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

· **1.1 Product identifier**

· **Trade name:Protect-proof® MMA 2K**

· **Article number:** RU 320 pig.

· **UFI:** XPJ3-VN43-E80W-V441

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Not suitable for use in do-it-yourself applications.

· **Application of the substance / the preparation:**
Reaction resin
Polyurethane resin

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Protect-proof
Wacholderweg 11
D-26133 Oldenburg
Tel.: +49-441 4087052
Fax.: +49-441 4084383
e-mail: kontakt@protect-proof.de

· **Further information obtainable from:** Environmental Department

· **1.4 Emergency telephone number:**
Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)511-19240

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**
2-ethylhexyl acrylate
methyl methacrylate
tetramethylene dimethacrylate

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N-Hydroxyethyl-N-methyl-p-toluidine

· **Hazard statements**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

· **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.

· **Additional information:**
EUH210 Safety data sheet available on request.
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

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

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SECTION 3: Composition/information on ingredients

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

· **Dangerous components:**		
CAS: 103-11-7 EINECS: 203-080-7 Reg.nr.: 01-2119453158-37	2-ethylhexyl acrylate Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	10-25%
CAS: 80-62-6 EINECS: 201-297-1 Reg.nr.: 01-2119452498-28	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	10-25%
CAS: 2082-81-7 EINECS: 218-218-1 Reg.nr.: 01-2119967415-30	tetramethylene dimethacrylate Skin Sens. 1B, H317	0.5-2.5%
CAS: 8002-74-2 EINECS: 232-315-6 Reg.nr.: 01-2119488076-30	Paraffin waxes and Hydrocarbon waxes substance with a Community workplace exposure limit	0.5-2.5%
CAS: 2842-44-6 EINECS: 220-638-5 Reg.nr.: 01-2120827830-56	N-Hydroxyethyl-N-methyl-p-toluidine Aquatic Chronic 2, H411; Eye Irrit. 2, H319; Skin Sens. 1, H317	≤0.5%

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **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.
Immediately rinse with water.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Foam
Sand
CO2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:**
Water
Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Exothermic polymerisation.
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.

SECTION 6: Accidental release measures

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

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Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into water course or sewage system.
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).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

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

· **Information about fire - and explosion protection:**
Fumes can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

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

· **Storage:**

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

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

· **Further information about storage conditions:**
Store receptacle in a well ventilated area.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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

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

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
80-62-6 methyl methacrylate	
WEL	Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm

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8002-74-2 Paraffin waxes and Hydrocarbon waxes	
WEL	Short-term value: 6 mg/m³ Long-term value: 2 mg/m³

· **DNELs**

80-62-6 methyl methacrylate		
Dermal	DNEL Dermal	13.67 mg/kg/d
Inhalative	DNEL Inhalation	210 mg/m³

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

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Use the indicated respiratory protection if workplace exposure limits are exceeded.
· **Recommended filter device for short term use:** Filter A
· **Hand protection**



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.
· **Eye/face protection**



Tightly sealed goggles

· **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Liquid
· **Colour:**	Different according to colouring
· **Odour:**	Unpleasant
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	100 °C
· **Flammability**	Highly flammable.
· **Lower and upper explosion limit**	
· **Lower:**	0.8 Vol %
· **Upper:**	12.5 Vol %
· **Flash point:**	10 °C
· **Auto-ignition temperature:**	245 °C
· **Decomposition temperature:**	Not determined.
· **pH**	Mixture is non-soluble (in water).
· **Viscosity:**	
· **Kinematic viscosity at 20 °C**	200 s (ISO 6 mm)
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	38.7 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	1.3 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Solvent content:**	
· **Organic solvents:**	0.0 %
· **Solids content:**	35 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

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· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Highly flammable liquid and vapour.
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** Keep away from heat and direct sunlight.
· **10.3 Possibility of hazardous reactions** Exothermic polymerisation.
· **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 product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

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SECTION 11: Toxicological information

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

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· **LD/LC50 values relevant for classification:**		
103-11-7 2-ethylhexyl acrylate		
Oral	LD50	5,660 mg/kg (rat)
Dermal	LD50	8,480 mg/kg (rabbit)
80-62-6 methyl methacrylate		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (kan)
Inhalative	LC50 (4h)	29.8 mg/l (rat)
2082-81-7 tetramethylene dimethacrylate		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rabbit)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Causes skin irritation.
· **Respiratory or skin sensitisation** May cause an allergic skin reaction.
· **STOT-single exposure** May cause respiratory irritation.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**		
128-37-0	Butylated hydroxytoluene	List II

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
103-11-7 2-ethylhexyl acrylate	
EC50 (48h)	17.5 mg/l (Daphnia magna)
LC50 (48h)	23 mg/l (Leuciscus idus)
EC50 (72h)	44 mg/l (Scenedesmus subspicatus od. quadricauda)
EC0 (192h) (dynamic)	44 mg/l (Scenedesmus subspicatus od. quadricauda)
EC50 (0.5h)	>1,000 mg/l (Pseudomonas pudita)
80-62-6 methyl methacrylate	
EC50 (48h)	69 mg/l (Daphnia magna)
EC50 (96h)	170 mg/l (Selenastrum capricornutum)
EC3 (16h)	100 mg/l (Pseudomonas pudita)
NOEC	37 mg/l (Daphnia magna)
NOEC (72h)	>110 mg/l (Selenastrum capricornutum)
LC50 (96h)	>79 mg/l (fish)
2082-81-7 tetramethylene dimethacrylate	
LC50 (48h)	32.5 mg/l (fish)
EC10 (16h)	>1,000 mg/l (Pseudomonas pudita)

· **12.2 Persistence and degradability** No further relevant information available.

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· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
For information on endocrine disrupting properties see section 11.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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SECTION 13: Disposal considerations

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

· **Uncleaned packaging:**
· **Recommendation:**
Packaging may be reused or recycled after cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
· **Recommended cleansing agents:** Acetone, ethylacetate

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SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	UN1866
· **14.2 UN proper shipping name**	
· **ADR**	1866 RESIN SOLUTION
· **IMDG, IATA**	RESIN SOLUTION
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	



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

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· **14.4 Packing group**	
· **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**	B
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1866 RESIN SOLUTION, 3, II

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SECTION 15: Regulatory information

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

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

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· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

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

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Environmental Protection Department
· **Abbreviations and acronyms:**
ATE: Acute toxicity estimate values
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
· *** Data compared to the previous version altered.**