18.07.2023 **Kit components**

Product code	Description
435	**Tweecolux set**

Components:

433	TWEECOLUX base component
434	TWEECOLUX hardener

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2023 Version number 56 (replaces version 55) Revision: 26.06.2023

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

· **1.1 Product identifier**

· Trade name: TWEECOLUX base component

· Article number: 433
· UFI: 1VV4-X0EG-4003-UARG

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· Sector of Use SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU19 Building and construction work
· Product category PC9a Coatings and paints, thinners, paint removers
· Process category PROC19 Manual activities involving hand contact
PROC7 Industrial spraying
PROC10 Roller application or brushing
PROC11 Non industrial spraying
· Environmental release category ERC5 Use at industrial site leading to inclusion into/onto article
ERC8c Widespread use leading to inclusion into/onto article (indoor)
ERC8f Widespread use leading to inclusion into/onto article (outdoor)
· Article category AC13 Plastic articles
AC11 Wood articles
· Application of the substance / the mixture See our technical datasheet for application details of this product.
Clear coating material, Varnish

· **1.3 Details of the supplier of the safety data sheet**
· Manufacturer/Supplier: De IJssel Coatings BV, Centrumbaan 960, NL 2841 MH Moordrecht
Tel: +31 182 372177, E-mail: info@de-ijssel-coatings.nl

· Further information obtainable from: Research and Development.
· **1.4 Emergency telephone number:** De IJssel Coatings BV, Tel. +31 182 372177, E-mail: safety@de-ijssel-coatings.nl
Office hours: working days from 08:00 to 17:00 hrs.

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· Classification according to Regulation (EC) No 1272/2008


GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.


GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

· **2.2 Label elements**
· Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.
· Hazard pictograms


GHS02 GHS07

· Signal word Danger
· Hazard statements H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
· Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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· **2.3 Other hazards**
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:		
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	10 – 25%
CAS: 141-78-6 EINECS: 205-500-4 Index number: 607-022-00-5 Reg.nr.: 01-2119475103-46	ethyl acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	10 – 25%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	10 – 25%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· General information: Immediately remove any clothing soiled by the product.
· After inhalation: Supply fresh air; consult doctor in case of complaints.
· After skin contact: Immediately rinse with water.
· After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· After swallowing: If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· Suitable extinguishing agents: CO2 or powder. Fight larger fires with alcohol resistant foam.
· For safety reasons unsuitable extinguishing agents: Water with full jet
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· Protective equipment: No special measures required.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections** See Section 7 for information on safe handling.

(Contd. on page 3)

(Contd. of page 2)

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
· Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
· Storage:
· Requirements to be met by storerooms and receptacles: Store in a cool location.
Store material in original, tightly closed containers in a cool, well-ventilated area in accordance with applicable (local) regulations. Depending on total volume stored, the storage area should comply with PGS15.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions: Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· Recommended storage temperature: 5 - 30 □
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:	
123-86-4 n-butyl acetate	
IOELV	Short-term value: 723 mg/m³, 150 ppm Long-term value: 241 mg/m³, 50 ppm
141-78-6 ethyl acetate	
IOELV	Short-term value: 1468 mg/m³, 400 ppm Long-term value: 734 mg/m³, 200 ppm
108-65-6 2-methoxy-1-methylethyl acetate	
IOELV	Short-term value: 550 mg/m³, 100 ppm Long-term value: 275 mg/m³, 50 ppm Skin

