



# Safe handling of coatings containing monomeric diisocyanates

## REACH restriction on monomeric diisocyanates in Europe 2023

**On 24th August 2023, a new EU regulation will come into force restricting the use of diisocyanates and mixtures containing more than 0.1% by weight of diisocyanates. This includes polyurethane coatings used by industries in the infrastructure segment.**

Hempel is committed to ensuring our customers can easily see which of our coatings contain >0.1% monomeric diisocyanates and are clear on where to access the training required for any of their teams using these products. This brochure gives more details on the regulation, the training, and the products.

REACH is the European Chemicals Regulation dealing with Registration, Evaluation, Authorisation and restrictions on chemicals.

### Diisocyanates

Diisocyanates are chemicals mainly used in the production of polyurethanes and are found in small quantities as residual monomers in polyurethane coatings in their liquid or paste state. They are present in varying amounts, depending on the formulation, of the coating while wet, but are not present once the polyurethane product has dried and cured.

Applicators may be exposed to minimal amounts of diisocyanates when working with polyurethane coatings. The new regulation has been brought in to protect these workers as diisocyanates can cause irritation to the eyes and respiratory tract when handled incorrectly. This new regulation will ensure the safety of anyone handling or working with products containing >0.1% diisocyanates.

# What this means to you

Training Program Number	Content	Training Modules* (For Trainers only)
T 000	Handling open mixtures of ambient temperature (incl foam furnises)	
T 001	Spraying in a ventilated booth	001+005+004+Q level 3
T 002	Wiping and pouring, open mixture, cleaning and waste	01 + 008 + 004 + 01+Q
T 003	Wiping, open mixture of ambient temperatures, cleaning and waste	001+004+004+Q
T 004	Spraying in a ventilated booth, cleaning and waste	001+005+01+Q level 3
T 005	Application by brush or roller, open handling of hot and warm formulations, cleaning and waste	001+005+01+Q level 3
T 006	Application by brush or roller, cleaning and waste	001+004+01+Q level 3
T 007	Professional painting, painting with brush or roller	001+004+01+Q
T 008	Cleaning and Waste	001+004+01+Q
T 009	Professional Application of adhesives and sealants / Small packaging or ambient temperature	021+1+Q
T 010	Professional application	001+01+Q
T 011	Professional application	048+Q
T 012	High Pressure Injection Risks	048+Q
T 013	Individual Application of adhesives and sealants	050+Q
T 014	Small packaging at ambient temperature	050+Q
T 015	Industrial Application of adhesives and sealants	051+Q
T 016	Production & Formulation of Diisocyanates containing Pre-Add	001+020+Q
T 017	Production & Formulation of Diisocyanates (incl. TPO) Training Program	001+2+3+Q
T 018	Appliances Production Training Program	NCE LIVE
		NCE LIVE

To ensure that all employees continue working safely, the training will be mandatory for professional and industrial users of products containing >0.01% diisocyanates. The training must be undertaken before 24th August 2023, with refresher training every five years thereafter.

## Employees in the scope of training

Professional and industrial users are defined in industry as people who handle, use, or monitor the use of these products as part of their business or commercial activities. This applies to both employees and to self-employed persons.

## Training requirements

Every employer or self-employed person is responsible for ensuring that all professional users in their organisations successfully complete the required training to handle and work with diisocyanates safely.

