

The safety data sheet complies with Commission Regulation (EU) 878/2020 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) .

NOVAFIX

Creation date	22nd October 2003	Version	15
Revision date	23rd December 2024		

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier NOVAFIX
Substance / mixture mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against
Mixture's intended use

Universal repair compound

The use descriptors

IS Use at industrial sites

PW Widespread use by professional workers

Mixture uses advised against

The product should not be used in ways other than those referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name	NOVATO
Address	Uralská 770/6, Praha, 160 00 Czech Republic
Identification number (CRN)	62910370
VAT Reg No	CZ62910370
Phone	+420 233 339 688
E-mail	petr.johanides@novato.cz
Web address	www.novato.cz

Competent person responsible for the safety data sheet

Name	ABITEC
E-mail	info@abitec.cz

1.4. Emergency telephone number

European emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Skin Irrit. 2, H315
Skin Sens. 1, H317
Eye Irrit. 2, H319
Acute Tox. 4, H332
Resp. Sens. 1, H334
STOT SE 3, H335
Carc. 2, H351
STOT RE 2, H373

Most serious adverse physico-chemical effects

Thermal decomposition at high temperatures may release dangerous decomposition products. The mixture reacts with water to release CO₂. Avoid inhalation of decomposition products.

Most serious adverse effects on human health and the environment

The mixture is harmful to health when inhaled, irritating to the respiratory tract. Risk of allergic reaction in people sensitive to isocyanates. It can have allergic effects when inhaled. May cause asthmatic reactions. Sensitive persons, asthmatics and pregnant women should not come into contact with the mixture at all. May cause respiratory tract irritation with coughing. Headaches, fatigue, drowsiness, cough, shortness of breath may occur. With high exposure or long-term exposure, pulmonary edema may occur. The mixture is suspected of causing cancer. Inhalation may cause irritation of the respiratory organs with coughing. Irritating to eyes and skin (watering, burning, itching, conjunctivitis). Ingestion of the liquid may cause vomiting, diarrhea and nausea. Ensure against confusion with drinks and food. Avoid inhalation, eye contact and skin contact. The mixture is not classified as dangerous for the environment. Follow the instructions for use to avoid risks to people and the environment. Avoid release to soil, ground or surface water or sewers.

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2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260	Do not breathe mist/vapours.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P501	Dispose of contents/container to in accordance with local regulations.

Supplemental information

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards

Neither the mixture nor its components meet the criteria for persistent, bioaccumulative and toxic or highly persistent and highly bioaccumulative substances in accordance with Annex XIII, nor have they been included in the list drawn up in accordance with Article 59, paragraph 1, due to the content of endocrine disruptors, nor has it been determined as an endocrine-disrupting substance in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 615-005-00-9 CAS: 101-68-8 EC: 202-966-0	4,4'-methylenediphenyl diisocyanate - PART A	60-70	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 4, H332 Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2 (**), H373 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 5 % Resp. Sens. 1, H334: C ≥ 0.1 % STOT SE 3, H335: C ≥ 5 % Skin Irrit. 2, H315: C ≥ 5 %	1, 2, 3, 4
Index: 612-067-00-9 CAS: 2855-13-2 EC: 220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine - PART B	0,1-0,8	Acute Tox. 4, H302+H312 Skin Corr. 1B, H314 Skin Sens. 1A, H317 Aquatic Chronic 3, H412 Specific concentration limit: ATE Oral = 1030 mg/kg bw Skin Sens. 1A, H317: C ≥ 0.001 %	

Notes

** another exposure route cannot be ruled out

- 1 Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- 2 Note 2: The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.
- 3 A substance for which exposure limits are set.
- 4 The use of the substance is restricted by Annex XVII of REACH Regulation

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

In the event of exposure, in case of suspected exposure or in the event of symptoms of health problems, seek medical attention and provide him with the information from this safety data sheet. When providing first aid, ensure the safety of the rescuer and the rescued. In case of life-threatening conditions, perform resuscitation. Place the unconscious person in a stable position and do not give anything by mouth. If necessary (respiratory arrest or irregular breathing), perform artificial respiration. Avoid catching cold. Do not induce vomiting. In case of spontaneous vomiting, prevent inhalation of vomitus.

If inhaled

In case of inhalation, stop the exposure immediately, transport the affected person outside the contaminated area, ensure the supply of fresh air, warmth and calmness. If the victim is conscious, rinse the mouth and nose with water. If clothing is contaminated, remove clothing. If necessary (respiratory arrest or irregular breathing), perform artificial respiration with a breathing bag, not directly from mouth to mouth. If respiratory tract irritation occurs, seek medical attention.