· DNEL (Derived No Effect Level) for workers		
123-86-4 n-butyl acetate		
Inhalative	Acute - systemic effects, worker	960 mg/m³ (Worker)
	Acute - local effects, worker	960 mg/m³ (Worker)
	Long-term - systemic effects, worker	480 mg/m³ (Worker)
	Long-term - local effects, worker	480 mg/m³ (Worker)
141-78-6 ethyl acetate		
Dermal	Long-term - systemic effects, worker	63 mg/kg bw/day (Worker)
Inhalative	Acute - systemic effects, worker	1,468 mg/m³ (Worker)
	Acute - local effects, worker	1,468 mg/m³ (Worker)
	Long-term - systemic effects, worker	34 mg/m³ (Worker)
	Long-term - local effects, worker	734 mg/m³ (Worker)
108-65-6 2-methoxy-1-methylethyl acetate		
Dermal	Long-term - systemic effects, worker	153.5 mg/kg bw/day (Worker)
Inhalative	Long-term - systemic effects, worker	275 mg/m³ (Worker)

· DNEL (Derived No Effect Level) for the general population		
123-86-4 n-butyl acetate		
Inhalative	Acute - systemic effects, general population	859.7 mg/m³ (General population)

(Contd. on page 4)

(Contd. of page 3)

	Acute - local effects, general population	859.7 mg/m³ (General population)
	Long-term - systemic effects, general population	102.34 mg/m³ (General population)
	Long-term - local effects, general population	102.34 mg/m³ (General population)
141-78-6 ethyl acetate		
Oral	Long-term - systemic effects, general population	4.5 mg/kg bw/day (General population)
Dermal	Long-term - systemic effects, general population	37 mg/kg bw/day (General population)
Inhalative	Acute - systemic effects, general population	734 mg/m³ (General population)
	Acute - local effects, general population	734 mg/m³ (General population)
	Long-term - systemic effects, general population	367 mg/m³ (General population)
	Long-term - local effects, general population	367 mg/m³ (General population)
108-65-6 2-methoxy-1-methylethyl acetate		
Oral	Long-term - systemic effects, general population	1.67 mg/kg bw/day (General population)
Dermal	Long-term - systemic effects, general population	54.8 mg/kg bw/day (General population)
Inhalative	Long-term - systemic effects, general population	33 mg/m³ (General population)

· PNEC (Predicted No Effect Concentration) values

123-86-4 n-butyl acetate	
Aquatic compartment - freshwater	0.18 mg/l (Freshwater)
Aquatic compartment - marine water	0.018 mg/l (Marine water)
Aquatic compartment - water, intermittent releases	0.36 mg/l (Intermittent release water)
Aquatic compartment - sediment in freshwater	0.981 mg/kg sed dw (Sediment freshwater)
Aquatic compartment - sediment in marine water	0.0981 mg/kg sed dw (Sediment marine water)
Terrestrial compartment - soil	0.0903 mg/kg dw (Soil)
Sewage treatment plant	35.6 mg/l (stp)
141-78-6 ethyl acetate	
Aquatic compartment - freshwater	0.26 mg/l (Freshwater)
Aquatic compartment - marine water	0.026 mg/l (Marine water)
Aquatic compartment - sediment in freshwater	0.34 mg/kg sed dw (Sediment freshwater)
Aquatic compartment - sediment in marine water	0.034 mg/kg sed dw (Sediment marine water)
Terrestrial compartment - soil	0.22 mg/kg dw (Soil)
Sewage treatment plant	650 mg/l (stp)
108-65-6 2-methoxy-1-methylethyl acetate	
Aquatic compartment - freshwater	0.635 mg/l (Freshwater)
Aquatic compartment - marine water	0.0635 mg/l (Marine water)
Aquatic compartment - water, intermittent releases	6.35 mg/l (Intermittent release water)
Aquatic compartment - sediment in freshwater	3.29 mg/kg sed dw (Sediment freshwater)
Aquatic compartment - sediment in marine water	0.329 mg/kg sed dw (Marine water)
Terrestrial compartment - soil	0.29 mg/kg dw (Soil)
Sewage treatment plant	100 mg/l (stp)

· Additional information: The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· Appropriate engineering controls No further data; see section 7.
· Individual protection measures, such as personal protective equipment
· General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· Respiratory protection: Not required.
· Hand protection
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 5)

(Contd. of page 4)

