

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. Product identifier:****Product name:** REPAIR SET SOLL REP**Article number:** SG7 025**Identifier of mixture:** contains styrene.**1.2. Relevant identified uses of the substance or mixture and uses advised against:** The product is intended for professional use, designed for rapid repair of surface damage.

UAB HELVINA

Parko str. 96, Ramučiai

LT 54464 Kaunas district

Lithuania

Tel.: +370 37308901

Fax: +370 37308902

E-mail: info@helvina.ltwww.helvina.lt**1.4. Further information obtainable from:** Laboratory**Emergency telephone number:**

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

2. HAZARDS IDENTIFICATION**2.1. Classification of the mixture****Classification according to Regulation (EC) No 1272/2008:**

Flam. Liq. 3; H226

Skin Irrit. 2; H315

Eye Irrit. 2; H319

STOT SE 3; H335

Repr.2; H361d

STOT RE 1; H372

Aquatic Chronic 3; H412

This mixture is classified as hazardous according to Regulation (EC) No 1272/2008.

Classification according to Directive 1999/45/EC:

Xn; R20, R48/20

Xi: R36/37/38

Repr. Kat. 3 R63

R10

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



GHS08

Signal word: DANGER**Hazard statements:**

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs (hearing organs) through prolonged or repeated exposure (route of exposure: inhalation).

H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements:

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves / eye 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/shower.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information on risks:

Maximum VOC value in product ready for use: < 540 g/l.

Permissible value of VOC: 540 g/l

The product is intended for professional use.

2.3 Other hazards

This product is a mixture and according to our knowledge doesn't contain substances with meet criteria PBT and vPvB in accordance with Annex XIII.









3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances:

Not applicable. This product is a mixture.

3.2. Mixtures:

Hazardous mixture ingredients and their concentrations:

CAS: 100-42-5 EINECS: 202-851-5 Reg. Nr. 01-2119457861-32-XXXX	Styrene R10;  Xn; R20 C ≥ 12,5%; R48/20, R65;  Xi; R36/38 C ≥ 12,5%, R37, Repr. Cat. R63  Flam. Liq. 3, H226;  Acute Tox. 4 H332; Skin Irrit. 2 H315; Eye Irrit. 2, H319;  Asp. Tox. 1, H304;  STOT SE 3, H335;  STOT RE 1, H372; Repr. 2; H361d;  Aquatic Chronic 3, H412	< 38 %
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Additional information: See section 16 for full text of R-phrases and H-statements.

4. FIRST AID MEASURES

4.1. Description of first aid measures**General remarks:**

Observe the rules of safety and health at the work place. Use collective protection measures. Wear appropriate personal protective equipment. Avoid direct contact with the mixture. In case of serious or long – lasting disorders call the doctor or ambulance – show the safety data sheet or label of the mixture.

In the event of exposure by inhalation:

Remove victim to fresh air, ensure condition to rest in a position comfortable for breathing. If required, apply artificial respiration or give oxygen. If a victim is unconscious lay and transport the person in a safe side position. Call a doctor.

In the event of contact with skin:

Remove contaminated clothes. Immediately wash contaminated skin with plenty of water and soap – exactly rinse. In case of long – lasting irritation of skin seek medical attention.

In the event of contact with eye:

Remove contact lenses. Rinse eyes with plenty of cool running water for at least 15 minutes with the lids opened wide. Avoid strong water currents in order to prevent cornea damage. Seek ophthalmologist medical attention if irritation symptoms occur.

In the event of swallowing:

Do not induce vomiting. Rinse mouth thoroughly with water. If vomiting occurs, the victim leans forward to reduce risk of aspiration. Immediately call the doctor or ambulance – show the safety data sheet or label of the mixture.

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

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In case of contact with vapours of high concentration of substance may experience the following symptoms: eye irritation, irritation of throat and respiratory system (cough and difficulty in breathing), depression of central nervous system (tiredness, dizziness and headaches).

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

Symptomatic treatment. Treatment of overexposure should be carried out on the basis of observation of symptoms and general patient's condition.

5. FIRE-FIGHTING MEASURES**5.1. Extinguishing media**

SUITABLE EXTINGUISHING MEDIA:

Small fire: extinguishing powders, carbon dioxide, extinguishing foams, water spray.

Large fire: extinguishing foams, water spray, water fog.

UNSUITABLE EXTINGUISHING MEDIA: compact water jet.

5.2. Special hazards arising from the substance or mixture

During fire arise carbon oxides and other unidentified products are formed. Avoid inhalation of combustion products, they may be hazardous to health. Vapours are heavier than air and they accumulate at the ground level and in the lower parts of premises. Vapours may form explosive mixtures with air.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulation.

