

SECTION 1: SUBSTANCE/MIXTURE IDENTIFICATION AND MANUFACTURER/SUPPLIER IDENTIFICATION

1.1. Product identification POLYESTER PUTTY

1.2. Relevant identified uses of the substance or mixture and uses advised against
For professional use in car refinish.

1.3. Data of the safety data sheet supplier

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The mixture was classified as dangerous according to current regulations – see section 15 of Material Safety Data Sheet.

Classification 1272/2008/EC:

Suspected of damaging the unborn child (Repr. 2).
Causes skin irritation (Skin Irrit. 2).
Causes eye irritation (Eye Irrit. 2).
Causes damage to organs through prolonged or repeated exposure (STOT RE 1).
Flammable liquid and vapours (Flam. liq. 3).

2.2. Label elements

Contains: styrene.

Pictograms:



Warning word: **Danger.**

Risk index:

H226 Flammable liquid and vapour.
H361d Suspected of damaging the unborn child.
H315 Causes skin irritation.
H319 Causes eye irritation.
H372 Causes damage to organs through prolonged or repeated exposure.

Safety index:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P312 Call a doctor if you feel unwell.

2.3. Other hazards

Styrene vapours form explosive mixtures with air. Fumes are heavier than air and accumulate close to the ground level and in lower parts of rooms.

Styrene polymerization may occur under the influence of high temperature or as a result of contact with strongly oxidizing agents, peroxides, strong acids, bases, metal salts, copper and its alloys. Styrene polymerization is a highly exothermic process.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixtures

Product identification

POLYESTER PUTTY 3in1

Styrene

12.5-14%

EC: 202-851-5

CAS: 100-42-5

Index no: 601-026-00-0

Registration no: 01-2119457861-32-XXXX

Classification 1272/2008/EC:

Flam. Liq. 3, H226;

Repr. 2, H361d;

Acute Tox. 4, H332;

Eye Irrit. 2, H319;

Skin Irrit. 2, H315;

STOT Rep. 1, H372.

Full text of the phrases identifying the types of hazard provided in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General recommendations:

See section 11 of Material Safety Data Sheet.

Respiratory tract:

Remove the victim into fresh air, ensure quiet surrounding, in case of no breath perform artificial respiration.

Call a doctor.

Skin:

Remove contaminated clothes. Wash contaminated skin with plenty of water for about 15 min. If irritation persists consult a doctor.

Eyes:

Immediately rinse contaminated eyes for about 15 minutes. Avoid strong water jet – risk of cornea damage; consult a doctor.

Alimentary tract:

Do not cause vomiting (choking risk). Rinse mouth with water. If the victim is conscious administer 1-2 glasses of warm water. Call a doctor.

Persons giving medical help should use medical gloves.

4.2. Most important symptoms both acute and delayed

Styrene foams in low concentration may cause eye lacrimation, metallic taste in mouth; painful and reddened conjunctivas, and in higher concentration – cough, dizziness, disequilibrium.

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

Special measures allowing specialist and immediate aid should be available in the place of work.

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media**

Powder, foam resistant to alcohols, carbon dioxide, water mist.

5.2. Special hazards arising from the substance or mixture

Styrene polymerization may occur under the influence of high temperature or as a result of contact with strongly oxidizing agents, peroxides, strong acids, bases, metal salts, copper and its alloys. Styrene polymerization is a highly exothermic process. Carbon monoxide and other toxic gases may be generated in case of fire.

5.3. Information for fire fighters

Fire-fighting teams should wear self-contained breathing apparatus and light protective clothing. Cool adjacent tanks by spraying water from a safe distance.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency measures**

For persons not being members of aid giving staff:

Remove ignition sources. Ensure sufficient ventilation of the room. Avoid direct contact with the released substance. Avoid contact with skin and eyes. Personal safety measures – see section 8 of Material Safety Data Sheet.

For persons being the members of aid giving staff:

Persons giving aid should wear protective clothing made of coated impregnated fabric, protective gloves (viton), tight protective glasses and breathing apparatus: gas mask with A type absorber.

