

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 09/05/2011

Reviewed on 04/24/2010









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

- **Product identifier**
- **Trade name:** **Key# 9540 H Cove paste**
- **Application of the substance / the preparation** Coating
- **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 Composition/information on ingredients

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

· Dangerous components:

CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate	 Xi R37/38-43;  F R11	25-50%
		 H225;  H315;  H317; H335	
CAS: 103-11-7 EINECS: 203-080-7	2-ethylhexyl acrylate	 Xi R37/38-43	10-25%
		 H315;  H317; H335	

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

3 Hazards identification

- **Classification of the substance or mixture**



GHS02 Flame

H225 Highly flammable liquid and vapour.



GHS07


H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H333 May be harmful if inhaled.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

 Xi; Irritant

R37/38-43: Irritating to respiratory system and skin. May cause sensitization by skin contact.



F; Highly flammable

R11: 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.

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· **Label elements**

· **Labelling according to EU guidelines:**

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

· **Code letter and hazard designation of product:**



Xi Irritant
F Highly flammable

· **Hazard-determining components of labelling:**

methyl methacrylate
2-ethylhexyl acrylate

· **Risk phrases:**

11 Highly flammable.
37/38 Irritating to respiratory system and skin.
43 May cause sensitization by skin contact.

· **Safety phrases:**

9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes
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.
37 Wear suitable gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
60 This material and its container must be disposed of as hazardous waste.

· **Classification system**

· **NFPA ratings (scale 0-4)**



Health = 1
Fire = 3
Reactivity = 0

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.

5 Firefighting measures

- **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents** Water.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Wear self-contained respiratory protective device.

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· **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Wear protective clothing.

· **Environmental precautions:**

Prevent seepage into sewage system, workpits and cellars.

Do not allow to penetrate the ground/soil.

· **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

· **Reference to other sections** Clean the accident area carefully.

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. (Fumes are heavier than air).

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

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Fumes 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.

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

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 (25-50%)

PEL 410 mg/m³, 100 ppm

REL 410 mg/m³, 100 ppm

TLV Short-term value: 410 mg/m³, 100 ppm

Long-term value: 205 mg/m³, 50 ppm

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

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- **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 / fumes / aerosols.
Avoid contact with the eyes and skin.
Store protective clothing separately.
Immediately remove all soiled and contaminated clothing
- **Breathing equipment:** *Not necessary if room is well-ventilated.*
- **Recommended filter device for short term use:**



Combination filter A-P2

- **Protection of hands:**



Plastic gloves

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 the permeation: Level ≥ 3

- **As protection from splashes gloves made of the following materials 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**

- **Appearance:**

Form: Fluid

Color: Blue

- **Odor:** Characteristic

- **Change in condition**

Melting point/Melting range: undetermined

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Boiling point/Boiling range:	101°C (214 °F)
· Flash point:	16°C (61 °F) (DIN 53213)
· 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 are possible.
· Explosion limits:	
Lower:	0.8 Vol %
Upper:	12.5 Vol %
· Vapor pressure at 25°C (77 °F):	47 hPa (35 mm Hg)
· Density:	Not determined
· Solubility in / Miscibility with Water at 20°C (68 °F):	max 16 g/l
· Other information	No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:**
 - acids
 - strong oxidizing agents
- **Hazardous decomposition products:**
 - in the event of fire:
 - toxic gases and vapours
 - Flammable gases/vapors

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

80-62-6 methyl methacrylate

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

103-11-7 2-ethylhexyl acrylate

Oral	LD50	4435 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rab)
Inhalative	LC50/4 h	600 mg/l (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** No irritating effect.
- **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:

