



Safety Data Sheet

HARDENER R

Catalyst for Silicone Putty

Revision date: March 3, 2017

Section 1 – Chemical Product and Company Identification

Product

Name: HARDENER R

Application: Catalyst for silicone putty

Distributor:

American Cap Company, LLC

15 Church Street

Wheatland, PA 16161

Phone: (724) 981-4461

Phone: (800) 448-0501

Fax: (724) 981-4495

Email: sales@americap-mfg.com

Website: www.americap-mfg.com

Section 2 – Hazard(s) Identification

Classification of the substance

or mixture:

Indications of danger: Toxic

R-phrases:

Flammable.

Toxic by inhalation.

Irritating to eyes and skin.

Harmful: Danger of serious damage to health by prolonged exposure if swallowed.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

May impair fertility.

May cause harm to the unborn child.

Possible risks of irreversible effects.

Label elements: *Hazardous components which must be listed on the label:*
Tetra methyl ortho silicate
ethyl silicate, tetraethyl silicate
ethyl acetate

R phrases:

10 Flammable.
23 Toxic by inhalation.
36/38 Irritating to eyes and skin.
48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
60 May impair fertility.
61 May cause harm to the unborn child.
68 Possible risks of irreversible effects.

S phrases:

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
53 Avoid exposure - obtain special instructions before use.
Product is classified and labelled in accordance with EC regulations or the corresponding national laws.

Additional advice on labeling:

Toxic for reproduction Cat.2
Mutagenic Cat. 3
Possible harmful physico-chemical effects:
Flammable liquid substances

Other hazards:

Accumulation in closed or lower lying rooms signifies heightened risk of fire or explosion.

Section 3 – Composition / Information on Ingredients

Chemical characterization: Mixture of polydimethylsiloxanes, inert mineral fillers and organotin compounds.

Hazardous components:

EC No., CAS No., Chemical name, Classification, Quantity
201-083-8, 78-10-4, ethyl silicate, tetraethyl silicate Xn,
Xi R10-20-36/37 < 10 %
211-656-4, 681-84-5, Tetra methyl ortho silicate, T+ R10-26-37/38-41, < 5 %
205-500-4, 141-78-6 F, Ethyl Acetate, Xi R11-36-66-67, < 2 %
Full text of R- and H-phrases: see section 16.

Section 4 – First Aid Measures

Description of first aid measures

General information:	Change contaminated clothing.
After inhalation:	Move victim out of danger zone. In case of inhalation of decomposition products, take the affected person into the fresh air and sit him quietly. Immediately get medical attention.
After contact with skin:	Take off immediately all contaminated clothing, including underwear and shoes. After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.
After contact with eyes:	In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of troubles or persistent symptoms, consult an ophthalmologist. Do not induce vomiting.
After ingestion:	Rinse mouth thoroughly with water. Medical treatment necessary.
Most important symptoms and effects, both acute and delayed:	No further data.
Indication of any immediate medical attention and special treatment needed:	No specific information.

Section 5 – Fire Fighting Measures

Extinguishing media

Suitable extinguishing media: Foam. Extinguishing powder. Carbon dioxide (CO₂).
Water spray.

Extinguishing media which must not be used for safety reasons: High power water jet.

Special hazards arising from the substance or mixture: Flammable liquids, Release of poisonous, highly flammable gases, which increase the risk of fire/explosion.

Advice for firefighters: Use water spray/stream to protect personnel and to cool endangered containers. Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

Additional information: None

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Wear personal protection equipment. Use appropriate Respiratory protection. Wear suitable gloves and Eye/face protection.

Environmental precautions: Do not empty into drains or the aquatic environment. No specific information.

Methods and material for containment and cleaning up: Collect up the product and place in a spare container suitably labelled. Absorb with dry sand or dry inert absorbent. Decontaminate with a self-emulsifying solvent and wash with plenty of water. Incinerate contaminated materials at an authorized installation.

Section 7 – Handling and Storage

Precautions for safe handling

Advice on safe handling: If suction of the immediate vicinity is impossible or insufficient, the entire working place must be sufficiently ventilated using appropriate machines.

Advice on protection against fire and explosion:	See attached safety data sheets and/or usage instructions.
Further information on handling:	Avoid contact with moisture/humidity.
Conditions for safe storage, including any incompatibilities Requirements for storage rooms and vessels:	Keep container tightly closed in a cool, well-ventilated place. Protect from moisture.
Suitable material for container:	Plastic materials (polyethylene, polypropylene) - coated steel (epoxy internal plated).
Advice on storage compatibility:	Information about storage in one common storage facility.
Unsuitable materials for container:	Oxidizing agents, strong.
Further information on storage conditions:	Do not store close to incompatible substances.

Section 8 – Exposure Controls / Personal Protection

Control parameters

Additional advice on limit values:

Exposure limit values: (U.S.A / A.C.G.I.H.): TLV (TWA): 0,1mg/m³ - TLV (STEL): 0,2mg/m³

Exposure controls
Occupational exposure controls:

Refer to chapter 7. No further action is necessary.

Protective and hygiene measures:

The usual precautionary measures are to be adhered to when handling chemicals. Wash hands before breaks and at the end of work. When using do not eat, drink or smoke.

Respiratory protection:	If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. Respiratory Device (if insufficient ventilation occur).
Hand protection:	Protective gloves PVC (Polyvinyl chloride).
Eye protection:	Goggles.
Skin protection:	Common occupational protective clothing.