6.2. Environmental precautions

Prevent leakage to the sewage system, surface waters, underground waters and soil.

6.3. Methods and materials for containment and cleaning up

Stop the leakage (close the liquid inflow, seal), place damaged container in an emergency container, remove the liquid mechanically and place it in an emergency container. In case of large leakage embank the area. In case of small amounts, collect with the use of a binding agent (e.g. mica, diatomaceous earth, sand).

6.4. Reference to other sections

Personal protection measures– see section 8 of the Material Safety Data Sheet.

Disposal considerations – see section 13 of the Material Safety Data Sheet.

SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES**7.1. Precautions for safe handling**

Keep away from heat and sources of ignition. Prevent leakage to the sewage system, surface waters, underground waters and soil. Use only in well ventilated rooms. Do not smoke. Do not inhale vapours. Avoid contact with skin and eyes. Take precaution measures against electrostatic discharge. Use personal protection measures – see section 8 of the Material Safety Data Sheet.

7.2. Conditions for safe storage, including any incompatibilities

Store in well sealed original containers. Do not store near large amounts of organic peroxides or other strong oxidants. Take precaution measures against electrostatic discharge. Store in cool, well ventilated rooms. Protect from low temperatures, the sunrays and heat sources.

7.3. Special end use(s)

For professional use in car refinishing taking into consideration the information included in subsections 7.1 and 7.2.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION MEASURES**8.1. Control parameters**

CAS NUMBER	SUBSTANCE	MPC (mg/m ³)	MPIC (mg/m ³)	MPCC (mg/m ³)
100-42-5	Styrene	50	200	---

MATERIAL SAFETY DATA SHEET

Date of issue: 04.05.2012

Updating date: 29.08.2018

Version: 3

RANAL®

Strona 4 z 8

POLYESTER PUTTY

National acceptable biological values:

CAS NUMBER	100-42-5
SUBSTANCE ABSORBED	Styrene
SUBSTANCE MARKED	mandelic acid + phenylglyoxylic acid
BIOLOGICAL MATERIAL	urine*
PCB VALUES	350 mg/g creatinine

Notes: * single sample at the end of daily exposure any day.

PN-EN 482:2009	Workplace Atmospheres – General Requirements Concerning Characteristic of Procedures for Measurement of Chemical Factors.
PN-EN-689: 2002	Workplace Atmospheres – Guidance for the Assessment of Exposure by Inhalation to Chemical Agents for Comparison with Limit Values and Measurement Strategy.
PN Z-04008-7:2002	Air Cleanness Protection - Sampling - Principles of Sampling Air in the Working Environment and Interpreting the Results.
PN-86/Z-04152.02	Air Cleanness Protection – Assessment of Styrene Content – Marking Styrene in Workplaces by Gas Chromatography with Sample Enriching.

8.2. Exposure control

Respiratory tract protection:

Gas mask with A type absorber (EN 141).

Hand protection:

Protective gloves PN-EN 374-3 (viton, 0,7 mm thick, penetration time >480 min, nitrile rubber, 0,4 mm thick, penetration time >30 min).

Eye protection:

Tight protective glasses.

Workplace:

Fixed fume extraction and general ventilation.

Contact with the product is not recommended to people suffering from hypersensitivity of respiratory tract (e.g. asthma, chronic inflammation of respiratory tract).

Environmental exposure control:

Prevent leakage to the sewage system, surface waters, underground waters and soil.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical state	highly viscous liquid
Color	according to specification
Odour	slightly sweet to powerful
Odour threshold	0.43 mg/m ³ (styrene)
pH	not applicable
Melting/freezing point	-30°C
Boiling point	146°C
Flash point	30°C
Autoignition point	490°C
Breakdown point	not specified
Evaporation rate	not specified
Flammability (solid, gas)	not applicable
Explosion limits	% bottom: 1.1 vol%, top: 8.0 vol% (styrene)
Vapour pressure	about 7.3 hPa (20°C) (styrene)
Vapour density (with regard to air)	3.6 (styrene)
Density	According to specification
Solubility (in water)	Very poor
n-octanol / water partition coefficient	3.2 (styrene)
Viscosity (rotational rheometer)	According to specification
Explosive properties	Not applicable
Oxidizing properties	not applicable

9.2. Other information

No data available.