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If on skin

If clothing becomes contaminated, remove clothing. Wipe off the product, wash thoroughly with water and soap, rinse well. Treat with a regenerating cream. Seek medical attention if symptoms of irritation or allergic skin reaction occur and persist.

If in eyes

Rinse the eyes and their surroundings. If the victim wears contact lenses, remove them. With the eyes wide open, flush from the inner corner of the eye towards the outer with a large amount of clean, lukewarm water, especially the area under the lids. Rinse for at least 15-20 minutes, seek medical treatment immediately.

If swallowed

Do not induce vomiting. Rinse the mouth with water and drink a glass of water (only if the victim is conscious and not in pain). Seek medical attention immediately and present this safety data sheet.

4.2. Most important symptoms and effects, both acute and delayed

If inhaled

The mixture is harmful to health when inhaled, irritating to the respiratory tract. Risk of allergic reaction in people sensitive to isocyanates. It can have allergic effects when inhaled. May cause asthmatic reactions. Sensitive persons, asthmatics and pregnant women should not come into contact with the mixture at all. May cause respiratory tract irritation with coughing. Headaches, fatigue, drowsiness, cough, shortness of breath may occur. With high exposure or long-term exposure, pulmonary edema may occur. The mixture is suspected of causing cancer. Inhalation may cause irritation of the respiratory organs with coughing.

If on skin

Irritating to eyes and skin (watering, burning, itching, conjunctivitis).

If in eyes

Irritating to eyes and skin (watering, burning, itching, conjunctivitis).

If swallowed

Ingestion of the liquid may cause vomiting, diarrhea and nausea.

4.3. Indication of any immediate medical attention and special treatment needed

In the case of the usual use of the mixture and following the instructions in the instructions for use, immediate medical assistance is not required. Special treatment is required if symptoms of a certain degree occur, according to the data in sections 4.1 and 4.2; is symptomatic.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Multipurpose powders, CO₂, foam, water mist.

Unsuitable extinguishing media

Full stream of water. Splattered water can be used to cool packages near the fire.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition at high temperatures can produce dangerous decomposition products (CO, CO₂, NO_x, HCN, irritating vapors, etc.). Do not inhale decomposition products. When in contact with water, CO₂ is formed, after resealing the package after contact with water, pressure may increase and the container may burst. Exposure to elevated temperatures may result in vapor evolution and container rupture.

5.3. Advice for firefighters

Self-contained breathing apparatus and overall protective chemical suit. Remove packaging from fire if you can do so without risk. Cool containers near fire with water spray or cover with foam. Combustion residues and water after intervention should be disposed of as hazardous waste.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Prevent the entry of unauthorized persons, mark, secure and isolate the escape area. Always use personal protective equipment if there is a risk of exposure. Intervention should only be carried out by trained persons. Provide adequate ventilation, do not inhale fumes. Avoid contact with skin and eyes - use personal protective equipment. Avoid contact with heat sources, do not smoke, do not expose to direct sunlight.

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6.2. Environmental precautions

Secure the area of the leak, catch the leaking mixture. Avoid release to sewers, soil, surface and ground water. Vapors can be knocked down with a water jet. In the event of a large liquid leak, monitor the NPK concentration or TLV and inform the appropriate state authorities and stream or sewer manager.

6.3. Methods and material for containment and cleaning up

Stop the leak, cover the leaking mixture with a suitable non-flammable sorbent (universal sorbent, sand, diatomaceous earth, soil, vermiculite, etc.), mechanically remove the polymerized mixture. Place the used sorbent in a closable waste container and dispose of it as hazardous waste. Wash the contaminated area with water and detergent, or neutralize with calcium carbonate.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure sufficient ventilation of the work area (e.g. cross ventilation). Avoid exceeding exposure limits. Avoid contact with heat sources. Protect against direct sunlight. Protect eyes and skin, do not inhale vapors, use personal protective equipment according to sec. 8. Keep the work area clean and clear. The work area should be equipped with a source of potable water to provide first aid. The container must remain closed and secured against the escape of vapors and the ingress of water and moisture.

Observe the applicable health and safety legislation. Follow the principles of hygiene when working with chemicals, do not eat, drink or smoke while working. Wash your hands with warm soapy water before breaks, meals and after work.

