

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 07/03/2016 Revision date: 05/01/2022 Supersedes version of: 06/05/2021 Version: 5.0

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

1.1. Product identifier

Product form : Mixture
Name : ARS COLOR AG5 Plastic Putty (Art.no. AG5 020)
UFI : RJ12-00C3-700K-02GS
Contains : styrene; 2,2'-(m-tolylimino)diethanol; maleic anhydride

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use, Industrial use
Industrial/Professional use spec : Used for the repair of car body components and polyester laminates.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

UAB HELVINA
Parko str. 96, Ramučiai
LT-54464 Kaunas distr., Lithuania
T: +370 37 308901 - F: +370 37 308902
info@helvina.lt - www.helvina.lt
E-mail address of competent person responsible for the SDS : info@helvina.lt

1.4. Emergency telephone number

Emergency number : Poison control and information office.
Tel. +370 5 236 2052 or +370 687 53378

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
Repr. 2	H361d
STOT RE 1	H372

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Suspected of damaging the unborn child. Causes damage to organs (hearing organs) through prolonged or repeated exposure (inhalation). Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

GHS08

Signal word (CLP) :

Danger

Contains

styrene; 2,2'-(m-tolylimino)diethanol; maleic anhydride

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Hazard statements (CLP)	: H226 - Flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H361d - Suspected of damaging the unborn child. H372 - Causes damage to organs (hearing organs) through prolonged or repeated exposure (inhalation).
Precautionary statements (CLP)	: P260 - Do not breathe dust, vapours. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P314 - Get medical advice/attention if you feel unwell. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P403+P235 - Store in a well-ventilated place. Keep cool.
Extra phrases	: The product is intended for professional use.

2.3. Other hazards

Other hazards which do not result in classification : Vapours may form flammable mixture with air. The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

The product does not meet the PBT and vPvB classification criteria

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
styrene	(CAS-No.) 100-42-5 (EC-No.) 202-851-5 (EC Index-No.) 601-026-00-0 (REACH-no) 01-2119457861-32-XXXX	≤ 15	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
2,2'-(m-tolylimino)diethanol	(CAS-No.) 91-99-6 (EC-No.) 202-114-8 (REACH-no) 01-2120791683-42-XXXX	≤ 0,4	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373
N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one	(CAS-No.) 2687-91-4 (EC-No.) 220-250-6 (EC Index-No.) 616-208-00-5 (REACH-no) 01-2119472138-36-XXXX	< 0,3	Eye Dam. 1, H318 Repr. 1B, H360
maleic anhydride	(CAS-No.) 108-31-6 (EC-No.) 203-571-6 (EC Index-No.) 607-096-00-9 (REACH-no) 01-2119472428-31-XXXX	≤ 0,05	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1A, H317 STOT RE 1, H372

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits
maleic anhydride	(CAS-No.) 108-31-6 (EC-No.) 203-571-6 (EC Index-No.) 607-096-00-9 (REACH-no) 01-2119472428-31-XXXX	(0,001 ≤ C ≤ 100) Skin Sens. 1A, H317

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

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

The decision on how to proceed with the rescue should be made by the doctor after careful assessment of the victim's condition. In case of severe poisoning, measures to prevent liver damage should be given; control the function of the heart and circulatory system. There is no antidote. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour.
Hazardous decomposition products in case of fire	: During combustion, hazardous vapors and gases containing thermal decomposition products, carbon oxides and soot may be formed. Avoid inhalation of combustion products, they may be hazardous to health.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe dust, vapours. Avoid contact with skin and eyes.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment. Avoid the formation of vapors. In case of spillage, steps should be taken to prevent it from spreading into the environment - prevent it from reaching sewage systems, water reservoirs, rivers, groundwater and soil. Do not use open fire, avoid sparks, eliminate ignition sources. Notify the appropriate emergency services. Warn others about the danger. Similar precautions should also be taken in the event of fire water.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site. Proceed in accordance with the Environmental Protection Law and the Waste Act.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, vapours. Avoid contact with skin and eyes.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible materials : Strong acids, strong bases and oxidation agents. Organic peroxides.
Storage temperature : 5 – 20 °C
Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition. Keep out of direct sunlight. Protect from moisture.