· Material of gloves	Nitrile rubber, NBR The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. Recommended thickness of the material: ≥ 0.3 mm
· Penetration time of glove material	The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).
· For the permanent contact gloves made of the following materials are suitable:	Nitrile rubber, NBR
· As protection from splashes gloves made of the following materials are suitable:	Nitrile rubber, NBR
· Not suitable are gloves made of the following materials:	Leather gloves Strong material gloves
· Eye/face protection	Tightly sealed goggles

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· General Information	
· Physical state	Fluid
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	77 – 78 °C (141-78-6 ethyl acetate)
· Flammability	Highly flammable.
· Lower and upper explosion limit	
· Lower:	1.2 Vol % (123-86-4 n-butyl acetate)
· Upper:	11.5 Vol % (141-78-6 ethyl acetate)
· Flash point:	-4 °C (Pensky Martens, ASTM D93)
· Auto-ignition temperature:	315 °C (108-65-6 2-methoxy-1-methylethyl acetate)
· Decomposition temperature:	Not determined.
· pH at 20 °C	7
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	750 mPas (Brookfield, ASTM D1544)
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	97 hPa (141-78-6 ethyl acetate)
· Vapour pressure at 50 °C:	360 hPa
· Density and/or relative density	
· Density at 20 °C:	1.021 g/cm³ (DIN 51757, ASTM D 1298)
· Relative density	Not determined.
· Vapour density	Not determined.

· **9.2 Other information**	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· Solvent content:	
· Organic solvents:	41.4 %
· VOC:	
· VOC (2004/42/EC):	41.37 %
· Solids content:	58.5 %

(Contd. on page 6)

(Contd. of page 5)

· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Highly flammable liquid and vapour.
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

* *SECTION 11: Toxicological information*

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· Acute toxicity Based on available data, the classification criteria are not met.
· LD/LC50 values relevant for classification:

· Components	Type	Value	Species
123-86-4 n-butyl acetate			
Oral	LD50	10,760 mg/kg	(Rat)
Dermal	LD50	> 5,000 mg/kg	(Rabbit)
141-78-6 ethyl acetate			
Oral	LD50	5,620 mg/kg	(Rabbit)
108-65-6 2-methoxy-1-methylethyl acetate			
Oral	LD50	8,532 mg/kg	(Rat)

· Skin corrosion/irritation Based on available data, the classification criteria are not met.
· Serious eye damage/irritation Causes serious eye irritation.
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
· Germ cell mutagenicity Based on available data, the classification criteria are not met.
· Carcinogenicity Based on available data, the classification criteria are not met.
· Reproductive toxicity Based on available data, the classification criteria are not met.
· STOT-single exposure Based on available data, the classification criteria are not met.
· STOT-repeated exposure Based on available data, the classification criteria are not met.
· Aspiration hazard Based on available data, the classification criteria are not met.

(Contd. on page 7)

(Contd. of page 6)

· **11.2 Information on other hazards**

· Endocrine disrupting properties
None of the ingredients is listed.

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SECTION 12: Ecological information

· **12.1 Toxicity**
· Aquatic toxicity: No further relevant information available.

· Type of test	Effective concentration	Method	Assessment
123-86-4 n-butyl acetate			
Oral	EC50	44 mg/l (Daphnia magna)	
Inhalative	LC50/4 h	> 21 mg/l (Rat)	
	LC50/96 h	18 mg/l (Fish Acute Toxicity Study)	
141-78-6 ethyl acetate			
Inhalative	LC50/4 h	1,600 mg/l (Rat)	
108-65-6 2-methoxy-1-methylethyl acetate			
Inhalative	LC50/4 h	35.7 mg/l (Rat)	

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· PBT: Not applicable.
· vPvB: Not applicable.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· Additional ecological information:
· General notes: Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
HP3	Flammable

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· ADR/RID/ADN, IMDG, IATA UN1263

