

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date:10/15/2012

Revised on: 10/15/2012

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

■ **Product identifier:**

Key# 9800 FLEXIBLE PUMMA

Application of the substance / the preparation: adhesive

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Key Resin Company
4050 Clough Woods Drive
OH-45103 Batavia /Ohio
Tel.: +1 513 943-4225
Fax.:+1 513 943-4255

Information department:

Mr Eric Borglum, Tel.: +1 513 943-4225 email:
eborglum@keyresin.com

■ **Emergency telephone number:**

Mr. Robert Cain, Tel.: +1 513 943-4225

2 Hazards identification

Hazard information:



Xi Irritant

F Highly flammable

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version

R 11 Highly flammable.

R 37/38 Irritating to respiratory organs and skin.

R 43 Possible sensitising by eye contact.

Label elements



GHS02 Flame

H225 – Fluid and vapour highly flammable.



GHS07

H315 - Causes skin Irritation.

H317 - May cause an allergic skin reaction.

H335 - May cause respiratory irritation.

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. Do not smoke.

P241 Use explosion-proof electric equipment /ventilators/lighting.

Safety phrases:

P303+P361+P353 ON SKIN CONTACT (or with hair): Immediately take off all contaminated, saturated clothes. Rinse/shower skin with water.

P321 Special treatment (see identification label).

Storage: P405 Keep receptacles tightly sealed. **Waste disposal:** P501 Must be specially treated adhering to.

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3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** methyl methacrylate resin

Dangerous components:

CAS: 80-62-6 EINECS: 201-297-1 Index no: 607-035-00-6	methyl methacrylate ☒ Xi, ☑ F; R 11-37/38-43	50-100%
	Danger: ☑ 2.6/2 Attention: ☑ 3.2/2, 3.4.S/1, 3.8/3	
CAS: 38668-48-3 EINECS: 254-075-1	N,N-Bis-(2-hydroxypropyl)-p-toluid'm _B ☒ X ☒ Xi; R 25-41-52/53	< 2,5%
	Danger: 3.1.0/3; 3.3/1 4.1.C/3	

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Take affected persons into fresh air and keep quiet.
Seek medical treatment in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Seek immediate medical advice.
- **Information for doctor:** No particular measures are known - treat according to symptoms.
The following symptoms may appear: headache

5 Firefighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** water.
- **Hazards arising from the substance, its combustion products or gases or mixture:**
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Wear independent breathing gear.
- **Additional information:** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures:

- **Personal precautions:**
Ensure adequate ventilation.
Wear protective clothing.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.

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Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents. Collect in a suitable container and dispose as described in section 13.

- **Zusätzliche Hinweise:** Unfallstelle sorgfältig säubern.

7 Handling and storage

Handling:**Precautions for safe handling:**

Keep receptacles tightly sealed.

Store in cool, dry place in tightly closed receptacles.

Ensure good interior ventilation, especially at floor level. (vapours are heavier than air).

- **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Vapours can combine with air to form an explosive mixture.

Flammable gas-air mixtures may be formed in empty receptacles.

Storage:**Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Keep containers securely closed and dry, store at 5 - 25°C.

Store only in the original receptacle. Provide floor trough without outlet.

- **Information about storage in one common storage facility:** Store away from oxidizing agents.

- **Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Store only outside or in explosion proof rooms. **Storage class: 3**

- **Classification:** Highly flammable

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Components with limit values that require monitoring at the workplace:

80-62-6 methyl methacrylate (50-100%)

AGW (Germany)	210 mg/m ³ , 50 ml/m ³
	2(I);DFG, Y

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

Personal protective equipment:**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Do not inhale gases/vapours/aerosols.

Avoid contact with the eyes and skin. Store protective clothing separately. Immediately remove all soiled and contaminated clothing.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.

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Recommended filter device for short term use:

Filter AX

Protection of hands: Only use chemical-protective gloves with CE-labelling of category III

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.

Material of gloves: Butyl rubber, BR; Nitrile rubber, NBR

Recommended thickness of the material: > 0.5 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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. Value for permeation: Level > 3

■ **As splash guard, gloves of the following material are suitable:** PVC gloves.

Not suitable are gloves made of the following materials: Leather gloves. Strong gloves.

Eye protection: Tightly sealed goggles.**Body protection:** Protective work clothing.

9 Physical and chemical properties

■ General Information

Form:	liquid purple
Color:	clear
Odor:	characteristical

■ Change in condition

Melting point/Melting range	Undetermined
Boiling point/Boiling range:	>100°C(212°F)

■ **Flash point:** 10°C (50 °F)

■ **Ignition temperature:** 245°C (473°F)

Auto igniting: Product is not selfigniting.

■ **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures is possible.