## Where to get the training

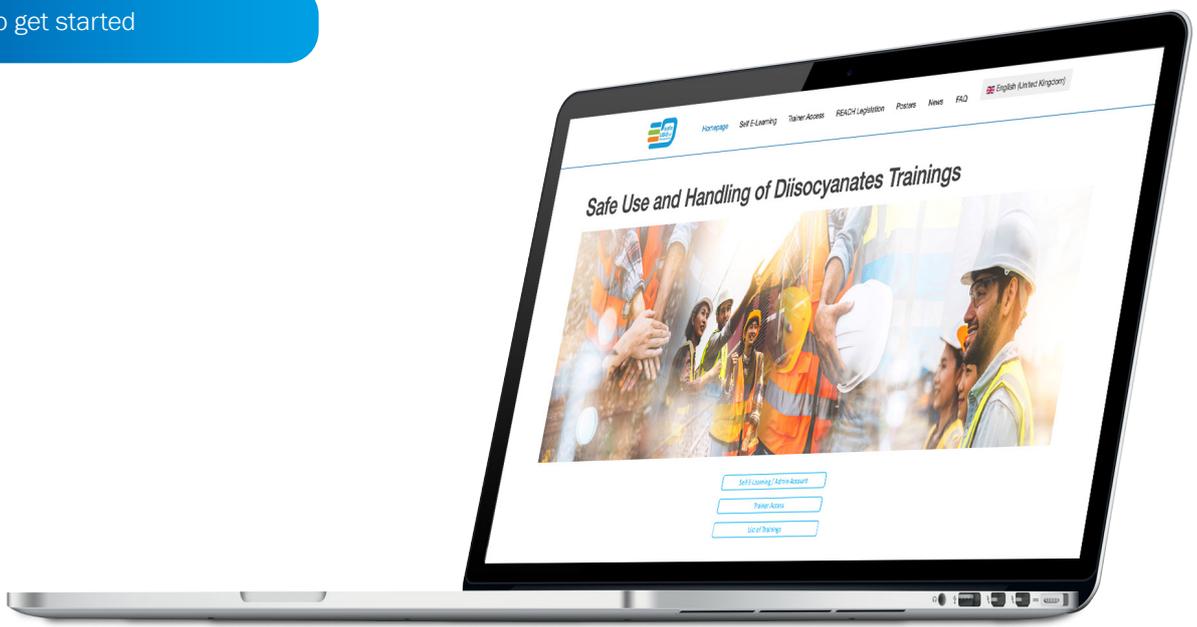
The European Diisocyanate and Polyol Producers Association (ISOPA) has in cooperation with the Association of European Aliphatic Isocyanate Producers (ALIPA) developed a comprehensive online training programme that can be accessed easily and cost-effectively.



Available in several languages via [safeusediisocyanates.eu](https://safeusediisocyanates.eu) and for various application sectors, the training is not related to specific products.

There are three training levels depending on the application: **General, Intermediate and Advanced**

[Click here](#) to get started



# Training



## General training

This is the basic training required for all occupational or industrial users and takes around an hour to complete. The General training is included as part of both the Intermediate and Advanced Training options, with these taking an additional 30-60minutes to complete.

## Intermediate and Advanced training

The Intermediate and Advanced requirements will be needed depending on the risk of exposure related to the task(s) performed by the employee. There is a [matrix](#) accessible online to assist you in deciding which level of training is required for your team. It is advisable to choose the broadest training course for your team to ensure the safest working environment for all.

### Training courses for professional users of coatings containing diisocyanates:

- T023 Professional Uses - Painting with a brush or roller
- T019 Professional Uses - Spray booth application
- T034 Professional Uses - Spraying outside application

### Commonly used training courses for industrial uses include:

- T022 Application by brush or roller, cleaning, and waste.
- T018 Spraying in a ventilated booth, cleaning, and waste.
- T035 Spraying outside a ventilated booth, cleaning, and waste.

There are many other training courses available. Please consult the training [matrix](#).

## Training options

### E-learning

The e-learning itself takes the form of reading through content then undertaking a multiple-choice test, after which the successful participant will receive a certificate that is valid for five years.

You can also book web-based training for a group of employees. A quick guide to sign up and manage your company staff is available. <https://www.safeusediisocyanates.eu/de/admin-user-guide>

### Workshop

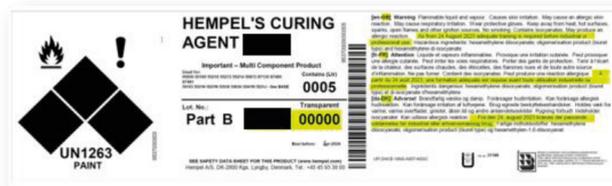
There is also a list of certified Safety Experts on Diisocyanates available if you would prefer to train your team in a workshop environment. Based all around Europe these experts are happy to facilitate your training session. <https://safeusediisocyanates.eu/experts>