· **14.2 UN proper shipping name**
· ADR/RID/ADN 1263 PAINT
· IMDG, IATA PAINT

· **14.3 Transport hazard class(es)**

· ADR/RID/ADN
· Class 3 (F1) Flammable liquids.
· Label 3

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· IMDG, IATA	
· Class	3 Flammable liquids.
· Label	3
· **14.4 Packing group**	
· ADR/RID/ADN, IMDG, IATA	II
· **14.5 Environmental hazards:**	
· Marine pollutant:	No
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-E
· Stowage Category	B
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1263 PAINT, 3, II

SECTION 15: Regulatory information

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

· Directive 2012/18/EU	
· Named dangerous substances - ANNEX I	None of the ingredients is listed.
· Seveso category	P5c FLAMMABLE LIQUIDS
· Qualifying quantity (tonnes) for the application of lower-tier requirements	5,000 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements	50,000 t
· REGULATION (EC) No 1907/2006 ANNEX XVII	Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

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· National regulations:

· Technical instructions (air):

Class	Share in %
NK	41.4

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

· Classification according to Regulation (EC) No 1272/2008 The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

Flammable liquids	On basis of test data
Serious eye damage/irritation	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· Department issuing SDS: Research and Development
· Contact: Saïda El Asjadi, tel: +31 182 372177, e-mail: safety@de-ijssel-coatings.nl
· Date of previous version: 23.03.2021
· Version number of previous version: 55
· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· Sources: Literature data and/or investigation reports are available through the manufacturer.
· * Data compared to the previous version altered.

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2023 Version number 55 (replaces version 54) Revision: 18.07.2023

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

· **1.1 Product identifier**

· Trade name: TWEECOLUX
hardener

· Article number: 434
· UFI: 6W05-Q0V4-H00C-XD4H
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· Sector of Use SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU19 Building and construction work
· Product category PC9a Coatings and paints, thinners, paint removers
· Process category PROC19 Manual activities involving hand contact
PROC7 Industrial spraying
PROC10 Roller application or brushing
PROC11 Non industrial spraying
· Environmental release category ERC5 Use at industrial site leading to inclusion into/onto article
ERC8c Widespread use leading to inclusion into/onto article (indoor)
ERC8f Widespread use leading to inclusion into/onto article (outdoor)
· Article category AC13 Plastic articles
AC11 Wood articles
· Application of the substance / the mixture See our technical datasheet for application details of this product.
Isocyanate hardener for polyurethanes

· **1.3 Details of the supplier of the safety data sheet**
· Manufacturer/Supplier: De IJssel Coatings BV, Centrumbaan 960, NL 2841 MH Moordrecht
Tel: +31 182 372177, E-mail: info@de-ijssel-coatings.nl

· Further information obtainable from: Research and Development.
· **1.4 Emergency telephone number:** De IJssel Coatings BV, Tel. +31 182 372177, E-mail: safety@de-ijssel-coatings.nl
Office hours: working days from 08:00 to 17:00 hrs.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· Classification according to Regulation (EC) No 1272/2008

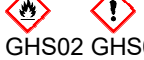

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**
· Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.
· Hazard pictograms


GHS02 GHS07

· Signal word Warning

· Hazard-determining components of labelling: hexamethyleendiisocyanaat/tolueendiisocyanaat based polyisocyanate
2-methoxy-1-methylethyl acetate
n-butyl acetate
m-tolylidene diisocyanate
hexamethylene-di-isocyanate
· Hazard statements H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
· Precautionary statements P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

(Contd. on page 2)

(Contd. of page 1)