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■ Explosion limits:	
lower:	0.8 Vol%
upper:	12.5 Vol %
Vapor pressure at 25°C (77 °F) 47hPa	
Density at 20°C (68 °F):	1 g/cm3
• Solubility in/miscibility with water:	Not or little miscible
Viscosity: kinematic at 23°C (73 °F):	43 s(DIN 53211/6)

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Substances to be avoided:

Acids

strong oxidizing agents

Dangerous reactions

Violent reactions with strong alkali and oxidizing agents.

Reaction with ktion mit amines.

Hazardous decomposition products:

the event of fire:

toxic gases and vapours

flammable gases/vapours

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

80-62-6 methyl methacrylate

Oral	LD50	> 5000mg/kg (rat)
Dermal	LD50	> 5000mg/kg (rab)
Inhalativ	LC50/4 h	7093 mg/l (rat)

38668-48-3 N,N-Bis-(2-hydroxypropyl)-p-toluidin

Oral	LD50	100 mg/kg (rat)
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Primary irritant effect:

on the skin: Irritant to skin and mucous membranes

on the eye: no irritation

Sensitization: Sensitization possible through skin contact

Additional toxicological Information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Irritating

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12 Ecological information

■ **Ecotoxic effects:**

Acquatic toxicity:

80-62-6 methyl methacrylate

BSB5-value	0.14 g/g(-)
ECO EC3	100 mg/l (<i>Pseudomonas putida</i>)
EC50	(192h) 37 mg/l (<i>Scenedesmus quadricauda</i>)
LC50 LC50	(96h) 170 mg/l (<i>Selenastrum capricornutum</i>)
(96h)	(48h) 69 mg/l (<i>daphnia</i>)
	350 mg/l (<i>Leuciscus idus</i>)
	> 79 mg/l (<i>Onchorhynchus mykiss</i>)
	232 mg/l (<i>Lepomis macrochirus</i> (Sonnenbarsch))
	277 mg/l (Goldfish)

38668-48-3 N,N-Bis-(2-hydroxypropyl)-p-toluidin

BSB-5	11 mg02/g(-)
CSB	2360 mg 02/g (-)
EC50	(48h) 28.8 mg/l (<i>Daphnia magna</i>)

Further ecological information:

■ **General informstion:** water hazard class 2 (self-rating): hazardous to water
Do not allow product to reach ground water, water course or sewage system.

13 Disposal information

Product:

Suggestion:

Must be specially treated adhering to official regulations.

Uncleaned packagings:

Suggestion: Disposal must be made according to official regulations.

14 Transport information

Transport hazard classes:



Class label:	3 (F1) Flammable liquids
Danger code (Kemler):	33
UN-number:	1993
Packing group:	II
Hazard label	3

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UN proper shipping name: 1993 FLAMMABLE LIQUID, N.O.S.
(METHYL METHACRYLATE, MONOMER, STABILISED)

Limited quantity (LQ) LQ4

Transport category 2

Sea transport IMDG/GGVSee:



IMDG/GG VSea-class : 3

UN-Number: 1993

Label 3

Packing group: II

EMS-Number: F-ES-E

Marine pollutant: NO

UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER STABILIZED)

Air transport ICAO-TI and IA TA-DGR:



ICAO/IATA-class: 3

UN/ID-Number: 1993

Label 3

Packing group: 11

UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED)

15 Regulatory information

Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Material.

Code letter and hazard designation of product:



Xi Irritant

F Highly flammable

Hazard-determining components of labelling:

methyl methacrylate

Risk phrases:

11 Highly flammable.

37/38 Irritating to respiratory system and skin.

43 May cause sensitization by skin contact.

Safety phrases:

16 away from sources of ignition - No smoking.

24 Avoid contact with skin.

28 After contact with skin, wash immediately with plenty of soap and water

33 Take precautionary measures against static discharges.

3 7 Wear suitable gloves.

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60 This material and its container must be disposed of as hazardous waste.

National regulations:

VOC USA % 0.1 g/l / 0.00 lb/gl

Water hazard class: WGK2 (Self-assessment): hazardous for water.

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**

11 Highly flammable.

25 Toxic if swallowed.

37/38 Irritating to respiratory system and skin.

41 May cause serious eye damage.

43 May cause sensitization by skin contact.

52/53 Harmful to water organisms, may have long-term harmful effects in waters.

■ **Department issuing MSDS:**

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Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International

Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IMDG: International Maritime Code for Dangerous Goods IATA:

International Air Transport Association ICAO: International Civil Aviation Organization ACGIH: American Conference of

Governmental Industrial Hygienists NFPA: National Fire Protection Association (USA)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards,

Denmark) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

· * **Data compared to the previous version altered.**