7.2. Conditions for safe storage, including any incompatibilities

Store tightly closed with the cap facing upwards in the original packaging in a dry and well-ventilated place. Store away from heat sources, protect from direct sunlight, do not smoke. Store away from food, drink and feed. Store away from strong acids and oxidizing agents. The warehouse should be equipped with a source of drinking water and emergency sumps. Follow the directions on the label.

Storage temperature min 5 °C, max 30 °C

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture does not contain any constituents of national exposure limits specified in Annex 2, Government Decree 361/2007 Coll., As amended or European Union for Work Environment.

Czech Republic

Government Regulation 330/2023 Coll.

Substance name (component)	Type	Value	Note
4,4'-methylenediphenyl diisocyanate - PART A (CAS: 101-68-8)	PEL	0,05 mg/m ³	irritating to mucous membranes (eyes, respiratory system) and skin, in the substance can not be excluded serious late effects, the substance has a sensitizing effect
	NPK-P	0,1 mg/m ³	

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8.2. Exposure controls

Ensure sufficient ventilation, or extraction of the working space. In case of exceeding NPK-P, use appropriate respiratory protection. Avoid contact with skin and eyes, do not inhale vapors. Avoid exposure. Observe hygienic measures for working with chemicals. The work area should be equipped with sources of drinking water. Do not eat, drink or smoke while working. Wash your hands with lukewarm water and soap before breaks, meals and after work. Adapt personal protective equipment to the nature of the work.

Eye/face protection

Closed safety glasses.

Skin protection

Protective work clothing. Wash affected skin, remove contaminated clothing, wash before further use. Chemically resistant protective gloves (eg: material nitrile, fluororubber, butyl rubber, penetration time > 480 min.). Observe the recommended penetration time of the glove material. When choosing, follow the manufacturer's recommendations, the material must be impermeable and resistant to the components of the mixture. Test in a specific workplace before first use. Replace damaged gloves.

Respiratory protection

Ensure sufficient ventilation, or extraction of the working space. In case of insufficient ventilation, use a mask with a filter against organic vapors and aerosols, type A. In case of intensive or long-term exposure, or use self-contained breathing apparatus in the event of an accident.

Thermal hazard

Not Specified. Avoid heating the mixture and exposure to elevated temperatures.

Environmental exposure controls

Observe the usual environmental precautions. Avoid leakage into sewers, underground and surface water and soil.

More information

Ensure compliance with governmental regulation 361/2007 Coll., Laying down the conditions for the protection of health at work, as amended, and to fulfill the obligations contained therein.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid (Viscous)
Colour	Yellowish/black
Odour	characteristic
Melting point/freezing point	>200 °C
Boiling point or initial boiling point and boiling range	>140 °C
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	>235 °C
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Solubility in water	insoluble
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	data not available
Relative vapour density	data not available
Particle characteristics	data not available

9.2. Other information

Density and/or relative density (at 20 °C): 1,150 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

There is no danger of reaction if the recommended use is adhered to.

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10.2. Chemical stability

The mixture is stable under normal environmental conditions, storage and handling.

10.3. Possibility of hazardous reactions

Contact with acids or oxidizing agents may give rise to an exothermic reaction.

10.4. Conditions to avoid

Creation of over-limit concentration, frost, temperatures above 50 °C, contact with heat sources.

10.5. Incompatible materials

Strong oxidizing agents, acids.

10.6. Hazardous decomposition products

Under normal conditions, the mixture does not decompose. Thermal decomposition at high temperatures or incomplete combustion can release hazardous decomposition products (COx, NOx, hydrocarbons, aldehydes, smoke, soot).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

The mixture meets the criteria for classification according to EC Regulation No. 1272/2008. The mixture is classified as dangerous in the sense of EC Regulation No. 1272/2008, as amended.

Acute toxicity

The mixture is classified as acutely toxic, category 4, harmful to health by inhalation.

3-aminomethyl-3,5,5-trimethylcyclohexylamine - PART B					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	1030 mg/kg		Rat (Rattus norvegicus)	
Oral	ATE	1030 mg/kg bw			

4,4'-methylenediphenyl diisocyanate - PART A					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	4700 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD ₅₀	>5000 mg/kg		Rat (Rattus norvegicus)	
Inhalation	LC ₅₀	0.49 mg/l	4 hours	Rat (Rattus norvegicus)	

Skin corrosion/irritation

The mixture is classified as skin irritant, category 2. Irritating to skin.