P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information: EUH204 Contains isocyanates. May produce an allergic reaction.
· **2.3 Other hazards**
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 26426-91-5	hexamethyleendiisocyanaat/tolueendiisocyanaat based polyisocyanate Eye Irrit. 2, H319; Skin Sens. 1, H317	25 – 50%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	25 – 50%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	25 – 50%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37	hexamethylene-di-isocyanate Acute Tox. 2, H330; Resp. Sens. 1, H334; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	≤ 0.1%
CAS: 26471-62-5 EINECS: 247-722-4 Index number: 615-006-00-4 Reg.nr.: 01-2119454791-34	m-tolylidene diisocyanate Acute Tox. 1, H330; Resp. Sens. 1, H334; Carc. 2, H351; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412, EUH204 Specific concentration limit: Resp. Sens. 1; H334: C ≥ 0.1 %	≤ 0.1%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· General information: Immediately remove any clothing soiled by the product.
· After inhalation: Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· After swallowing: If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

(Contd. of page 2)

· **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· Suitable extinguishing agents: CO_2 or powder. Fight larger fires with alcohol resistant foam.
· For safety reasons unsuitable extinguishing agents: Water with full jet
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· Protective equipment: No special measures required.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections** See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
· Storage:
· Requirements to be met by storerooms and receptacles: Store material in original, tightly closed containers in a cool, well-ventilated area in accordance with applicable (local) regulations. Depending on total volume stored, the storage area should comply with PGS15.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions: Keep container tightly sealed.
· Recommended storage temperature: 5 - 30 □
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:	
108-65-6 2-methoxy-1-methylethyl acetate	
IOELV	Short-term value: 550 mg/m³, 100 ppm Long-term value: 275 mg/m³, 50 ppm Skin

(Contd. on page 4)

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123-86-4 n-butyl acetate	
IOELV	Short-term value: 723 mg/m³, 150 ppm Long-term value: 241 mg/m³, 50 ppm

· DNEL (Derived No Effect Level) for workers

108-65-6 2-methoxy-1-methylethyl acetate		
Dermal	Long-term - systemic effects, worker	153.5 mg/kg bw/day (Worker)
Inhalative	Long-term - systemic effects, worker	275 mg/m³ (Worker)
123-86-4 n-butyl acetate		
Inhalative	Acute - systemic effects, worker	960 mg/m³ (Worker)
	Acute - local effects, worker	960 mg/m³ (Worker)
	Long-term - systemic effects, worker	480 mg/m³ (Worker)
	Long-term - local effects, worker	480 mg/m³ (Worker)
822-06-0 hexamethylene-di-isocyanate		
Inhalative	Acute - systemic effects, worker	0.07 mg/m³ (Worker)
	Long-term - systemic effects, worker	0.035 mg/m³ (Worker)
	Long-term - local effects, worker	0.035 mg/m³ (Worker)

· DNEL (Derived No Effect Level) for the general population

108-65-6 2-methoxy-1-methylethyl acetate		
Oral	Long-term - systemic effects, general population	1.67 mg/kg bw/day (General population)
Dermal	Long-term - systemic effects, general population	54.8 mg/kg bw/day (General population)
Inhalative	Long-term - systemic effects, general population	33 mg/m³ (General population)
123-86-4 n-butyl acetate		
Inhalative	Acute - systemic effects, general population	859.7 mg/m³ (General population)
	Acute - local effects, general population	859.7 mg/m³ (General population)
	Long-term - systemic effects, general population	102.34 mg/m³ (General population)
	Long-term - local effects, general population	102.34 mg/m³ (General population)