7.3. Specific end use(s)

See Section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

styrene (100-42-5)	
Poland - Occupational Exposure Limits	
Local name	Styren
NDS (OEL TWA)	50 mg/m ³
NDSCh (OEL STEL)	100 mg/m ³
Regulatory reference	Dz. U. 2018 poz. 1286

maleic anhydride (108-31-6)	
Poland - Occupational Exposure Limits	
Local name	Bezwodnik maleinowy
NDS (OEL TWA)	0,5 mg/m ³

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maleic anhydride (108-31-6)	
NDSCh (OEL STEL)	1 mg/m ³
Remark (PL)	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2018 poz. 1286

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

styrene (100-42-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	289 mg/m ³
Acute - local effects, inhalation	306 mg/m ³
Long-term - systemic effects, dermal	406 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	85 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	174,25 mg/m ³
Acute - local effects, inhalation	182,75 mg/m ³
Long-term - systemic effects, oral	2,1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	10,2 mg/m ³
Long-term - systemic effects, dermal	343 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0,028 mg/l
PNEC aqua (marine water)	0,014 mg/l
PNEC aqua (intermittent, freshwater)	0,04 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,614 mg/kg dwt
PNEC sediment (marine water)	0,307 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,2 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	5 mg/l

N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one (2687-91-4)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	20,1 mg/m ³
Long-term - systemic effects, dermal	4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	16,75 mg/m ³
Long-term - local effects, inhalation	10,05 mg/m ³
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	4

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PNEC (Water)	
PNEC aqua (freshwater)	0,25 mg/l
PNEC aqua (marine water)	0,025 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	1,91 mg/kg dwt
PNEC sediment (marine water)	0,191 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,235 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

maleic anhydride (108-31-6)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	0,2 mg/kg bodyweight/day
Acute - systemic effects, inhalation	0,95 mg/m ³
Long-term - systemic effects, dermal	0,2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0,19 mg/m ³
Long-term - local effects, inhalation	0,32 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	0,1 mg/kg bodyweight/day
Acute - systemic effects, inhalation	0,25
Acute - systemic effects, oral	0,1 mg/kg bodyweight/day
Long-term - systemic effects, oral	0,06 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0,05 mg/m ³
Long-term - systemic effects, dermal	0,1 mg/kg bodyweight/day
Long-term - local effects, inhalation	0,08 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0,075 mg/l
PNEC aqua (marine water)	0,0075 mg/l
PNEC aqua (intermittent, freshwater)	0,75 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,06 mg/kg dwt
PNEC sediment (marine water)	0,006 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,01 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	6,67 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	4,46 mg/l

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure adequate ventilation in confined areas. If ventilation is not sufficient, to keep vapour concentrations below the limit values use the appropriate respiratory protection. Personal protection equipment should be selected on the basis of substance concentrations at individual work stations, exposure time, operator functions and recommendations indicated by the supplier of the equipment. In explosion-risk areas, wear clothes, gloves and boots with electrostatic discharge protection function. Procedures for monitoring concentrations of hazardous components in the air and procedures for air cleanliness in the workplace should be applied - as long as they are available and justified at the workplace - in accordance with the relevant reference methods - standards in force in Poland. The mode, type and frequency of tests and measurements should meet the requirements of the Regulation of the Minister of Health of February 2, 2011 on tests and measurements of factors harmful to health in the work environment (Journal of Laws No. 33 item 166, as amended). Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:			
Safety glasses			
Type	Field of application	Characteristics	Standard
Safety goggles	Dust, Fine dust, Droplet	clear	EN 166

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:

Protective gloves					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Protective gloves	Polyvinylchloride (PVC), Latex, Neoprene rubber (HNBR), Nitrile rubber (NBR)	6 (> 480 minutes)	> 0,38 mm	3 (> 0.65)	EN ISO 374, EN 420

Other skin protection

Materials for protective clothing:

Condition	Material	Standard
Indoor or outdoor use	Antistatic clothing	EN 340, EN 14605, EN ISO 20346

8.2.2.3. Respiratory protection

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

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Device	Filter type	Condition	Standard
Reusable half mask	Type P2	Short term exposure, Protection for Solid particles	EN 143, EN 149