5.3. Advice for fire-fighters

Evacuate personnel to safe areas. Cool containers exposed to fire or high temperature with water from a safe distance. If it is possible and safe, remove exposed containers from danger area. Not let that the sewage which arose as a result of fire-fighting get into sewers or surface and ground water. Follow the procedures which are applicable to fire-fighting of chemicals. Persons involved in firefighting operations should be trained, equipped with chemical protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Observe general safety standards. Use personal protective equipment (see section 8). Ensure adequate ventilation – do not allow mixing vapours of styrene with air in concentrations that can form explosive mixtures. Eliminate all sources of ignition. Avoid direct contact with released product.

6.2. Environmental precautions

Secure sewage gullies. Do not allow the product to get into sewer systems or surface and ground water.

6.3. Methods and material for containment and cleaning up

If it is possible and safe remove or limit spillage (place in an emergency container, stop the leak). Small amount of released product collect with non-flammable absorbent e.g. sand, limestone or other nonflammable absorbent material, place into labelled, closed container for disposal. Dispose of in accordance with the recommendations set out in Section 13.

6.4. Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Avoid direct contact with product; avoid eye and skin contamination; avoid breathing in vapours. Use personal protective equipment consistent with the information set out in Section 8. Use only in well-ventilated area. Observe basic hygiene rules: do not eat, drink, smoke in the workplace; after work wash your hands with water and soap.

7.2 Conditions for safe storage, including any incompatibilities

Store only in tightly closed original containers in dry, well - ventilated area. Protect from direct action of sun light and moisture. Keep away from sources of heat and ignition in temperature from +5 to +20°C.

7.3 Specific end use(s)

None.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure in the work environment:

STYRENE (CAS: 100-42-5)

Long-term value: 50 mg / m³

Short-term value: 100 mg / m³

Ceiling value: -

European Community:

Not specified.

Explanation of acronyms is given in Section 16.

Recommendation for monitoring procedures:

LST ISO 4225:2000 Air quality. General aspects. Vocabulary.

LST EN 689:2001 Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.

LST EN 14042:2004 Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Values of PNEC and DNEL for STYRENE:

PNEC

Fresh water: 0,028 mg/l

Marine water: 0,0028 mg/l

Periodic emission water: 0,04 mg/l

Fresh water sediment: 0,614mg/kg dw

Marine water sediment: 0,0614 mg/kg dw

Agricultural solid: 0,2 mg/kg dw

STP: 5mg/l

DNEL (workers)

Inhalation (long term - systemic effects): 85 mg/m³

Dermal (long term - systemic effects): 406 mg/kg/day

Inhalation (acute – local effects): 306 mg/m³

Inhalation (acute – systemic effects): 289 mg/m³

DNEL (consumer)

Inhalation (acute – local effects): 182,75 mg/m³

Inhalation (acute - systemic effects): 174,25 mg/m³

Inhalation (long term – systemic effects): 10,2 mg/m³

Dermal (long term – systemic effects): 343 mg/kg/day

Oral (long term – systemic effects): 2,1 mg/kg/day

8.2 Exposure controls

Technical measures:

Ensure adequate ventilation in confined spaces. In case where ventilation isn't sufficient use adequate respiratory protection. In explosion –risk area wear clothes, gloves and boots with electrostatic discharge protection function.

Personal protective measures:

Legal basis:

Personal protective equipment is to comply with Directive No 89/686/EEC (as amended) and the applicable standards listed below.

Remark:

When the concentration of the substance is known, the selection of personal protective equipment should be made on the basis of substance concentration in the workplace, exposure time, activities performed by the employee, and the recommendations given by the manufacturer of personal protective equipment. In an emergency situation, when the concentration of the substance in the workplace is not known, use personal protective equipment of the highest protection class. The employer is obligated to ensure that the used personal protective equipment: clothing and shoes have appropriate protective and functional properties and ensure their cleaning, maintenance, repair and decontamination.

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**HAND PROTECTION:**

Wear protective gloves: rubber, PVC, polyvinyl alcohol or butyl rubber. It is recommended to regularly change the gloves and change them immediately in case of any symptom of wear or damage. The selected protective gloves have to meet the requirements of Standard EN 374.

EYE AND FACE PROTECTION:

Use tight protective glasses or goggles. The selected goggles or glasses must comply with the European standard EN 166.

SKIN PROTECTION:

Wear protective clothing and protective footwear. Relevant requirements can be found: for protective clothing: EN 340 standard, for footwear: EN-ISO 20346 standard.

RESPIRATORY PROTECTION:

Not required with adequate ventilation. If it necessary, use mask or half – mask with filter A or/and P meeting the requirements of EN 140.

Thermal hazard: Not specified.

