

Safety Data Sheet
acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

1 Identification

- **Product identifier**
- **Trade name:** MP54270, MP54270BK (Resin)
- **Relevant identified uses of the substance or mixture.** Adhesive
- **Application of the substance / the mixture** Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Adhesive Systems, Inc.
A Division of Royal Adhesives & Sealants, LLC
9411 Corsair Road
Frankfort, Illinois 60423
Phone Number: 800-552-0299
- **Information department:** Environment protection department.
- **Emergency telephone number:**
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**



- **Skin Irrit. 2 H315** Causes skin irritation.
- **Eye Irrit. 2A H319** Causes serious eye irritation.
- **Skin Sens. 1 H317** May cause an allergic skin reaction.
- **STOT SE 3 H335** May cause respiratory irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** Warning
- **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 1)

Contaminated work clothing must not be allowed out of the workplace.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

Wash contaminated clothing before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

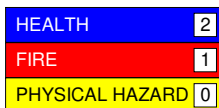


Health = 2

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 1

Physical Hazard = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Adhesive

· **Hazardous components:**

25068-38-6	Bisphenol A Epoxy Resin	50-100%
------------	-------------------------	---------

* 4 First-aid measures

· **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.

If skin becomes irritated seek medical attention.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting. Obtain medical advice.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
- **Protective equipment:** Protective clothing and respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste in accordance with federal state and local regulations.
Ensure adequate ventilation.
- **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:**

25068-38-6	Bisphenol A Epoxy Resin	90 mg/m ³
------------	-------------------------	----------------------

· **PAC-2:**

25068-38-6	Bisphenol A Epoxy Resin	990 mg/m ³
------------	-------------------------	-----------------------

· **PAC-3:**

25068-38-6	Bisphenol A Epoxy Resin	5,900 mg/m ³
------------	-------------------------	-------------------------

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location away from direct heat.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 3)

- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment (see listings below)**
- **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.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**
Nitrile rubber, NBR
Chloroprene rubber, CR
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.
- **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 protection:**
Safety glasses with side shields.



Tightly sealed goggles

- **Body protection:** Protective work clothing

* 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Pale yellow
Odor:	Characteristic

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 4)

· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point:	Undetermined.
· Boiling point:	
· Flash point:	>200 °C (>392 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	Not determined
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Flammable limits:	
Lower:	Not determined
Upper:	Not determined
· Vapor pressure:	Not determined.
· Specific gravity at 20 °C (68 °F):	1.17 g/cm ³ (9.764 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Slightly soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	Not available
· Other information	No further relevant information available.

* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Avoid high temperatures. Avoid freezing.
- **Incompatible materials:** Reacts with oxidizing agents.
- **Hazardous decomposition products:**
 - Carbon monoxide
 - Carbon dioxide
 - Aldehydes
 - Acids

USA

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 5)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Skin Contact - Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.
- **NTP (National Toxicology Program)**
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:** At present there are no ecotoxicological assessments.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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** not regulated

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS


Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 6)

· IMDG, IATA	UN3082
· UN proper shipping name · DOT · IMDG · IATA	not regulated ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol A Epoxy Resin), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol A Epoxy Resin)
· Transport hazard class(es) · DOT · Class	not regulated
· IMDG, IATA	
	
· Class · Label	9 Miscellaneous dangerous substances and articles 9
· Packing group · DOT · IMDG, IATA	not regulated III
· Environmental hazards: · Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
· Special precautions for user · EMS Number: · Stowage Category	Warning: Miscellaneous dangerous substances and articles F-A,S-F A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	The above DOT information applies to non-bulk containers. Not regulated by D.O.T. if in a container of 119 gallon capacity or less.
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (BISPHENOL A EPOXY RESIN), 9, III

15 Regulatory information

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

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

(Contd. on page 8)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 7)

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

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **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.

· **(DSL) Canada Domestic Substance List**

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **New Jersey Right-to-Know List:**

None of the ingredients is listed.

· **New Jersey Special Hazardous Substance List:**

None of the ingredients is listed.

· **Pennsylvania Right-to-Know List:**

None of the ingredients is listed.

· **Pennsylvania Special Hazardous Substance List:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients listed.

· **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.

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

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

16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:** Environment protection department.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Resin)

(Contd. of page 8)

· **Creation Date:** 01/25/2017

· **Date of preparation / last revision** 01/25/2017 / -

· **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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

USA

Safety Data Sheet
acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

1 Identification

- **Product identifier**
- **Trade name:** MP54270, MP54270BK (Hardener, Catalyst)
- **Relevant identified uses of the substance or mixture.** Hardener
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Adhesive Systems, Inc.
A Division of Royal Adhesives & Sealants, LLC
9411 Corsair Road
Frankfort, Illinois 60423
Phone Number: 800-552-0299
- **Information department:** Environment protection department.
- **Emergency telephone number:**
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 1)

· **Hazard pictograms**



GHS05 GHS06 GHS08

· **Signal word** *Danger*

· **Hazard statements**

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

Do not breathe dusts or mists.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Take off immediately all contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 4

Fire = 1

Physical Hazard = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

USA

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 2)

