

New regulations on diisocyanates

L 252/24

EN

Official Journal of the European Union

4.8.2020

COMMISSION REGULATION (EU) 2020/1149

of 3 August 2020

amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards diisocyanates

(Text with EEA relevance)

EUROPEAN COMMISSION,

in accordance with the Treaty on the Functioning of the European Union,

in accordance with Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 7/EEC, 93/105/EC and 2000/21/EC⁽¹⁾, and in particular Article 68(1) thereof,

has:

adopted the following Regulation:

Diisocyanates have a harmonised classification as a respiratory sensitiser category 1 and as a skin sensitiser category 1 according to Regulation (EC) No 1272/2008 of the European Parliament and of the Council⁽²⁾. Diisocyanates are used as chemical building blocks in a wide range of sectors and applications, in particular in foams, sealants and coatings, inter alia, throughout the Union.

ANNEX

In Annex XVII to Regulation (EC) No 1907/2006, the following entry is added:

*74. Diisocyanates, O = C=N-R-N = C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length

1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:
 - (a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or
 - (b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).
2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:
 - (a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or
 - (b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".

DIISOCYANATES

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In 2020, the European Union published new restrictions **for products containing at least 0.1% of diisocyanates by Regulation (EU) 2020/1149.**

The regulation enters into force on **August 24, 2023** and requires **all professional and industrial users** to undergo **certified training** in the use of these products.

This regulation is aimed at **ensuring protection and safety for employees** in the event of contact with dangerous chemical substances (diisocyanates) at work, as well as preventing allergic skin and respiratory reactions that may be caused by improper use of products containing diisocyanates

DIISOCYANATES

What are diisocyanates?

These chemicals come in three forms:

liquid, solid or mixed and are used for the production of:

polyurethane polymers,

coatings,

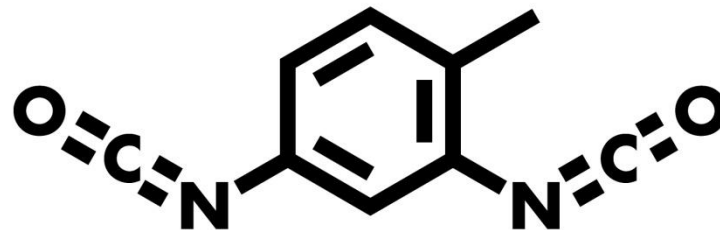
glues,

sealants,

elastomers,

clear coats.

Isocyanates are highly reactive, volatile substances, which can react with many compounds, including water or polyols, and thus with body tissues of humans. Therefore, it is extremely important to be aware of their occurrence, the threats they pose and to be competent in protection against them.



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DIISOCYANATES



The annual number of cases of occupational diseases caused by diisocyanates is estimated at over 5 000. EU-wide action has been shown to be necessary. They are proposed to restrict industrial and professional uses and to place diisocyanates on the market on their own and as a component of other substances and mixtures.

The Annex XV in the documentation indicates that both respiratory sensitization and dermal exposure to diisocyanates lead to occupational asthma, which has been identified as a major health concern in the European Union.

DIISOCYANATES

Where to check if a product contains diisocyanates?

1) On the label:

The suppliers adds a statement on the packaging:

„As from 24 August 2023 adequate training is required before industrial or professional use.”

The statement is added in a clear manner and separately from the other information on the label.

