Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

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1 Identification

· **1.1 Product identifier**

· **Trade name: SILIKAL® RU 368**

· **Article number:** RU 368
· **Application of the substance / the preparation:** Reaction resin

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Silikal GmbH
Ostring 23
D-63533 Mainhausen
Tel.: +49-6182/9235-0
Fax.: +49-6182/9235-40
e-mail: mail@silikal.de

· **Information department:** Environmental protection department
· **1.4 Emergency telephone number:**
Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

2 Hazard(s) identification

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

Flammable Liquids 2	H225 Highly flammable liquid and vapor.
Skin Irritation 2	H315 Causes skin irritation.
Sensitization - Skin 1	H317 May cause an allergic skin reaction.
Carcinogenicity 2	H351 Suspected of causing cancer.
Specific Target Organ Toxicity - Single Exposure 3	H335 May cause respiratory irritation.

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

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
methyl methacrylate
2-ethylhexyl acrylate
N-Hydroxyethyl-N-methyl-p-toluidine
· **Hazard statements**
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 1)

H351 Suspected of causing cancer.
H335 May cause respiratory irritation.

· **Precautionary statements**

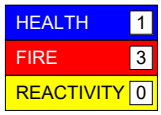
P201 Obtain special instructions before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **3.2 Chemical characterization: Mixtures**

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

· **Dangerous components:**

80-62-6	methyl methacrylate Flammable Liquids 2, H225; Skin Irritation 2, H315; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335	25-50%
103-11-7	2-ethylhexyl acrylate Carcinogenicity 2, H351; Skin Irritation 2, H315; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335; Flammable Liquids 4, H227	10-25%
2842-44-6	N-Hydroxyethyl-N-methyl-p-toluidine Eye Irritation 2A, H319; Sensitization - Skin 1, H317	≤0.5%

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

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 2)

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:**
Do not induce vomiting; immediately call for medical help.
Rinse out mouth and then drink plenty of water.
· **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.

5 Fire-fighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Foam
Sand
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Exothermic polymerization.
In case of fire, the following can be released:
Hydrocarbons
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.
· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources
Use respiratory protective device against the effects of fumes/dust/aerosol.
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.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 3)

· **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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
80-62-6	methyl methacrylate	17 ppm
103-11-7	2-ethylhexyl acrylate	15 ppm
109-16-0	Triethylene glycol dimethacrylate	33 mg/m³

· **PAC-2:**		
80-62-6	methyl methacrylate	120 ppm
103-11-7	2-ethylhexyl acrylate	120 ppm
109-16-0	Triethylene glycol dimethacrylate	360 mg/m³

· **PAC-3:**		
80-62-6	methyl methacrylate	570 ppm
103-11-7	2-ethylhexyl acrylate	150 ppm
109-16-0	Triethylene glycol dimethacrylate	2,100 mg/m³

7 Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

· **Information about protection against explosions and fires:**
Fumes can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Store in cool, dry conditions in well sealed receptacles.
Do not allow to enter sewers/ surface or ground water.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

· **Maximum storage temperature:** 25°C

· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **8.1 Control parameters**

· **Additional information about design of technical systems:** No further data; see section 7.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 4)

· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

80-62-6 methyl methacrylate	
PEL	Long-term value: 410 mg/m³, 100 ppm
REL	Long-term value: 410 mg/m³, 100 ppm
TLV	Short-term value: 100 ppm Long-term value: 50 ppm DSEN, A4

· **Additional information:** The lists that were valid during the creation were used as basis.

· **8.2 Exposure controls**
· **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.
· **Breathing equipment:**
Workplace must be properly ventilated and monitored to maintain air quality below the TLV.
Organic vapour respirators are required only when levels meet or exceed these values. A self contained breathing apparatus is required in confined spaces.
Filter AX or Organic Vapour Cartridge.
· **Recommended filter device for short term use:** Filter A
· **Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation (EN 374)
· **Material of gloves** Butyl rubber, BR
· **Penetration time of glove material**
The exact break through 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 60 minutes (Permeation according to EN 16523-1:2015: Level 3).
· **Eye protection:**


Tightly sealed goggles

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 5)

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	Transparent
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	10 °C (50 °F)
· **Flammability (solid, gaseous):**	Highly flammable.
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	0.8 Vol %
Upper:	12.5 Vol %
· **Vapor pressure:**	Not determined.
· **Density at 20 °C (68 °F):**	0.97-1 g/cm³ (8.09-8.35 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic at 20 °C (68 °F):	85-105 s (ISO 6 mm)
· **9.2 Other information**	No further relevant information available.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 6)

10 Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** Keep away from heat and direct sunlight.
· **10.3 Possibility of hazardous reactions** Exothermic polymerization.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** Reacts with peroxides and other radical forming substances.
· **10.6 Hazardous decomposition products:**
Hydrocarbons
Carbon monoxide and carbon dioxide
· **Additional information:** Do not allow to enter sewers/ surface or ground water.

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **on the skin:**
Causes skin irritation.
· **on the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:**
May cause an allergic skin reaction.
· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
80-62-6	methyl methacrylate	3
103-11-7	2-ethylhexyl acrylate	2B
128-37-0	Butylated hydroxytoluene	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity**
Suspected of causing cancer.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **Specific target organ toxicity - single exposure**
May cause respiratory irritation.
· **Specific target organ toxicity - 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 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 7)

12 Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **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.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (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.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation:**
Must be specially treated adhering to official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:**
Packaging can be reused or recycled after cleaning.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
· **Recommended cleansing agent:** Aceton, Ethylacetat

14 Transport information

· **14.1 UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1866
· **14.2 UN proper shipping name**	
· **DOT**	Resin solution
· **ADR**	1866 RESIN SOLUTION
· **IMDG, IATA**	RESIN SOLUTION

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 8)

· **14.3 Transport hazard class(es)**

· **DOT**

· **Class**	3 Flammable liquids
· **Label**	3

· **ADR, IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3

· **14.4 Packing group**	
· **DOT, ADR, 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**	A
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **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 1866 RESIN SOLUTION, 3, II

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 9)

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15 Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

80-62-6	methyl methacrylate

· **TSCA (Toxic Substances Control Act):**
All components have the value ACTIVE.

· **Hazardous Air Pollutants**

80-62-6	methyl methacrylate

· **Proposition 65**

· **Chemicals known to cause cancer:**

103-11-7	2-ethylhexyl acrylate

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

80-62-6	methyl methacrylate	E, NL

· **TLV (Threshold Limit Value)**

80-62-6	methyl methacrylate	A4

· **MAK (German Maximum Workplace Concentration)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **AGW (German Workplace Threshold Value)**

80-62-6	methyl methacrylate
103-11-7	2-ethylhexyl acrylate

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

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/09/2024 Reviewed on 08/21/2023

Trade name: SILIKAL® RU 368

(Contd. of page 10)

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.

· **Department issuing SDS:** Environmental protection department
· **Date of preparation / last revision** 01/09/2024
· **Abbreviations and acronyms:**
Flammable Liquids 2: Flammable liquids – Category 2
Flammable Liquids 4: Flammable liquids – Category 4
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Sensitization - Skin 1: Skin sensitisation – Category 1
Carcinogenicity 2: Carcinogenicity – Category 2
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3
· *** Data compared to the previous version altered.**