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description: Mixture**

- **Hazardous components:**

84852-15-3	4-nonylphenol, branched	25-50%
6864-37-5	2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)	25-50%
100-51-6	Benzyl alcohol	5-20%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Remove to fresh air. If not breathing, administer artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
Call a doctor immediately.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin becomes irritated seek medical attention.
- **After eye contact:** Rinse opened eye for 20 minutes under running water. Call a Doctor immediately.
- **After swallowing:**
Rinse mouth with water.
Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
- **Protective equipment:** Protective clothing and respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

(Contd. on page 4)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 3)

- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste in accordance with federal state and local regulations.
Ensure adequate ventilation.
- **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:**

84852-15-3	4-nonylphenol, branched	3.9 mg/m ³
6864-37-5	2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)	0.28 mg/m ³
100-51-6	Benzyl alcohol	30 ppm

· **PAC-2:**

84852-15-3	4-nonylphenol, branched	43 mg/m ³
6864-37-5	2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)	3.1 mg/m ³
100-51-6	Benzyl alcohol	52 ppm

· **PAC-3:**

84852-15-3	4-nonylphenol, branched	260 mg/m ³
6864-37-5	2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)	19 mg/m ³
100-51-6	Benzyl alcohol	740 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep container closed when not in use.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location away from direct heat.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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.
- **Control parameters**
- **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.

100-51-6 Benzyl alcohol

WEEL Long-term value: 10 ppm

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 4)

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

· **Exposure controls**

· **Personal protective equipment (see listings below)**

· **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.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

Nitrile rubber, NBR

Chloroprene rubber, CR

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.

· **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 protection:**



Tightly sealed goggles

Use full face shield over protective eye wear when there is a risk of a splash.

· **Body protection:**

Protective work clothing

Apron

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Light Amber

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point: Undetermined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 5)

Boiling point:	204 °C (399 °F)
· Flash point:	>116 °C (>241 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	275 °C (527 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Flammable limits:	
Lower:	0.5 Vol %
Upper:	13.0 Vol %
· Vapor pressure at 20 °C (68 °F):	0.1 hPa
· Specific gravity at 20 °C (68 °F):	1 g/cm ³ (8.345 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Slightly soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	15.0 %
VOC (Per EPA 24)	= <1.0% GMS/L
· Solids content:	Not available
· Other information	No further relevant information available.

* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Avoid high temperatures. Avoid freezing.
- **Incompatible materials:**
 - Reacts with oxidizing agents.
 - Reacts with epoxies
 - Reacts with acids.
- **Hazardous decomposition products:**
 - Carbon monoxide
 - Carbon dioxide
 - Ammonia

USA

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 6)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

6864-37-5 2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)

Oral	LD50	320-460 mg/kg (rat)
Dermal	LD50	200-400 mg/kg (rabbit)
Inhalative	LC50/4 h	0.42 mg/l (rat)

100-51-6 Benzyl alcohol

Oral	LD50	1230 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)

- **Primary irritant effect:**

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:**

Causes serious eye damage

Vapors may be severely irritating to the eyes.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

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

- **Behavior in environmental systems:**

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

- **Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** Very toxic for fish

- **Additional ecological information:**

- **General notes:** At present there are no ecotoxicological assessments.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 7)

- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

* 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

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	UN2922
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG · IATA 	<p>Corrosive liquids, toxic, n.o.s. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine), 4-nonylphenol, branched)</p> <p>CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine), 4-nonylphenol, branched), MARINE POLLUTANT</p> <p>CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine), 4-nonylphenol, branched)</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<p>8 Corrosive substances</p> <p>8, 6.1</p>
<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances</p> <p>8, 6.1</p>
<ul style="list-style-type: none"> · IMDG 	<p>8 Corrosive substances</p> <p>8/6.1</p>
<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances</p> <p>8/6.1</p>
<ul style="list-style-type: none"> · IATA 	<p>8 Corrosive substances</p> <p>8 (6.1)</p>
<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances</p> <p>8 (6.1)</p>
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<p>III</p>

(Contd. on page 9)

-USA-

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 8)

· Environmental hazards:	
· Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Corrosive substances
· EMS Number:	F-A,S-B
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	The above DOT information applies to non-bulk containers. Not regulated by D.O.T. if in a container of 119 gallon capacity or less.
· DOT	
· Remarks:	Special marking with the symbol (fish and tree).
· UN "Model Regulation":	UN 2922 CORROSIVE LIQUIDS, TOXIC, N.O.S. (2,2'-DIMETHYL-4,4'METHYLENEBIS(CYCLOHEXYLAMINE), 4-NONYLPHENOL, BRANCHED), 8 (6.1), III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

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

None of the ingredients is listed.

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

84852-15-3 | 4-nonylphenol, branched

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

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **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.

· **(DSL) Canada Domestic Substance List**

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **New Jersey Right-to-Know List:**

None of the ingredients is listed.

· **New Jersey Special Hazardous Substance List:**

None of the ingredients is listed.

(Contd. on page 10)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing Date 01/25/2017

Revision Number 1

Revision Date 01/25/2017

Trade name: MP54270, MP54270BK (Hardener, Catalyst)

(Contd. of page 9)

· **Pennsylvania Right-to-Know List:**

100-51-6	Benzyl alcohol
----------	----------------

· **Pennsylvania Special Hazardous Substance List:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients listed.

· **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.

· **National regulations:**

- **Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:** Environment protection department.

· **Creation Date:** 01/25/2017

· **Date of preparation / last revision** 01/25/2017 / -

· **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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Repr. 2: Reproductive toxicity – Category 2