Serious eye damage/irritation

The mixture is classified as eye irritant, category 2. Causes serious eye irritation.

Respiratory or skin sensitisation

The mixture is classified as a respiratory tract sensitizer, category 1. It may cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. The mixture is classified as a skin sensitizer, category 1. It may cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

The mixture is classified as carcinogenic, category 2, suspected of causing cancer.

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Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

The mixture is classified as toxic to specific target organs after single exposure, category 3, may cause respiratory tract irritation.

Toxicity for specific target organ - repeated exposure

The mixture is classified as specific target organ toxic after repeated exposure, category 2, may cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Based on available data the classification criteria are not met.

11.2. Information on other hazards

It does not contain substances causing disruption of the endocrine system. The mixture is harmful to health when inhaled, irritating to the respiratory tract. Risk of allergic reaction in people sensitive to isocyanates. It can have allergic effects when inhaled. May cause asthmatic reactions. Sensitive persons, asthmatics and pregnant women should not come into contact with the mixture at all. May cause respiratory tract irritation with coughing. Headaches, fatigue, drowsiness, cough, shortness of breath may occur. With high exposure or long-term exposure, pulmonary edema may occur. The mixture is suspected of causing cancer. Inhalation may cause irritation of the respiratory organs with coughing. Irritating to eyes and skin (watering, burning, itching, conjunctivitis). Ingestion of the liquid may cause vomiting, diarrhea and nausea.

SECTION 12: Ecological information

12.1. Toxicity

The ecotoxic effects of the mixture itself were not assessed. Due to the form of the mixture, the risk of damaging the components of the environment is small.

Acute toxicity

3-aminomethyl-3,5,5-trimethylcyclohexylamine - PART B				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	110 mg/l	96 hours	Fish (<i>Leuciscus idus</i>)	
EC ₅₀	42 mg/l	24 hours	Invertebrates (<i>Daphnia magna</i>)	
EC ₅₀	37 mg/l	72 hours	Algae (<i>Scenedesmus subspicatus</i>)	

4,4'-methylenediphenyl diisocyanate - PART A				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	>3000 mg/l	96 hours	Fish (<i>Oryzias latipes</i>)	
EC ₅₀	129.7 mg/l	24 hours	Invertebrates (<i>Daphnia magna</i>)	
IC ₅₀	1.5 mg/l	96 hours	Algae (<i>Desmodesmus subspicatus</i>)	

12.2. Persistence and degradability

The mixture is difficult to break down.

12.3. Bioaccumulative potential

Not determined, bioaccumulation is unlikely.

12.4. Mobility in soil



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Very little mobility in soil.

12.5. Results of PBT and vPvB assessment

Has not been done.

12.6. Endocrine disrupting properties

not available

12.7. Other adverse effects

not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Suitable disposal methods for the mixture Dispose of as hazardous waste. Hand over to an authorized person or to a hazardous waste collection yard for disposal. Dispose of mixture and packaging residues in accordance with local waste management regulations.

Waste management legislation

Act No. 477/2001 Coll., On Packaging, as amended. Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended.

Waste type code

08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances

Packaging waste type code

15 01 10* packaging containing residues of or contaminated by hazardous substances

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information

14.1. UN number or ID number

not subject to transport regulations

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Transport in packages that match the properties of the mixture. Observe the prescribed marking for cargo.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the 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, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Commission Delegated Regulation (EU) 2021/849 of 11 March 2021 amending, for the purposes of adapting to technical and scientific progress, Part 3 of Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labeling and packaging of substances and mixtures. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals.

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Restrictions pursuant to Annex XVII of Regulation (EC) No. 1907/2006 (REACH), as amended

4,4'-methylenediphenyl diisocyanate - PART A

Restriction	Conditions of restriction
56	<p>1. Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in concentrations equal to or greater than 0,1 % by weight of MDI for supply to the general public, unless suppliers shall ensure before the placing on the market that the packaging:</p> <p>(a) contains protective gloves which comply with the requirements of Council Directive 89/686/EEC (*****);</p> <p>(b) is marked visibly, legibly and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures: “— Persons already sensitised to diisocyanates may develop allergic reactions when using this product. — Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. — This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.”</p> <p>2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.</p>
74	<p>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:</p> <p>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or</p> <p>(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).</p> <p>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:</p> <p>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or</p> <p>(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”.</p> <p>3. For the purpose of this entry “industrial and professional user(s)” means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.</p> <p>4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:</p> <p>(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).</p> <p>(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:</p> <ul style="list-style-type: none"> — handling open mixtures at ambient temperature (including foam tunnels); — spraying in a ventilated booth; — application by roller; — application by brush; — application by dipping and pouring; — mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore; — cleaning and waste; — any other uses with similar exposure through the dermal and/or inhalation route; <p>(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:</p> <ul style="list-style-type: none"> — handling incompletely cured articles (e.g. freshly cured, still warm); — foundry applications; — maintenance and repair that needs access to equipment; — open handling of warm or hot formulations (> 45 °C); — spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers); — and any other uses with similar exposure through the dermal and/or inhalation route. <p>5. Training elements:</p>