Section 9 – Physical and Chemical Properties

Information on basic physical and chemical properties:

Physical state:	Paste
Color:	Red
Odor:	Mint
pH-Value:	Liquid on inert carrier material
Melting point:	Not determined
Boiling point:	Not determined
Softening point:	Not determined
Flash point:	21 °C ASTM D 56
Flammability:	Not applicable
Solid:	Not determined
Explosive properties	
Lower explosion limits	Not applicable
Upper explosion limits	Not applicable
Ignition temperature:	Not determined
Auto-ignition temperature:	Oxidizing: Concentration of inorganic, oxidizing substances < 15 weight percentage (UN class 5.1, pack group I / II).
Vapor pressure:	Not determined
Density:	0.98 g/cm ³
Water solubility:	Practically insoluble
Solubility in other solvents:	Hydrocarbons, aromatic. hydrocarbons, aliphatic.
Viscosity / dynamic:	Not determined
Vapor density:	Not determined
Evaporation rate:	Not determined

Section 10 – Chemical Stability & Reactivity Information

Reactivity:	No data available.
Chemical stability:	No information available.
Possibility of hazardous reactions:	Reacts slowly with water, releasing.
Conditions to avoid:	No special precautionary measures.
Incompatible materials:	Oxidizing agents, strong.
Hazardous decomposition products:	Flammable vapors which may generate fire or explosion hazards. Formation of: Ethanol. Methanol.
Further information:	Stable at standard application conditions.

Section 11 – Toxicological Information

Information on toxicological effects

Acute toxicity:	Toxic by inhalation. LD50: (Rat.) > 2.000 mg/kg
Specific effects in Experiment on animals:	No data available.
Irritation and corrosivity:	May cause irritation to skin and digestive tract.
Sensitizing effects:	Not classified as sensitizing after skin contact.
Severe effects after repeated or prolonged exposure:	Harmful: danger of serious damage to health by prolonged exposure if swallowed. Possible risks of irreversible effects.
Carcinogenic/mutagenic/toxic effects for reproduction:	May cause harm to the unborn child.
Additional information on tests:	None

Empirical data on effects on humans: No special references.
No special precautionary measures.

Section 12 – Ecological Information

Toxicity: Aqua toxicity. Toxic to aquatic organisms.

Persistence and degradability: Secondary biodegradability through aerobians.
Product is not easily biodegradable.

Bio-accumulative potential: Distribution coefficient (n-octanol / water) (log P O/W):
Not applicable.

Mobility in soil: Behavior in environmental compartments.
Environmental compartment, in which the product is finally dispersed: Soil and air.

Other adverse effects: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information: Do not empty into drains or the aquatic environment.

Section 13 – Disposal Considerations

Waste treatment methods

Advice on disposal: Hand over to officially registered waste disposal company.
Do not discharge waste into drains.

Contaminated packaging: Waste disposal according to official state regulations.
Carry out a burning of hazardous waste according to official regulations.

Section 14 – Transportation Information

Land transport (ADR/RID)

UN number: 1992
UN proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3+6.1

Classification code: FT1
Limited quantity: LQ0
Hazard-no.: 336
Other applicable information (land transport): Special regulations: 274 330 601 640E
Transport Category: 3
Tunnel Restriction Code: E
Transport Category: 2
Tunnel Restriction Code: D1E

Inland waterways transport

UN number: 1992
UN proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3+6.1
Classification code: FT1
Limited quantity: LQ0
Other applicable information (inland waterways transport): Special regulations: 274 330 601 640E
Special regulations: 274 802

Marine transport

UN number: 1992
UN proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3+6.1
Marine pollutant: •
Limited quantity: 1 L
EmS: F-E, S-D
Other applicable information (marine transport): Special regulations: 274 330 601 640E
Special regulations: 274 802

Air transport:

UN number: 1992
UN proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3+6.1
Limited quantity Passenger: 1 L
IATA-packing instructions – Passenger: 305

IATA-max. quantity –
Passenger: 1 L
IATA-packing instructions –
Cargo: 307
IATA-max. quantity – Cargo: 60 L
Other applicable
information (air transport): Passenger-LQ: Y309
Passenger-LQ: Y305

Section 15 – Regulatory Information

Safety, health and environmental
regulations/legislation specific for
the substance or mixture

EU regulatory information

1999/13/EC (VOC): None

Additional information: Only the most important legal regulations for the product described in the safety data sheet are specified in this section. The user is advised that there might be additional legal regulations. It is recommended to read up on all relevant international, national and local regulations.

National regulatory
information

Employment restrictions: Observe employment restrictions for child bearing and nursing mothers.

Water contaminating
class (D): 1 - slightly water contaminating

Additional information: No further data.
Ordinance on Industrial Safety and Health (BetrSichV).

Chemical safety
assessment: Chemical safety assessments for substances in this mixture were not carried out.

Section 16 – Other Information

Full text of R-phrases referred to under sections 2 and 3:

- 10 Flammable.
- 11 Highly flammable.
- 20 Harmful by inhalation.
- 23 Toxic by inhalation.
- 26 Very toxic by inhalation.
- 36 Irritating to eyes.
- 36/37 Irritating to eyes and respiratory system.
- 36/38 Irritating to eyes and skin.
- 37/38 Irritating to respiratory system and skin.
- 41 Risk of serious damage to eyes.
- 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 60 May impair fertility.
- 61 May cause harm to the unborn child.
- 66 Repeated exposure may cause skin dryness or cracking.
- 67 Vapors may cause drowsiness and dizziness.
- 68 Possible risks of irreversible effects.

Full text of H-Statements referred to under sections 2 and 3:

- H225 Highly flammable liquid and vapor.
- H226 Flammable liquid and vapor.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.

Disclaimer:

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