also include the communication to our suppliers concerning the purchased substances and monomers in order to secure that further marketing of the affected products is allowed in compliance with REACH.

Since polymers are exempted from registration under REACH and the substances of a mixture often are subject to different registration deadlines, a general statement concerning registration status of a product can currently not be made.

##### **SVHC (Substances of Very High Concern)**

We as a supplier of substances or mixtures are obliged to provide a Safety Data Sheet which includes information if the product contains a Substance of Very High Concern in reportable amounts according to REACH. Since the Candidate List of Substances of Very High Concern for Authorization is regularly updated by ECHA (European Chemicals Agency), we would like to ask you to check our newest Safety Data Sheet which will be updated according to the legal obligations. <sup>iii</sup>

## 5. Additional Information

### VOC-content

By determination of the amount of non-volatile components at 3h / 105°C, we have defined the content of VOC of TEGO® Rad 2300 to be approximately 20,0 g/liter.

Please note that the amount of volatile organic components is determined for an arbitrarily selected batch, and therefore this is not part of our product specification.

### California Proposition 65

TEGO® Rad 2300 does not contain to the best of our knowledge and believe any substance(s) which are defined by the state of California to cause cancer, birth defects, or other reproductive effects.

### Diverse substances

We do not intentionally add the following substances to produce our TEGO® Rad 2300: ii

- Halogenated hydro carbons (Group 1–9 according Regulation (EC) No 1005/2009 (substances that deplete the ozone layer) – status September 2009)
- Photo-initiators
- Glycol ethers
  - EGBE (ethylene glycol butyl ether) (CAS 111-76-2)
  - EGME (ethylene glycol methyl ether) (CAS 109-86-4)
  - EGEE (ethylene glycol ethyl ether) (CAS 110-80-5)
  - EGMEA (ethylene glycol methyl ether acetate) (CAS 110-49-6)
  - EGEEA (ethylene glycol ethyl ether acetate) (CAS 111-15-9)
  - EGDME (ethylene glycol di-methyl ether) (CAS 110-71-4)
  - DEGDME (di-ethylene glycol di-methyl ether) (CAS 111-96-6)
  - DEGME (di-ethylene glycol methyl ether) (CAS 111-77-3)
  - TEGDME (tri-ethylene glycol di-methyl ether) (CAS 112-49-2)

- Acrylates
  - BDDA (butanediol diacrylate) (CAS 1070-70-8)
  - DEGDA (diethylene glycol diacrylate) (CAS 4074-88-8)
  - 2EHA (2-ethyl hexy acrylate) (CAS 103-11-7)
  - IDA (iso decyl acrylate) (CAS 1330-61-6)
  - ODA (octyl acrylate) (CAS 2499-59-4)
  - Phenol acrylate (CAS 937-41-7)
  - Phenoxy ethyl acrylate (CAS 48145-04-6)
  - HDDA (1,6 Hexanediol diacrylate) (CAS 13048-33-4)
  - PETA (mixtures of pentaerythritol tri- and tetra-acrylates) (CAS 3524-68-3)
  - TEGDA (tetraethylene glycol diacrylate) (CAS 17831-71-9)
  - TMPTA (trimethylol propane triacrylate) (CAS 15625-89-5)
  - DPGDA (dipropylene glycol diacrylate) (CAS 57472-68-1)
- Bisphenol A (CAS 80-05-7)
- BADGE (Bisphenol A-diglycidylether) (CAS 1675-54-3)
- Biocides which separate Formaldehyde
- Acetaldehyde (CAS 75-07-0)
- Tetrachloroethylene (CAS 127-18-4)
- Isocyanate
- Melamine (CAS 108-78-1)
- Aromatic components:
  - Benzene (CAS 71-43-2)
  - Toluene (CAS 108-88-3)
  - Xylene (CAS 1330-20-7)
  - 1,2,4-Trimethylbenzene (CAS 95-63-6)
  - 1,4-Dichlorobenzene (CAS 106-46-7)
  - Ethylbenzene (CAS 100-41-4)
  - Styrene (CAS 100-42-5)
- DMF (dimethylformamide) (CAS 68-12-2)
- NMP (N-methyl-2-pyrrolidone) (CAS 872-50-4)
- Components derived from animals
- Components derived from genetically modified organisms (GMO)
- Nanomaterials

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- i Please refer only to the mentioned substances. For further information concerning substances possibly not listed in this statement please do not hesitate to contact us.
  - ii Please note that Evonik Industries AG does not analyze whether the mentioned substances are contained in our TEGO® Rad 2300, because the content of such substances is not part of our product specification respectively formulation. Therefore in particular no warranty, whether expressed or implied, or guarantee of product properties in the legal sense is intended or implied with respect to the concentration, if any, to any given limit of such substances in our TEGO® Rad 2300.  
TEGO® Rad 2300 is made of raw materials of technical purity. Therefore negligible amounts on the level of natural / technical impurities cannot be excluded.
  - iii You can find most of our Safety Data Sheets which are updated according to the legal obligations on the TEGO homepage:

<http://www.tego.de/product/tego/en/products/alphabetical/pages/default.aspx>

**This information and all further technical advice are based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether expressed or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.**

**In case of any questions concerning the provided information or if you need additional advice you are very welcome to contact us:**

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