Environmental exposure controls: Avoid product entering soil, sewers, waterways.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Appearance:	Liquid
Colour:	Slightly yellow
Odour:	Sweet, aromatic
pH value:	Not applicable
Melting point / freezing:	- 31 °C (for styrene)
Initial boiling point and boiling range:	145 °C at 1,1013 hPa (for styrene).
Flash point (Abel closed-cup method according to EN ISO 13736):	> - 31 °C for mixture
Evaporation rate:	No data available
Flammability (solid, gas):	Not applicable
Explosion limits (lower / upper):	1,1 – 6,1 % (for styrene)
Vapor pressure:	6,65hPa (20 ° C for styrene)
Relative vapour density (air 1):	3,6 (for styrene)
Density by pycnometer method according to PN-EN ISO 2811-1:2011at 23°C::	1,06 – 1,17 g/cm ³
Solubility in water:	Practically insoluble in water.
Partition coefficient: n-octanol/water:	log Po/w: 2.96 (25 °C for styrene)
Auto-ignition temperature:	490°C w 1,1013 hPa (for styrene)
Decomposition temperature:	No data available
Viscosity (Hoeppler, at temperature 23°C according to - PN ISO 12058-1:2005)::	400 -600 mPas.
Explosive properties:	No data available
Oxidising properties:	Is not classified as oxidizing

9.2. Other information:

Maximum VOC value in product ready for use: < 540 g/l.

Permissible VOC: 540 g/l

10. STABILITY AND REACTIVITY

10.1. Reactivity:

There are no reactivity hazards of the mixture under recommended condition of storage and use.

10.2. Chemical stability:

The product is stable under recommended conditions of storage and use (Section 7).

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10.3. Possibility of hazardous reactions:

Vapours of styrene mixed with air may form explosive mixtures.

10.4. Conditions to avoid:

High temperature, source of ignition, exposure to light, air and moisture.

10.5. Incompatible materials:

Strong acid, strong bases, peroxides and strong oxidizing agents.

10.6. Hazardous decomposition products:

Carbon dioxides and other unidentified toxic gases.

11. TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects.****Acute toxicity for Styrene:**

LC50 (inhalation, rat) = 11,8 mg/l (4h)

LD50 (oral, rat) = 5000 mg/kg

LD50 (dermal, rat) > 2000 mg/kg

Acute toxicity – mixture:

Based on available data the classification criteria are not met.

ATEmix (inhalation) = 31,05 mg/l/4h (vapours)

Skin corrosion/irritation - mixture:

Causes skin irritation.

Serious eye damage/irritation – mixture:

Causes serious eye irritation.

Respiratory or skin sensitisation - mixture:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity - mixture:

Based on available data, the classification criteria are not met.

Carcinogenicity - mixture:

Based on available data, the classification criteria are not met.

Reproductive toxicity - mixture:

Suspected of damaging the unborn child.

STOT – single exposure:

May cause respiratory irritation.

STOT – repeated exposure:

Causes damage to organs (hearing organs) through prolonged or repeated exposure (route of exposure: inhalation).

Aspiration hazard - mixture:Based on available data, the classification criteria are not met - the product is a high viscosity liquid (kinematic viscosity at 40°C > 20 mm²/s).**Effects of acute exposure - styrene:**

Styrene vapours in low concentrations can cause watery eyes, metallic taste in mouth in a higher concentration – pain and redness of the conjunctiva, and in very high concentrations – coughing, dizziness, vertigo. Discontinuation of exposure may prevent the severity of symptoms: the symptoms abate. Continued exposure causes drowsiness, disturbance of consciousness, it may lead to respiratory paralysis and death. Contamination of skin with liquid styrene can cause pain and redness of the skin. Eye contact with liquid styrene causes pain, redness of the conjunctiva. Ingestion causes sore throat, abdominal pain, nausea, vomiting.

Effects of chronic exposure - styrene:

Chronic dermatitis, chronic conjunctivitis, impaired sense of smell, mental dysfunction, sluggishness, change in the EEG record, impaired hearing.

12. ECOLOGICAL INFORMATION**12.1. Toxicity:****Aquatic toxicity:****Styrene:**Acute toxicity (LC50/96h) for fish *Pimephales promelass* – 4,02 mg/l – 10 mg/l

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Acute toxicity (EC50/48h) for invertebrates *Daphnia magna* – 4,7 mg/lAcute toxicity (LC50/72h) for algae *Pseudokirchnerella subcapitata* – 4,9 mg/l

Chronic toxicity to daphnia and other invertebrates:

Daphnia magna NOEC (21days) – 1,01**Mixture:**

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability:

Styrene is general resistant to hydrolysis; readily biodegradable: degradation by ozone and OH radicals.