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

Product not reactive under normal conditions.

10.2. Chemical stability

Product stabile under normal conditions.

10.3. Possibility of hazardous reactions

Styrene polymerization may occur under the influence of high temperature or as a result of contact with strongly oxidizing agents, peroxides, strong acids, bases, metal salts, copper and its alloys. Uncontrolled polymerization in a closed container may result in an explosion. Carbon monoxide and other toxic gases may be generated as a result of thermal decomposition.

10.4. Incompatible materials

Flammable product. Avoid contact with strong oxidants, peroxides, strong acids and bases. Avoid generation and accumulation of static electricity. Protect from the influence of sunrays and heat sources.

10.5. Incompatible materials

Avoid contact with large amounts of organic peroxides, strong acids and bases, as well as other strong oxidants.

10.6. Hazardous decomposition products

Carbon monoxide and other toxic gases are generated as a result of thermal decomposition.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects**

No experimental data available on the preparation. Evaluation based on the data on dangerous ingredients included in the preparation.

a) Acute toxicity

Styrene

LD50 (rat, ingestion)	5000 mg/kg
LC50 (rat, inhalation)	24000 mg/m ³ (4 h)
TCL0 (human, inhalation)	2600 mg/m ³
LCL0 (human, inhalation)	43000 mg/m ³

b) Caustic / irritating effect on skin

Causes skin irritation.

c) Serious eye damage / eye irritation

Causes eye irritation.

d) Allergic effect on respiratory tract or skin

The mixture is not classified as having an allergic effect. No available data confirming the hazard class.

e) Mutagenic effect on germ cells

The mixture is not classified as mutagenic. No available data confirming the hazard class.

f) Carcinogenicity

The mixture is not classified as carcinogenic. No available data confirming the hazard class.

g) Harmful effect on reproduction

Suspected of damaging the unborn child.

h) Toxic effect on target organs – single exposure

Styrene foams in low concentration may cause eye lacrimation, metallic taste in mouth; in concentration of about 800 mg/m³ – painful and reddened conjunctivas, and in higher concentrations – cough, dizziness,

disequilibrium. Prolonged exposure causes drowsiness, disturbances of consciousness; possible paralysis of the respiratory centre.

i) Toxic effect on target organs – repeated exposure

Drowsiness, impaired consciousness; irritation of respiratory tract may occur. Causes damage to organs (hearing organ) through prolonged or repeated exposure (inhalation).

j) Aspiration hazard

No available data confirming the hazard class.

Ways of exposure:

Respiratory tract: Harmful in case of inhalation.

Skin: Causes skin irritation.

Eyes: Causes eye irritation.

Digestive system: If swallowed the substance may cause irritation of the alimentary tract, nausea, vomiting and diarrhea.

Poisoning symptoms:

Headaches and dizziness, fatigue, decreased muscle power, and in exceptional instances loss of consciousness.

If swallowed the substance may cause irritation of alimentary tract, nausea, vomiting and diarrhea. The substance has depressing effect on central nervous system.

SECTION 12: ECOLOGICAL INFORMATION

No experimental data available on the preparation. Evaluation based on the data on dangerous ingredients included in the preparation.

12.1. Toxicity

Styrene

Acute toxicity for fish / LC50 (96 h) 4-10 mg/l

Acute toxicity for crustacea Daphnia magna EC50 (24 h) 182 mg/l

Number in catalogue of water hazardous substances 187

Water hazard class 2

12.2. Persistence and degradability

Styrene

Biodegradability: 80% (closed bottle test)

12.3. Bioaccumulative potential

Styrene

Log Pow: potential 2,96 (OECD 107) - poor bioaccumulative

12.4. Mobility in soil

Very poorly soluble in water.

12.5. Results of PBT and vPvB assesment

No data available.

12.6. Other hazardous effects

No data available.