· PNEC (Predicted No Effect Concentration) values

108-65-6 2-methoxy-1-methylethyl acetate	
Aquatic compartment - freshwater	0.635 mg/l (Freshwater)
Aquatic compartment - marine water	0.0635 mg/l (Marine water)
Aquatic compartment - water, intermittent releases	6.35 mg/l (Intermittent release water)
Aquatic compartment - sediment in freshwater	3.29 mg/kg sed dw (Sediment freshwater)
Aquatic compartment - sediment in marine water	0.329 mg/kg sed dw (Marine water)
Terrestrial compartment - soil	0.29 mg/kg dw (Soil)
Sewage treatment plant	100 mg/l (stp)
123-86-4 n-butyl acetate	
Aquatic compartment - freshwater	0.18 mg/l (Freshwater)
Aquatic compartment - marine water	0.018 mg/l (Marine water)
Aquatic compartment - water, intermittent releases	0.36 mg/l (Intermittent release water)
Aquatic compartment - sediment in freshwater	0.981 mg/kg sed dw (Sediment freshwater)
Aquatic compartment - sediment in marine water	0.0981 mg/kg sed dw (Sediment marine water)
Terrestrial compartment - soil	0.0903 mg/kg dw (Soil)
Sewage treatment plant	35.6 mg/l (stp)
822-06-0 hexamethylene-di-isocyanate	
Aquatic compartment - freshwater	0.0774 mg/l (Freshwater)
Aquatic compartment - marine water	0.00774 mg/l (Marine water)
Aquatic compartment - sediment in freshwater	0.01334 mg/kg sed dw (Sediment freshwater)
Aquatic compartment - sediment in marine water	0.001334 mg/kg sed dw (Sediment marine water)
Terrestrial compartment - soil	0.0026 mg/kg dw (Soil)
Sewage treatment plant	8.42 mg/l (stp)

· Additional information: The lists valid during the making were used as basis.

(Contd. on page 5)

(Contd. of page 4)

· **8.2 Exposure controls**

· Appropriate engineering controls	No further data; see section 7.
· Individual protection measures, such as personal protective equipment	
· General protective and hygienic measures:	Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid contact with the eyes and skin.
· Respiratory protection:	In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· Hand protection	Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· Material of gloves	Nitrile rubber, NBR The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. Recommended thickness of the material: $\geq$ 0.3 mm
· Penetration time of glove material	The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).
· For the permanent contact gloves made of the following materials are suitable:	Nitrile rubber, NBR
· As protection from splashes gloves made of the following materials are suitable:	Nitrile rubber, NBR
· Not suitable are gloves made of the following materials:	Leather gloves Strong material gloves
· Eye/face protection	Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· General Information	
· Physical state	Fluid
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	124 – 128 °C
· Flammability	Flammable.
· Lower and upper explosion limit	
· Lower:	1.2 Vol %
· Upper:	10.8 Vol %
· Flash point:	28 °C (Pensky Martens, ASTM D93)
· Auto-ignition temperature:	315 °C
· Decomposition temperature:	Not determined.
· pH at 20 °C	7
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	750 mPas (Brookfield, ASTM D1544)
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	10.7 hPa

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· Density and/or relative density	
· Density at 20 °C:	1.076 g/cm³ (DIN 51757, ASTM D 1298)
· Relative density	Not determined.
· Vapour density	Not determined.
· **9.2 Other information**	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· Solvent content:	
· Organic solvents:	57.5 %
· VOC:	
· VOC (2004/42/EC):	57.55 %
· Solids content:	41.9 %
· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Flammable liquid and vapour.
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void
· Nitrogen content	7.19 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity**	No further relevant information available.
· **10.2 Chemical stability**	
· Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**	No dangerous reactions known.
· **10.4 Conditions to avoid**	No further relevant information available.
· **10.5 Incompatible materials:**	No further relevant information available.
· **10.6 Hazardous decomposition products:**	No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· Acute toxicity Based on available data, the classification criteria are not met.
· LD/LC50 values relevant for classification:

· Components	Type	Value	Species
108-65-6 2-methoxy-1-methylethyl acetate			
Oral	LD50	8,532 mg/kg (Rat)	

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123-86-4 n-butyl acetate		
Oral	LD50	10,760 mg/kg (Rat)
Dermal	LD50	> 5,000 mg/kg (Rabbit)
822-06-0 hexamethylene-di-isocyanate		
Oral	LD50	738 mg/kg (Rat)
Dermal	LD50	593 mg/kg (Rat)

· Skin corrosion/irritation — Based on available data, the classification criteria are not met.
· Serious eye damage/irritation — Causes serious eye irritation.
· Respiratory or skin sensitisation — May cause an allergic skin reaction.
· Germ cell mutagenicity — Based on available data, the classification criteria are not met.
· Carcinogenicity — Based on available data, the classification criteria are not met.
· Reproductive toxicity — Based on available data, the classification criteria are not met.
· STOT-single exposure — May cause drowsiness or dizziness.
· STOT-repeated exposure — Based on available data, the classification criteria are not met.
· Aspiration hazard — Based on available data, the classification criteria are not met.