12.3. Bioaccumulative potential:

Styrene: demonstrates a moderate ability to bio concentrate log Pow=3; bio concentration factor: BCF = 74.

12.4. Mobility in soil:

Styrene vaporizes from surface of water and soil. Is very mobile in soil and may penetrate into groundwater.

12.5. Results of PBT and vPvB assessment:

Ingredients of the mixture listed in section 3 are not assessed as PBT or vPvB.

12.6. Other adverse effects

Styrene: spreads on the surface of the water, is toxic to fish, invertebrates and aquatic microorganisms.

13 DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods:**

Residues of the product in container must be carefully removed and cured by means of the attached curing agent - in accordance with the official local regulations. Cured product is not a harmful substance.

Waste code:

07 02 wastes from the MFSU of plastics, synthetic rubber and man –made fibres.

07 02 13 Waste plastic.

Residues of the product that are not hardened by addition of hardener are considered as hazardous waste.

Waste code:

08 04 Waste from MFSU of adhesives and sealants (including waterproofing products).

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances.

Single-use containers after use and purification - chemical recycling.

Contaminated packaging:

Waste code:

15 01 Packaging (including separately collected municipal packaging waste).

15 01 10* Packaging containing residues of or contaminated by dangerous substances.

Observe the local, national and international regulations concerning of disposal waste solid or hazardous.

14 TRANSPORT INFORMATION**14.1. UN number:**

1866

14.2. UN proper shipping name:

ADR: RESIN SOLUTION, flammable.

14.3. Transport hazard class(es):

3

14.4. Packing group:

III

14.5. Environmental hazards:

Not applicable.

14.6. Special precautions for user:

Remove sources of ignition (extinguish open fire, forbid smoking and using spark emitters). Keep away from heat and ignition sources.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.**15 REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

* REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorization 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 (with subsequent amendments).

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* 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)No1907/2006.

Remark:

References to legislation, regulations and official documents may not be treated as an exhaustive.

15.2. Chemical safety assessment:

The manufacturer not performed a chemical safety assessment for the mixture.

16 OTHER INFORMATION**Explanation of abbreviations and acronyms used in the SDS:**

TWA 8-hour Time Weighted Averages.

STEL Short Term Exposure Limit

Ceiling Value - The concentration of an airborne substance that shall not be exceeded during any part of the working exposure.

PBT Persistent, bio accumulative, toxic (Substance).

PNEC Predicted no effect concentration.

DNEL Derived no effect level

vPvB Very Persistent and very Bio accumulative (Substance).

LC50 Median lethal concentration. The concentration causing 50% lethality

LD50 Median lethal dose. The dose causing 50% lethality.

EC50 The effective concentration of substance that causes 50% of the maximum response.

ADR Agreement concerning the international carriage of Dangerous goods by Road

RID Regulation concerning the International carriage of Dangerous goods by Rail

UN Number Number of identifying hazardous material.

MFSU Manufacture, formulation, supply and use

VOC Volatile organic compound

Explanation of R phrases:

Xn Harmful

Xi Irritant

R10 Flammable

R20 Harmful by inhalation

R36/38 Irritating to eyes and skin.

R37 Irritating to respiratory system.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation

R65 Harmful: may cause lung damage if swallowed.

Explanation of category codes and codes of statements indicating type of hazard:

Flam. Liq. 3 Flammable Liquid, Category 3;

Acute Tox. 4 Acute toxicity, Category 4;

Skin Irrit. 2 Skin corrosion/irritation, Category 2;

Eye Irrit. 2 Serious eye damage/eye irritation, Category 2;

Asp. Tox. 1 Aspiration toxicity, Category 1;

STOT SE 3 Specific target organ toxicity – single exposure. Category 3;

STOT RE 1 Specific target organ toxicity — repeated exposure, Category 1;

Repr. 2 Reproductive toxicity, Category 2;

Aquatic Chronic 3 Hazardous to the aquatic environment - Chronic Hazard, Category 3.

Full text of H phrases:

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure if inhaled.

H412 Harmful to aquatic life with long lasting effects.

H361d Suspected of damaging the unborn child.

Training:

Working place: required documents confirming Occupational Safety and Health and fire – fighting trainings at workplace. Employer is obligated to inform all workers who have contact with the product about hazard and personal protection measures specified in this safety data sheet.

The information above is based on current data concerning the product, experience and knowledge in this area owned by the manufacturer. It does not constitute a qualitative description of the product or warranty of certain properties. It must be regarded as an aid to safety in transport, storage and use of the product. They do not exempt the user from the liability of the misuse of this information and from complying with all applicable legal standards in this area. The user of this product is responsible for providing the persons which can have contact with this product (by use, storage, cleaning containers and other activities) with complete information contained in this SDS which are essential to ensure safety of work and protection of health and environment.