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

Product must be disposed of in compliance with the proper local and statutory regulations with regard to waste – see point 15.

Product remains:

Unhardened remains of the product are harmful waste. Waste code: 08 04 09*. Do not dispose the product into the sewage system. Do not store with communal waste. Remove the remains of the mixture carefully and

harden with the use of the proper B component, a (waste) hardener from the set. Hardened product is not a harmful waste.

CAUTION: harden the remains in small portions away from flammable products. High amounts of heat are released during chemical reaction!

Contaminated container:

A contaminated container containing unhardened remains of the product is harmful waste. Waste code: 15 01 10*. Do not store with communal waste. The contaminated container should be disposed with entities which are authorized to collection, recover or disposal.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

1866

14.2. UN proper shipping name

RESIN IN SOLUTION, flammable

14.3. Transport hazard class(-es)

3

14.4. Packaging group

III

14.5. Environmental hazards

No.

14.6. Special precautions for user

Do not transport together with products of class 1 (except products of class 1.4S), and some products of class 4.1 and 5.2. During the transport avoid direct contact with products of class 5.1 and 5.2. Do not use an open flame and do not smoke.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 Convention and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) no 1907/2006 of the European Parliament and of the Council of December 18 2006 concerning Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing 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.
- Official Journal of the EU L 136 of May 29 2007r. with later amendments Official Journal of the EU L 304 of November 22 2007, Official Journal of the EU L268 of October 09 2008, Official Journal of the EU L 46 of February 17 2009, Official Journal of the EU L164 of June 26 2009, Official Journal of the EU L133/1 of May 31 2010 with later amendments.
- Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- Regulation of the European Parliament and of the Council (EC) No 1272/2008 of December 16 2008 on Classification, Labeling and Packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No 1907/2006 (Official Journal of the EU L 353 of December 31 2008); Official Journal of the EU L 235 of September 5 2009, Official Journal of the EU L 83 of March 30 2011, Official Journal of the EU L 179 of July 11 2012, Official Journal of the EU L 149 of June 1 2013, Official Journal of the EU L 261 of October 3 2013, Official Journal of the EU L 167 of June 6 2014, Official Journal of the EU L 197 of July 25 2015.

15.2. Chemical safety assessment

Not performed.

SECTION 16: OTHER INFORMATION

Full text of the phrases identifying the types of hazards and R phrases mentioned in sections 2-15:

Flam. Liq. 3	Flammable Liquids cat. 3
H226	Flammable liquid and vapours
Acute Tox. 4	Acute toxicity cat. 4
H332	Harmful if inhaled.
STOT SE 3	Toxic effect on target organs – single exposure, cat. 3
H335	May cause respiratory irritation.
Eye Irrit. 2	Irritating effect on eyes cat. 2
H319	Causes serious eye irritation.
Skin Irrit. 2	Irritating effect on skin, cat. 2
H315	Causes skin irritation (category 2)
STOT RE 1	Toxic effect on target organs – repeated exposure, cat. 1
H372	Causes damage to organs through prolonged or repeated exposure.
Asp. Tox. 1	Aspiration hazard.
H304	May be fatal if swallowed and enters airways.

Explanations of the abbreviations and acronyms used in the Material Safety Data Sheet:

CAS no – numerical symbol ascribed to a chemical substance by the American organization Chemical Abstracts Service (CAS).

EC no – a number ascribed to a chemical substance in the European List of Notified Chemical Substances (ELINCS), or a number in the European Inventory of Existing Chemical Substances mentioned in "No-longer polymers" publication (EINECS)

MPC – maximum permissible concentration of health hazardous substances in the work place.

MPIC – maximum permissible instantaneous concentration.

MPCC – maximum permissible ceiling concentration.

PCB – permissible concentration in biological material

UN number – four-digit identification number of a substance, preparation or product pursuant to UN model regulations

Classification based on calculation method according to classification rules included in Regulation 1272/2008/EC.

Other data sources:

ECHA European Chemicals Agency

TOXNET Toxicology Data Network

Changes: General update.

Number of Material Safety Data Sheet: 0P1L0318V3.