· **11.2 Information on other hazards**

· Endocrine disrupting properties
None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**
· Aquatic toxicity: No further relevant information available.

· Type of test	Effective concentration	Method	Assessment
108-65-6 2-methoxy-1-methylethyl acetate			
Inhalative	LC50/4 h	35.7 mg/l (Rat)	
123-86-4 n-butyl acetate			
Oral	EC50	44 mg/l (Daphnia magna)	
Inhalative	LC50/4 h	> 21 mg/l (Rat)	
	LC50/96 h	18 mg/l (Fish Acute Toxicity Study)	
26471-62-5 m-tolylidene diisocyanate			
Inhalative	LC50/4 h	0.24 mg/l (Rat)	

· **12.2 Persistence and degradability** — No further relevant information available.
· **12.3 Bioaccumulative potential** — No further relevant information available.
· **12.4 Mobility in soil** — No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· PBT: Not applicable.
· vPvB: Not applicable.
· **12.6 Endocrine disrupting properties** — The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· Additional ecological information:
· General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· Recommendation — Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

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HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP13	Sensitising

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

*
SECTION 14: Transport information

· **14.1 UN number or ID number**
· ADR/RID/ADN, IMDG, IATA: UN1263

· **14.2 UN proper shipping name**
· ADR/RID/ADN: 1263 PAINT
· IMDG, IATA: PAINT

· **14.3 Transport hazard class(es)**

· ADR/RID/ADN
· Class: 3 (F1) Flammable liquids.
· Label: 3

· IMDG, IATA
· Class: 3 Flammable liquids.
· Label: 3

· **14.4 Packing group**
· ADR/RID/ADN, IMDG, IATA: III

· **14.5 Environmental hazards:**
· Marine pollutant: No

· **14.6 Special precautions for user**: Warning: Flammable liquids.
· Hazard identification number (Kemler code): 30
· EMS Number: F-E,S-E
· Stowage Category: A

· **14.7 Maritime transport in bulk according to IMO instruments**: Not applicable.

· Transport/Additional information:

· ADR/RID/ADN
· Limited quantities (LQ): 5L
· Excepted quantities (EQ): Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
· Transport category: 3
· Tunnel restriction code: D/E

· IMDG
· Limited quantities (LQ): 5L
· Excepted quantities (EQ): Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation": UN 1263 PAINT, 3, III

SECTION 15: Regulatory information

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

· Directive 2012/18/EU
· Named dangerous substances - ANNEX I: None of the ingredients is listed.
· Seveso category: P5c FLAMMABLE LIQUIDS

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· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 74

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.

· National regulations:

· Technical instructions (air):

Class	Share in %
I	0.1
NK	57.5

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.
EUH204 Contains isocyanates. May produce an allergic reaction.

· Classification according to Regulation (EC) No 1272/2008 The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

Flammable liquids	On basis of test data
Serious eye damage/irritation Skin sensitisation Specific target organ toxicity (single exposure)	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· Department issuing SDS: Research and Development
· Contact: Saïda El Asjadi, tel: +31 182 372177, e-mail: safety@de-ijssel-coatings.nl
· Date of previous version: 28.01.2022
· Version number of previous version: 54
· Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
(Regulations Concerning the International Transport of Dangerous Goods by Rail)

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ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· Sources: Literature data and/or investigation reports are available through the manufacturer.
· * Data compared to the previous version altered.