



Safety Data Sheet
 prepared to UN GHS Revision 3
KEY Vinyl Ester Binder/Coating
PART A

1. Identification of the Substance/Mixture and the Company/Undertaking

- 1.1 Product Identifier** VEC-A
- Product Name:** KEY Vinyl Ester Binder/Coating PART A **Revision Date:** 02/18/2020
- Supercedes Date:** 05/29/2015
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Component of multicomponent industrial coatings - Industrial use.
- 1.3 Details of the supplier of the safety data sheet**
- Manufacturer:** Key Resin Company
 4050 Clough Woods Dr.
 Batavia, OH 45103
- Phone: 513-943-4225
 888-943-4532
- Datasheet Produced by:** Key Resin Company - EHS
- 1.4 Emergency telephone number:** CHEMTREC 1-800-424-9300 (Inside US)
 CHEMTREC +1 703 527-3887 (Outside US)

2. Hazard Identification

2.1 Classification of the substance or mixture

Carcinogenicity, category 1A
 Eye Irritation, category 2
 Flammable Liquid, category 3
 STOT, single exposure, category 3, RTI
 Skin Irritation, category 2

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

MICA, MICROCRYSTALLINE SILICA

HAZARD STATEMENTS

Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Eye Irritation, category 2	H319	Causes serious eye irritation.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
Carcinogenicity, category 1A	H350-1A	May cause cancer.
	H372	Causes damage to organs through prolonged or repeated exposure.

PRECAUTION PHRASES

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention
P332+313	If skin irritation occurs: Get medical advice/attention.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
100-42-5	STYRENE	25-50
12001-26-2	MICA	10-25
13463-67-7	TITANIUM DIOXIDE	2.5-10
14808-60-7	MICROCRYSTALLINE SILICA	0.1-1.0
1333-86-4	CARBON BLACK	0.1-1.0
121-69-7	DIMETHYLANILINE	<0.1

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
100-42-5	GHS02-GHS07	H226-315-319-332-372	0
12001-26-2	GHS07	H319-335	0
13463-67-7			0
14808-60-7	GHS08	H350-370-372	0
1333-86-4	GHS08	H351	0
121-69-7	GHS06-GHS08-GHS09	H302-312-330-351-411	0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

AFTER SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.

AFTER EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Provide adequate ventilation. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Electrical installations / working materials must comply with the technological safety standards. Wear shoes with conductive soles.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Cool containers / tanks with water spray. Flammable.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

For personal protection see section 8. Ensure adequate ventilation. Evacuate personnel to safe areas. Evacuate personnel to safe areas. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not use sparking tools. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection.

PROTECTION AND HYGIENE MEASURES : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Heat, flames and sparks.

STORAGE CONDITIONS: Inhibitor levels should be maintained. Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

Name	%	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	OEL Note
STYRENE	25-50	20 ppm	40 ppm	100 ppm	200 ppm	
MICA	10-25	3 MGM3	N/E	3 MGM3	N/E	
TITANIUM DIOXIDE	2.5-10	10 MGM3	N/E	10 MGM3	N/E	
MICROCRYSTALLINE SILICA	0.1-1.0	0.025 MG/M3 (respirable)	N/E	0.1 MG/M3 (respirable)	N/E	
CARBON BLACK	0.1-1.0	3.0 MG/M3	N/E	3.5 MG/M3	N/E	
DIMETHYLANILINE	<0.1	5 PPM	10 PPM	25 MGM3	N/E	

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

EYE PROTECTION: Safety glasses with side-shields.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical

breakthrough. Impervious gloves. Request information on glove permeation properties from the glove supplier.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location. Lightweight protective clothing

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Viscous Tan Or Grey Liquid
Physical State	Liquid
Odor	Styrene
Odor threshold	No Information
pH	N/D
Melting point / freezing point (°C)	N/D
Boiling point/range (°C)	176 F (80 C) - 545 F (285 C)
Flash Point, (°C)	23
Evaporation rate	No Information
Flammability (solid, gas)	No Information
Upper/lower flammability or explosive limits	Not determined
Vapour Pressure, mmHg	N/D
Vapour density	No Information
Relative density	No Information
Solubility in / Miscibility with water	N/D
Partition coefficient: n-octanol/water	No Information
Auto-ignition temperature (°C)	No Information
Decomposition temperature (°C)	No Information
Viscosity	Unknown
Explosive properties	No Information
Oxidising properties	No Information