Irritant

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12 Ecological information

· **Acquatic toxicity:**

80-62-6 methyl methacrylate

BSB5-Wert	0.14 g/g (-)
EC0	100 mg/l (<i>Pseudomonas putida</i>)
EC3	(192h) 37 mg/l (<i>Scenedesmus quadricauda</i>)
EC50	(96h) 170 mg/l (<i>Selenastrum capricornutum</i>) (48h) 69 mg/l (<i>daphnia</i>)
LC50	350 mg/l (<i>Leuciscus idus</i>)
LC50 (96h)	>79 mg/l (<i>Onchorhynchus mykiss</i>) 232 mg/l (<i>Lepomis macrochirus (bluegill)</i>) 277 mg/l (<i>Carassius auratus (Goldfisch)</i>)

103-11-7 2-ethylhexyl acrylate

EC0	(192h) 0.06 mg/l (<i>Microcystis aeruginosa</i>)
EC50	(48h) 17.5 mg/l (<i>daphnia</i>) (0.5h) > 1000 mg/l (<i>Pseudomonas putida</i>)
EC50 (72h)	44 mg/l (<i>Scenedesmus subspicatus</i>)
LC50	(48h) 23 mg/l (<i>Leuciscus idus</i>)

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

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Ecotoxicological effects:** Not determined

· **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.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation** Must be specially treated adhering to official regulations.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT**

UN1866

· **ADR, IMDG, IATA**

1866

· **UN proper shipping name**

· **DOT, IMDG, IATA**

RESIN SOLUTION

· **ADR**

1866 RESIN SOLUTION

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· **Transport hazard class(es)**· **DOT, IMDG, IATA**

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

· **ADR**

· **Class** 3 (F1) Flammable liquids
· **Label** 3

· **Packing group**· **DOT, ADR, IMDG, IATA** II· **Environmental hazards:**· **Marine pollutant:** No· **Special precautions for user** Warning: Flammable liquids· **Danger code (Kemler):** 33· **EMS Number:** F-E,S-E

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **UN "Model Regulation":** UN1866, RESIN SOLUTION, 3, II

15 Regulatory information

· **Carcinogenity categories**· **EPA (Environmental Protection Agency)**

80-62-6	methyl methacrylate	E;NL
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· **IARC (International Agency for Research on Cancer)**

80-62-6	methyl methacrylate	3
103-11-7	2-ethylhexyl acrylate	3
128-37-0	2,6-di-tert-butyl-p-cresol	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

80-62-6	methyl methacrylate	A4
128-37-0	2,6-di-tert-butyl-p-cresol	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.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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· **Markings according to EU guidelines:**

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

· **Code letter and hazard designation of product:**



Xi Irritant
F Highly flammable

· **Hazard-determining components of labelling:**

methyl methacrylate
2-ethylhexyl acrylate

· **Risk phrases:**

11 Highly flammable.
37/38 Irritating to respiratory system and skin.
43 May cause sensitization by skin contact.

· **Safety phrases:**

9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes
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.
37 Wear suitable gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
60 This material and its container must be disposed of as hazardous waste.

· **National regulations**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Sara**

· **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

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

80-62-6 methyl methacrylate

· **TSCA (Toxic Substances Control Act):**

80-62-6	methyl methacrylate
103-11-7	2-ethylhexyl acrylate
2082-81-7	1,4-Butandioldimethacrylat
23077-12-1	??
31570-04-4	Tris(2,4-di-tert-butylphenyl)phosphit
2440-22-4	2-(2H-Benotriazol-2-yl)-p-kresol

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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.

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H335 May cause respiratory irritation.

R11 Highly flammable.

R37/38 Irritating to respiratory system and skin.

R43 May cause sensitization by skin contact.

• **Department issuing MSDS:**

IGG-AD Ingenieurbüro für Gefahrstoff- und Gefahrgutberatung

Bismarckstraße 10

D-68623 Lampertheim

Fax: 0049-(0)6206-58422 <http://www.igg-ad.de> info@igg-ad.de

• **Contact:**

Dr. U. Prinz (u.prinz@igg-ad.de)

Dipl.-Chem. H. Hinse (heidrun.hinse@igg-ad.de)

• **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.**

USA