RESIN RESEARCH INC.

S A F E T Y D A T A S H E E T

RESIN RESEARCH EPOXY HARDENERS

SECTION I - IDENTIFICATION

Product Name: **Resin Research Composite Pro Hardener**
Product Code: 311F, 3100S, 3100X
Recomended use: Coatings, adhesives and composites
HMIS ratings: HEALTH 3, FIRE 1 REACTIVITY 0
SDS Number: 116 Date of Prep: **1/31/16**
Resin Research Inc. 4231 S. Fremont ave. Tucson, AZ 85714
Resin Research Inc. 131 Tomahawk Dr #11 Indian Harbor Beach, FL 32937
Ph. 321-223-5276
24-Hr. Emergency Phone: CHEMTEL 800-255-3924 OR 813-248-0585

SECTION 2 -HAZARD(S) IDENTIFICATION

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Acute Tox.	4 (dermal)	Acute toxicity
Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Skin Sens.	1A	Skin sensitization
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word: Danger

Hazard Statement:

H312	Harmful in contact with skin.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P260	Do not breathe dust or mist.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.
Precautionary Statements (Response):	
P310	Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.
Precautionary Statements (Storage):	
P405	Store locked up.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT WT% CAS#

Aliphatic Amines 70-75% (Mixture is a trade secret)

Benzyl Alcohol 20-30% 100-51-6 (Mixture is a trade secret)

SECTION 4 - FIRST AID MEASURES

Description of first aid measures

General advice:

Immediately remove contaminated clothing. If danger of loss of consciousness, place patient in recovery position and transport accordingly. Apply artificial respiration if necessary. First aid personnel should pay attention to their own safety.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:

Wash affected areas thoroughly with soap and water. Remove contaminated clothing. Immediate medical attention required.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Note to physician Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote. Pulmonary adema prophylaxis. Medical monitoring for at least 24 hours.

SECTION 5 - FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
No particular hazards known.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').
Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Containers should be opened carefully in well-ventilated areas to avoid static discharge.
Protection against fire and explosion:
No explosion proofing necessary.

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances. Segregate from isocyanates. Segregate from epoxides.
Suitable materials for containers: Carbon steel (Iron), Stainless steel 1.4401, Stainless steel 1.4301 (V2), High density polyethylene (HDPE), glass, Low density polyethylene (LDPE)
Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Keep tanks under inert gas.
Keep away from sources of ignition - No smoking. Keep container tightly closed and in a cool place.
Storage stability:
Storage duration: 12 Months
From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

No occupational exposure limits known.

Advice on system design:

Provide local exhaust ventilation to control vapors/mists.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

Chemical resistant protective gloves, Suitable materials, polyvinylchloride (Pylox)
Eye protection:
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.
Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.
General safety and hygiene measures:
Eye wash fountains and safety showers must be easily accessible. Avoid inhalation of vapours/mists. Wear protective clothing as necessary to prevent contact.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance: Clear liquid
Odor: Slight ammonia odor
Odor threshold: NA
pH: 11.2
Melting point/freezing point: NA
Boiling Range: 205C
Flash point 150C
Evaporation rate:1.8
Flammability: Product is combustable
Vapor Pressure: .1 @25C
Vapor density: 3.72
Solubility: 1g/25ml water at 17C
Partition coefficient: NA
Auto-ignition temperature: NA
Decomposition Temperature: <400C
Viscosity: 200cps

SECTION 10 - STABILITY AND REACTIVITY

Corrosion to metals: No corrosive effect on metal.
Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.
Formation of flammable gases:
Forms no flammable gases in the presence of water.

SECTION 11: TOXICOLOGY INFORMATION

Acute toxicity
Oral:
Type of value: LD50
Species: rat
Value: 1,030 mg/kg
Inhalation:
No data available.
Dermal:
No data available. The European Union (EU) has classified this substance as 'harmful'.
Irritation / corrosion
Skin:
Species: rabbit
Result: Corrosive.
Eye:
Species: rabbit
Result: Risk of serious damage to eyes.
Method: OECD Guideline 405
Sensitization:

Guinea pig maximization test
No mutagenic effects reported.
Experimental/calculated data:
Micronucleus assay
No mutagenic effects reported.
Aspiration Hazard:
No aspiration hazard expected.
Species: guinea pig
Result: sensitizing
Method: OECD Guideline 406
Genetic toxicity
Experimental/calculated data:
Ames-test

SECTION 12: ECOLOGICAL INFORMATION

Fish
Acute:
Directive 84/449/EEC, C.1 semistatic
Leuciscus idus/LC50 (96 h): 110 mg/l
Nominal values (confirmed by concentration control analytics)
Chronic:
Study scientifically not justified.
Aquatic invertebrates
Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): 23 mg/l
Nominal values (confirmed by concentration control analytics)
semistatic
Chaetogammarus marinus/EC50 (48 h): 388 mg/l
The details of the toxic effect relate to the nominal concentration.
Chronic:
OECD Guideline 202, part 2 semistatic Daphnia magna (NOEC) 21 d 3 mg/l
Nominal values (confirmed by concentration control analytics)
Aquatic plants
Toxicity to aquatic plants:
Directive 88/302/EEC, part C, p. 89 green algae/EC50 (72 h): > 50 mg/l
Nominal concentration.
Microorganisms
Toxicity to microorganisms:
DIN 38412 Part 8 bacterium/EC10 (18 h): 1,120 mg/l
Nominal concentration.
Degradability / Persistence
Biological / Abiological Degradation
Test method: Directive 92/69/EEC, C.4-A (aerobic),
Method of analysis: DOC reduction
Degree of elimination: 8 % (28 d)
Evaluation: Not readily biodegradable (by OECD criteria).
Hydrolysis
Test method: OECD Guideline 111
Half-life: (50 °C)
Bioaccumulation
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected. Literature data.
Environmental mobility:

Transport between environmental compartments:
calculated adsorption/water - soil
KOC: 928
log KOC: 2.97
Other adverse effects:
Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. The inhibition of the degradation activity of activated sludge is not anticipated when introduced
to biological treatment plants in appropriate low concentrations.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal of substance:
Incinerate in a licensed facility. Do not discharge substance/product into sewer system.
Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Amine
UN NUMBER: UN2735
CLASS 8
PKG III
DOT HAZARD CLASS: Corrosive Liquid

DOT

Not Regulated

TDG

Not Regulated

MEX

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

ICAO

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

IATA code

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

IMDG Code

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

RID
UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III
ADR
UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III
ADN
UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

Emergency PH. # (domestic) 800-225-3924 (international)813-248-0585 Chemtel MIS0005050
SARA Title III:
This product contains no toxic chemicals subject to the report requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (EPRCA) and of 40 CFR 372.

SECTION 15: REGULATORY INFORMATION

Federal Regulations
Registration status:
Chemical TSCA, US released / listed
OSHA hazard category: Acute target organ effects reported; Corrosive to skin and/or eyes; Sensitizer
EPCRA 311/312 (Hazard categories): Acute; Chronic

SECTION 16: OTHER INFORMATION

HMIS RATINGS:
Health 3
Fire 1
Physical Hazard 0
Created: 10/11/2005
Last Updated: 6/1/2016

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