źródła ciepła, gorących powierzchni, źródeł iskrzenia, otwartego ognia i innych źródeł zapłonu. Nie palić. Stosować rękawice ochronne/odzież ochronną/ochronę oczu/ochronę twarzy. W PRZYPADKU POŁKNIECIA: natychmiast skontaktować się z OŚRODKIEM ZATRUCI/lekarzem. W PRZYPADKU KONTAKTU ZE SKÓRĄ: umyć dużą ilością wody. W PRZYPADKU DOSTANIA SIĘ DO DRÓG ODDECHOWYCH: wyprowadzić lub wynieść poszkodowanego na świeże powietrze i zapewnić mu warunki do swobodnego oddychania. W PRZYPADKU DOSTANIA SIĘ DO OCZU: Ostrożnie płukać wodą przez kilka minut. Wyjąć soczewki kontaktowe, jeżeli są i można je łatwo usunąć. Nadal płukać. Zawartość/pojemnik usuwać do zbiorników zgodnie z prawem dotyczącym odpowiednio odpadów niebezpiecznych lub pojemników i odpadów w pojemnikach. Od dnia 24 sierpnia 2023 r. wymagane jest odbycie odpowiedniego szkolenia przed użyciem przemysłowym lub profesjonalnym. Link: <https://troton.pl/szkolenia/> Zawiera: Diiizocyanian heksametylenu, oligomery; Ksylen; Etylobenzen; Diiizocyanian heksano-1,6-diyu. EN DANGER! Harmful if inhaled. May be fatal if swallowed and enters airways. Causes serious eye irritation. Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Contains isocyanates. May produce an allergic reaction. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively. As from 24 August 2023 adequate training is required before industrial or professional use. Link: <https://troton.pl/training/> Contains: Hexamethylene diisocyanate, oligomers; Xylene; Ethylbenzene; Hexamethylene-dl-isocyanate. RU ОПАСНО! Вредно при вдыхании. Может быть смертельным при проглатывании и последующем попадании в дыхательные пути. Предполагается, что данное вещество вызывает раковые заболевания. При попадании в глаза-вызывает сильнейшее раздражение. Раздражающее вещество. Пленка образует в дыхательных

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Where to check if a product contains diisocyanates?

2) In the SDS sheets:

The supplier adds the phrase EUH204 in the section 2.2:

EUH204 – Contains isocyanates. May produce an allergic reaction.

Also in additional information:

O As of August 24, 2023, appropriate training is required prior to industrial or professional use.

The Safety Data Sheet contains information regarding the safe storage of products containing diisocyanates. It also informs what personal protective equipment to use when working with products containing diisocyanates.

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Danger



Hazard statements:

Acute Tox. 4: H332 - Harmful if inhaled.
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).
STOT SE 3: H335 - May cause respiratory irritation.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352: IF ON SKIN: Wash with plenty of water.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

Supplementary information:

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Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

HARDENER for V2007 HS 1:4

Printing: 21/12/2022 Date of compilation: 17/03/2017 Revised: 15/09/2022 Version: 6 (Replaced 5)

SECTION 2: HAZARDS IDENTIFICATION (continued)

EUH204: Contains isocyanates. May produce an allergic reaction.

Substances that contribute to the classification

Hexamethylene diisocyanate, oligomers; Xylene; Ethylbenzene; Hexamethylene-di-isocyanate

Additional Labelling:

As from 24 August 2023 adequate training is required before industrial or professional use.

DIISOCYANATES

What are the scopes of the training?

The regulation defines 3 levels of training:

- General training (Level I),
- Intermediate training (Level II)
- Advanced training (Level III)

When choosing the right level of training, the type of product and application method should be taken into account, as the level of training is adapted to each end use.



DIISOCYANATES

Who carries out the training?

Training concerning diisocyanates should be provided by the employer or self-employed person. They are conducted by a Health and Safety (HSE) specialist with qualifications obtained through relevant professional training.

Currently, the trainings are available on the ISOPA and ALIPA websites. Information about training requirements and training topics can be found there. After prior registration, participants receive up-to-date information about the availability of trainings in the preferred language, as well as other information related to the safe use of diisocyanates. Training materials are made available to all European users of diisocyanates through two implementation systems:

- Internet platform for online training: users will connect to the platform using a computer, tablet, or smartphone, and they will follow the training through self-paced learning.
- Trainers (internal company trainers or trainers from specialized training institutes) will conduct the training in virtual or direct classroom format.
- The duration of each training session is estimated to be 1 hour per topic if the training is conducted in an e-learning format.