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

In order to reduce the impact on the environment and human health, the recommendations contained in this safety data sheet should be followed. When carrying out operations with the product at elevated temperatures, use efficient ventilation systems equipped with devices preventing the emission of gases into the atmospheric air. Do not contaminate water with the product or its packaging. Prevent the product or its packaging from getting into the sewage system, water reservoirs, rivers, groundwater and soil. It is forbidden to recover or dispose of the product, packaging and packaging waste outside of the installations or devices intended for this purpose, meeting the requirements specified in the provisions of the Act on waste. Avoid release to the environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: dark grey.
Appearance	: Thixotropic paste.
Odour	: Sweet. aromatic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: 145 °C (1013 hPa; for styrene)
Flammability	: Not applicable
Explosive properties	: Vapours may form flammable mixture with air.
Oxidising properties	: Does not meet the criteria for classification as oxidising.
Explosive limits	: Not available
Lower explosive limit (LEL)	: 0,9 vol % (for styrene)
Upper explosive limit (UEL)	: 6,1 vol % (for styrene)
Flash point	: 31 °C (for styrene)
Auto-ignition temperature	: 490 °C (1013 hPa; for styrene)
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Viscosity, dynamic	: 260000 – 350000 mPa·s (EN ISO 2555:2018, 23°C, Brookfield)
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 6,67 hPa (20°C for styrene)
Vapour pressure at 50 °C	: Not available
Density	: 1,77 – 1,87 g/cm ³ (PN-EN ISO 2811-1:2016, 23°C)
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

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9.2.2. Other safety characteristics

VOC content : < 250 Directive 2004/42/CE Annex II B bodyfiller/stopper

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids, strong bases and strong oxidants. Organic peroxides.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

styrene (100-42-5)

LD50 oral	> 6000 mg/kg bodyweight Animal: hamster, Syrian, Animal sex: male
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat (Vapours)	11,8 mg/l/4h

N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one (2687-91-4)

LD50 oral rat	≈ 3200 mg/kg bodyweight Animal: rat
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5,1 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

maleic anhydride (108-31-6)

LD50 dermal rabbit	2620 mg/kg bodyweight Animal: rabbit, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
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Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Suspected of damaging the unborn child.

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STOT-single exposure : Not classified

styrene (100-42-5)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Causes damage to organs (hearing organs) through prolonged or repeated exposure (inhalation).

styrene (100-42-5)

LOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat
LOAEC (inhalation, rat, vapour, 90 days)	0,21 mg/l air Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat
NOAEL (subchronic, oral, animal/male, 90 days)	10 mg/kg bodyweight Animal: mouse, Animal sex: male
STOT-repeated exposure	Causes damage to organs (hearing organs) through prolonged or repeated exposure.

N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one (2687-91-4)

LOAEC (inhalation, rat, vapour, 90 days)	0,2 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study), Guideline: EPA OPPTS 870.3465 (90-Day Inhalation Toxicity)
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	0,06 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study), Guideline: EPA OPPTS 870.3465 (90-Day Inhalation Toxicity)

2,2'-(m-tolylimino)diethanol (91-99-6)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
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maleic anhydride (108-31-6)

NOAEL (oral, rat, 90 days)	≈ 10 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 452 (Chronic Toxicity Studies)
NOAEC (inhalation, rat, vapour, 90 days)	≈ 0,0033 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2 Other information

Other information : Information on Effects: refer to section 4

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified
Not rapidly degradable	

styrene (100-42-5)	
LC50 - Fish [1]	10 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	4,7 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	4,9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	6,3 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	2,06 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	1,01 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one (2687-91-4)	
LC50 - Fish [1]	464 – 999 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	> 104 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 101 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	12,5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

maleic anhydride (108-31-6)	
LC50 - Fish [1]	75 mg/l Test organisms (species): Lepomis macrochirus
LC50 - Fish [2]	75 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	330 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 150 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

styrene (100-42-5)	
Persistence and degradability	Readily biodegradable.
Biochemical oxygen demand (BOD)	1,96 g O ₂ /g substance
Chemical oxygen demand (COD)	2,8 g O ₂ /g substance
Biodegradation	70,9 %

N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one (2687-91-4)	
Persistence and degradability	Readily biodegradable.