# Identifying a restricted product



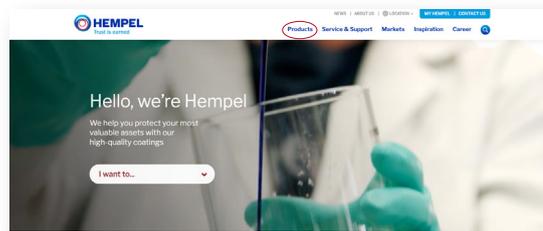
## Labels

The details of products containing more than 0.1% diisocyanate can be found on the drum label. The new mandatory sentence is displayed on the right side on each label. The sentence is translated into each language for ease of reference for anyone handling the product.

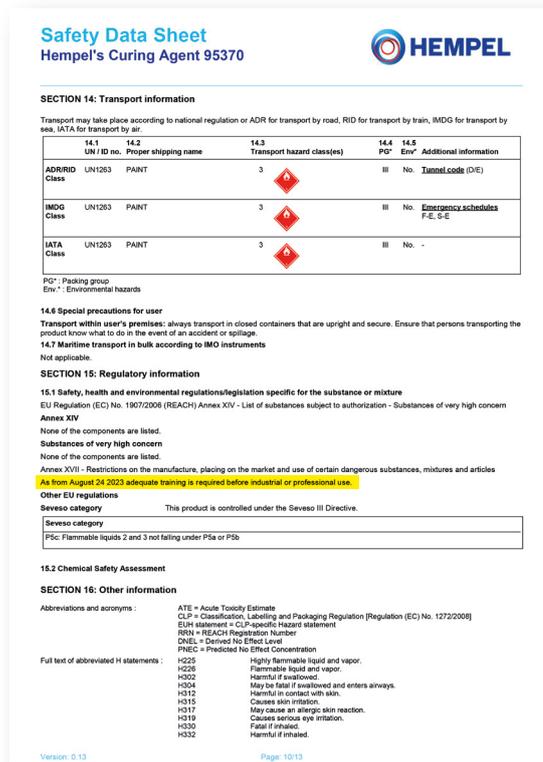


## Safety data sheets

You will also find the information on our Safety Data Sheets.



To find the data sheet, visit [hempel.com](http://hempel.com) and select products in the navigation bar and product search. Enter mix or single component quality code number (the first 5 digits) and select 'safety data sheet'. Select 'Europe' as the 'Legislative market' and 'choose product shade' (last 5 digits of the product code). For a two-component product base and curing agent will appear. Select 'Download'. The information regarding the regulation will appear under section 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.



On the following page you will find a detailed list of Hempel coatings that are more than 0.1% diisocyanate, and included in the new regulations by the restrictions and an additional list of the coatings that are less than 0.1% diisocyanate and therefore not affected by the new regulation.

# Products containing diisocyanates

## Which products does it affect

Below you can find both the list of our polyurethane products which **do not require** further training and the list of our polyurethane products, which do require training.

### Safe use training required: Isocyanate containing product with above 0.1% isocyanates

Sales quality	Name
05140	Hempel's Diamond Varnish
154DE	Hempel's 154DE
174DE	Hempel's 174DE
25050	Hempel's Yacht Polyprimer
35010	Hempathane Level Coat
35660	Hempathane PW 35660
37103	Hempablade Pore 141
37600	Hempablade Edge 171
447E0	Hempel's PU MIO Coat
459DE	Hempel's 459DE
543E1	Hempathane FC
55102	Hempel's Polyenamel 55102
551E0	Hempathane Satin FC
55210	Hempathane Topcoat 55210
55213	Hempathane Topcoat 55213
55214	Hempathane Topcoat 55214
5521J	Hempathane Topcoat 5521J
555DE	Hempel's 555DE
55613	Hempathane HS 55613
55620	Hempathane DTM
55634	Hempathane LSA 55634
55970	Hempatop Direct 700
87480	Hempathane TL87/EG
87481	Hempathane TL87/RAL
B09NL	Chemoplex ML25
C0GNL	Belticryl 2C finish
C0WNL	Belticryl 2C finish
C1BNL	Belticryl 2C
C1ENL	Belticryl 2C
C2CNL	Belticryl 2C
C37NL	Belticryl 2C finish
C3WNL	Belticryl 2C finish
C5FNL	Platecoat
C63NL	Belticryl 2C
C67NL	Belticryl monocoat
C6FNL	2 Pack for plastics
C6GNL	2 Pack for plastics
C6LNL	2 Pack for plastics
C6NNL	2 Pack for plastics
C70NL	2 Pack for plastics
C88NL	2 Pack for plastics
C8ENL	Belticryl 2C finish