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4,4'-methylenediphenyl diisocyanate - PART A

Restriction	Conditions of restriction
	<p>(a) general training, including on-line training, on:</p> <ul style="list-style-type: none"> – chemistry of diisocyanates; – toxicity hazards (including acute toxicity); – exposure to diisocyanates; – occupational exposure limit values; – how sensitisation can develop; – odour as indication of hazard; – importance of volatility for risk; – viscosity, temperature, and molecular weight of diisocyanates; – personal hygiene; – personal protective equipment needed, including practical instructions for its correct use and its limitations; – risk of dermal contact and inhalation exposure; – risk in relation to application process used; – skin and inhalation protection scheme; – ventilation; – cleaning, leakages, maintenance; – discarding empty packaging; – protection of bystanders; – identification of critical handling stages; – specific national code systems (if applicable); – behaviour-based safety; – certification or documented proof that training has been successfully completed <p>(b) intermediate level training, including on-line training, on:</p> <ul style="list-style-type: none"> – additional behaviour-based aspects; – maintenance; – management of change; – evaluation of existing safety instructions; – risk in relation to application process used; – certification or documented proof that training has been successfully completed <p>(c) advanced training, including on-line training, on:</p> <ul style="list-style-type: none"> – any additional certification needed for the specific uses covered; – spraying outside a spraying booth; – open handling of hot or warm formulations (> 45 °C); – certification or documented proof that training has been successfully completed <p>6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture(s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.</p> <p>7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.</p> <p>8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.</p> <p>9. Member States shall include in their reports pursuant to Article 117(1) the following information:</p> <ul style="list-style-type: none"> (a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law; (b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates; (c) national exposure limits for diisocyanates, if there are any; (d) information about enforcement activities related to this restriction. <p>10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.</p>

The safety data sheet complies with Commission Regulation (EU) 878/2020 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) .

NOVAFIX

Creation date	22nd October 2003	Version	15
Revision date	23rd December 2024		

15.2. Chemical safety assessment

No chemical hazard assessment was performed for this mixture.

More information

This information only indicates the basic regulations listed in this Safety Data Sheet. Please note the possible existence of additional regulations supplementing these Regulations. We refer to all applicable national, international and local regulations and regulations.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H302+H312	Harmful if swallowed or in contact with skin.

Guidelines for safe handling used in the safety data sheet

P260	Do not breathe mist/vapours.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P501	Dispose of contents/container to in accordance with local regulations.

A list of additional standard phrases used in the safety data sheet

EUH204	Contains isocyanates. May produce an allergic reaction.
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Other important information about human health protection

The mixture should not be used for any purpose other than that for which it is intended (see point 1.2). Because the supplier can not control the specific conditions of use of the mixture, it is the responsibility of the user to adapt the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and can not be considered as technical product information.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC ₅₀	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association

SAFETY DATA SHEET

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IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC ₅₀	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
log K _{ow}	Octanol-water partition coefficient
NPK	Maximum admissible concentration
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible Exposure Limit
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Carc.	Carcinogenicity
Resp. Sens.	Respiratory sensitization
Skin Corr.	Skin corrosion
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

Training guidelines

According to § 103 and § 104 of Act No. 262/2006 Coll., The Labor Code, as amended. Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

Manufacturer data and toxicological databases.

The changes (which information has been added, deleted or modified)

Adaptation of BL updated Annex II of the REACH Regulation as amended by Commission Regulation (EU) 2020/878.

Statement

The safety data sheet contains the data needed to ensure safety and health at work and environmental protection. These data correspond to the current state of knowledge and experience and are in accordance with applicable legal regulations. They can not be considered as a guarantee of the suitability and usability of the product for a specific application. The user is responsible for the treatment under existing laws and regulations.