DIISOCYANATES

Who should undergo the training?

Every person who uses diisocyanates as well as mixtures and products containing diisocyanates is obligated to undergo training. This obligation applies to:

- Employees of companies manufacturing paints, adhesives, varnishes, etc.
- Employees who come into contact with open containers containing diisocyanates.



The training certificate is valid for 5 years.

DIISOCYANATES



Are diisocyanates safe?

Work-related exposure to diisocyanates can lead to various health consequences. The risk of complications related to the use of diisocyanates is indeed significant, but it can be significantly reduced by complying with certain guidelines. Diisocyanates are primarily used in the chemical industry and production, where workers have direct contact with them, which can consequently result in various health effects:

- Irritation of the eyes
- Irritation of the skin
- Sensitization of the respiratory tract

In case of suspected exposure or concerns about health effects, it is advisable to consult a relevant specialist in the field of health and safety.

DIISOCYANATES

Irritates the eyes:

Diisocyanates may cause tearing, redness and irritation of the eyes.

REMEMBER

Always use safety glasses or cover your face to avoid direct contact with eyes.



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Irritates the skin:

Diisocyanates use, may provoke serious irritation and inflammation of the skin, itching and rash appearance.

REMEMBER

Always use protecting gloves made of resistant materials resistant to diisocyanates, like e.g.; nitrile or neoprene.



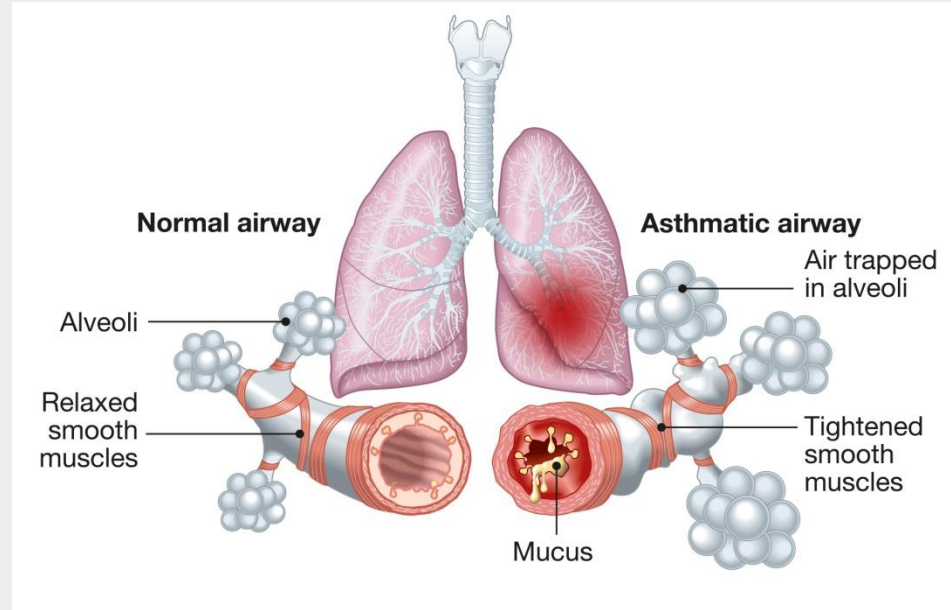
DIISOCYANATES

Sensitize the airway:

Exposure to and inhalation of diisocyanates may cause cough, throat ache, shortness of breath and rhinitis (runny nose). Long term exposure to diisocyanates may cause asthma.

REMEMBER

Stock-up with right protective masks: anti-dust and anti-gas.



DIISOCYANATES

Take care of your own health and safety and that of your employees while working with diisocyanates. Respect security rules:

- use safety masks while spraying
- wear overall, protecting your skin against absorption of irritating substances
- use protective gloves during mixing and spraying products
- use safety glasses