9.2 Other information

VOC Content g/l:	44
Specific Gravity (g/cm³)	1.3

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation may occur.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: N/D

Inhalation LC50: N/D

Irritation: Unknown

Corrosivity: Unknown

Sensitization: Unknown

Repeated dose toxicity: Unknown

Carcinogenicity: Unknown

Mutagenicity: Unknown

Toxicity for reproduction: Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
100-42-5	STYRENE	2650 mg/kg, oral, rat		2800 ppm / 4hr, inh, rat
12001-26-2	MICA	Not Available		Not Available
13463-67-7	TITANIUM DIOXIDE	25000 mg/m ³ , oral (rat)		Not Available
14808-60-7	MICROCRYSTALLINE SILICA	Not Available		Not Available
1333-86-4	CARBON BLACK	8000 mg/kg oral, rat		Not Available
121-69-7	DIMETHYLANILINE	951 mg/kg, oral, rat	1770 mg/kg, dermal, rabbit	250 mg/m ³ , 4 Hr, Inh

Additional Information:

This product contains silica which is classified by IARC as a known human carcinogen (Group 1). Crystalline silica is known to cause silicosis. The classification(s) is/are relevant when exposed to these respirable substances in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

12. Ecological Information

12.1 Toxicity:	
EC50 48hr (Daphnia):	Unknown
IC50 72hr (Algae):	Unknown
LC50 96hr (fish):	Unknown
12.2 Persistence and degradability:	Unknown
12.3 Bioaccumulative potential:	Unknown
12.4 Mobility in soil:	Unknown
12.5 Results of PBT and vPvB assessment:	The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.
12.6 Other adverse effects:	Unknown

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
100-42-5	STYRENE	4.7 mg/l (daphnia)	4.9 mg/l (Green Algae)	4 - 10 mg/l (fathead minnow)
12001-26-2	MICA	No information	No information	No information
13463-67-7	TITANIUM DIOXIDE	No information	No information	No information
14808-60-7	MICROCRYSTALLINE SILICA	No information	No information	No information
1333-86-4	CARBON BLACK	No information	No information	No information
121-69-7	DIMETHYLANILINE	13.7 mg/l (Daphnia magna)	14 mg/l (Algae)	78.2 mg/l (Fathead minnow)

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1 UN number	UN 1866
14.2 UN proper shipping name	Resin Solution
Technical name	N/A
14.3 Transport hazard class(es)	3
Subsidiary shipping hazard	N/A
14.4 Packing group	III
14.5 Environmental hazards	Unknown
14.6 Special precautions for user	Unknown
EmS-No.:	F-E, S-E
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Unknown

15. Regulatory Information

15.1

Safety, health and environmental regulations/legislation for the substance or mixture:**U.S. Federal Regulations: As follows -****CERCLA - Sara Hazard Category**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
STYRENE	100-42-5
DIMETHYLANILINE	121-69-7

Toxic Substances Control Act:

All components of this product are either listed on the TSCA Inventory or are exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

<u>Chemical Name</u>	<u>CAS-No.</u>
DIMETHYLANILINE	121-69-7

U.S. State Regulations: As follows -**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS-No.</u>
VINYL ESTER RESIN	TRADE SECRET
VINYL ESTER RESIN	TRADE SECRET
TITANIUM DIOXIDE	1317-80-2

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS-No.</u>
VINYL ESTER RESIN	TRADE SECRET
VINYL ESTER RESIN	TRADE SECRET
TITANIUM DIOXIDE	1317-80-2

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

<u>Chemical Name</u>	<u>CAS-No.</u>
TITANIUM DIOXIDE	13463-67-7
MICROCRYSTALLINE SILICA	14808-60-7
CARBON BLACK	1333-86-4
BENZENE	71-43-2

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

<u>Chemical Name</u>	<u>CAS-No.</u>
BENZENE	71-43-2

International Regulations: As follows -*** Canadian DSL:**

No Information

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information**Text for GHS Hazard Statements shown in Section 3 describing each ingredient:**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H351	Suspected of causing cancer.
H370	Causes damage to organs.
H411	Toxic to aquatic life with long lasting effects.
H372	Causes damage to organs through prolonged or repeated exposure.

Reasons for revision

No Information

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.