Sales quality	Name
C8FNL	Belticryl 2C topcoat
C8JNL	Belticryl 2C finish
C8MNL	Belticryl 2C finish
C8NNL	Belticryl 2C finish
C8RNL	2 Pack for plastics
C8TNL	Belticryl 2C finish
C8UNL	Belticryl 2C finish
C90NL	2 Pack for plastics
C98NL	Belticryl 2C finish
C99NL	Belticryl 2C finish
L01NL	Belticryl 2C STT05
L0ANL	Belticryl 2C
L11NL	Belticryl 2C STT14
L2CNL	Belticryl 2C STT46
P1KNL	Belticryl 2C primer
P1NNL	Belticryl 2C primer
X01NL	Beltipox spatter
X04NL	Belticryl 2C spatter
X08NL	Belticryl 2C spatter
X0BNL	Belticryl 2C spatter
X0CNL	Belticryl 2C spatter
X0FNL	Belticryl 2C spatter
X0HNL	Belticryl 2C spatter

### No further training required: Isocyanate containing products with below 0.1% diisocyanate

Please find the list of products which have less than 0.1% diisocyanate below. The list applies to products produced after 1 January 2023 and delivered out of Europe.

Sales quality	Name
550FR	Hempathane Non-Skid
55250	Hempathane Speed-Dry Topcoat 250
5531B	Hempathane HS 5531B
55610	Hempathane HS 55610
5561B	Hempathane HS 5561B
55630	Hempathane LSA 55630
55750	Hempathane Fast Dry 55750
5575A	Hempathane Fast Dry 5575A
55810	Hempathane HS 55810
55930	Hempathane 55930

Updated information can always be found on the safety data sheet and the product label. Find out more at [www.hempel.com/service-and-support/training/reach-restriction](http://www.hempel.com/service-and-support/training/reach-restriction)

Always consult either the product label or the product safety data sheet under section 15.1 if unsure. For two-component products, it is often the curing agent containing diisocyanate.

# FAQs



## What are diisocyanates?

There are many types of diisocyanate. Along with polyols, they form the building blocks of Polyurethane. Polyurethane is effectively derived from the chemical reaction between diisocyanates and polyols; when mixed they polymerise. Polyurethanes would not exist without diisocyanates and polyols.

## Are all Polyurethane products affected?

Under the new regulations, any product with more than 0.1% diisocyanates are subject to the new restrictions.

## How do I know which Hempel products are affected?

You can refer to the list found on page 5 of this brochure or refer to the drum label or the safety Data sheet, section 15.1.

## Who is responsible for the training?

The employer or self-employed person is responsible to ensure the correct, comprehensive training is completed and documented.

## How do I demonstrate training compliance?

Successful completion of the training is documented with a certificate issued to the participant. The training must be completed every 5 years to ensure documentation is up to date. For further information, please see the regulation: EUR-Lex - 32020R1149 - EN - EUR-Lex (europa.eu)

## Further information on Hempel coatings

If you require further information, please contact your Hempel Representative, or email us at [HSE.request@hempel.com](mailto:HSE.request@hempel.com)

**Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)** is a European Union regulation dated from December 2006. REACH addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. The regulation also established the European Chemicals Agency (ECA), which manages the technical, scientific, and administrative aspects of REACH.

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