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2,2'-(m-tolylimino)diethanol (91-99-6)

Persistence and degradability	Biodegradability in water: no data available.
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maleic anhydride (108-31-6)

Persistence and degradability	Readily biodegradable.
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12.3. Bioaccumulative potential

styrene (100-42-5)

Partition coefficient n-octanol/water (Log Pow)	2,95
Bioaccumulative potential	Potential to bioaccumulate is low.

N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one (2687-91-4)

Partition coefficient n-octanol/water (Log Kow)	-0,2 23°C
Bioaccumulative potential	Bioaccumulation unlikely.

2,2'-(m-tolylimino)diethanol (91-99-6)

Bioaccumulative potential	No bioaccumulation data available.
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maleic anhydride (108-31-6)

Bioaccumulative potential	No bioaccumulation data available.
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12.4. Mobility in soil

styrene (100-42-5)

Partition coefficient n-octanol/water (Log Koc)	352
Ecology - soil	moderately.

N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one (2687-91-4)

Ecology - soil	No data available.
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2,2'-(m-tolylimino)diethanol (91-99-6)

Ecology - soil	No data available.
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maleic anhydride (108-31-6)

Ecology - soil	No data available.
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12.5. Results of PBT and vPvB assessment

Putty for plastics

The product does not meet the PBT and vPvB classification criteria

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Regional legislation (waste) : Act of 14 December 2012 on waste. Act of 13 June 2013 on the management of packaging and packaging waste. Regulation of the Minister of Climate of 2 January 2020 on the catalogue of waste.
- Waste treatment methods : The holder of product waste and packaging waste is obliged to handle the waste in a manner consistent with the principles of waste management specified in the Act on the management of packaging and packaging waste, the Act on waste and environmental protection requirements. The resulting product waste and packaging waste should be stored, transported, collected and recovered, including recycling or neutralization, in accordance with the provisions of the Act on waste and related regulations. Unused product as well as contaminated packaging should be sent to an entity authorized to collect hazardous waste. The waste classification should be applied, using the appropriate codes and names in accordance with the applicable waste catalog. The disposal of waste to soil and ground, sewage systems, rivers, water reservoirs is prohibited. Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

ADR Certificate : 125/IPO-BC/2011

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:		
Reference code	Applicable on	Entry title or description
3(a)	Putty for plastics ; styrene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Putty for plastics ; styrene ; N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one ; 2,2'-(m-tolylimino)diethanol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	styrene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
30.	N-ethyl-2-pyrrolidone; 1-ethylpyrrolidin-2-one	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.
40.	styrene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : < 250 Directive 2004/42/CE Annex II B bodyfiller/stopper

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15.1.2. National regulations

Poland

Polish National Regulations

: Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
The ADR Agreement - Annex to the J. o L. of 26 April 2019 Government Statement of 18 February 2019 on the entry into force of the amendments to Annex A and B to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o L. 2019, item 769).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Regulation of the Minister of Health of 20 April 2012 on labelling of hazardous substances and hazardous mixtures and certain mixtures (consolidated text: J. o L. 2015, item 450).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
Regulation of the Minister of Climate of 2 January 2020 on the catalogue of waste.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

SECTION 2. SECTION 3. SECTION 9.

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

- Data sources : Supplier's safety documents. ECHA (European Chemicals Agency).
- Training advice : Workplace: required documents confirming completion of training in the field of health and safety and fire protection at the workplace. The employer is obliged to inform all employees who have contact with the product about hazards and personal protection measures specified in this safety data sheet.
- Other information : The above information is based on the current data characterizing the product as well as the experience and knowledge of the manufacturer in this field. They do not constitute a quality description of a product or a promise of specific properties. They should be treated as an aid for safe handling in transport, storage and use of the product. This does not release the user from responsibility for the improper use of the above information and from compliance with all legal standards in this field.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

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Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.
H360	May damage fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Flam. Liq. 3	H226	On basis of test data
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 2	H361d	Calculation method
STOT RE 1	H372	Calculation method

SDS_EU_ARS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.