According to 1907/2006/EC, Article 31

Version number 5

Reviewed on 04/12/2016

1: PRODUCT AND COMPANY IDENTIFICATION

Trade name: R500 Sn63Pb37

Application of the substance / the preparation: Dispensing Paste

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Kester Inc. 800 West Thorndale Avenue Itasca, IL 60143 USA Tel (630) 616-4000

ITW Specialty Materials (Suzhou) Co., Ltd. Heng Qiao Road Wujiang Economic Development Zone Suzhou, Jiangsu 215200 China Tel +86 512 82060808

Kester GmbH Ganghofer Strasse 45 D-8216 Gernlinden Germany Tel +49 (0) 8142 4785

Information department:

Product Compliance: EHS_Kester@kester.com **1.4 Emergency telephone number:** CHEMTREC 24-Hour Emergency Response Telephone Number : (800) 424-9300 CHEMTREC 24-Hour Emergency Response (Outside US & Canada) Telephone Number : (703) 527-3887

2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008

GHS08 Health hazard

Carc. 2H351Suspected of causing cancer.Repr. 1H360May damage fertility or the unborn child.STOT RE 2H373May cause damage to organs through prolonged or repeated exposure.



Acute Tox. 4 H302 Harmful if swallowed.Acute Tox. 4 H332 Harmful if inhaled.Eye Irrit. 2A H319 Causes serious eye irritation.Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labeled according to the CLP regulation.

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(Contd. of page 1) Hazard pictograms GHS07 GHS08 Signal word Danger Hazard-determining components of labeling: LEAD (Pb) Rosin Hazard statements Harmful if swallowed or if inhaled. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. **Precautionary statements** Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves. Wear 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. Contaminated work clothing must not be allowed out of the workplace. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Get medical advice/attention if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of water. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. Hazard description: WHMIS Symbols **Classification system:** NFPA ratings (scale 0 - 4) Health = 2Fire = 2Reactivity = 0

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HMIS-ratings (scale 0 - 4)

HEALTH *1 Health = *1 2 Fire = 2Reactivity = 0 REACTIVITY 0

2.3 Other hazards Results of PBT and vPvB assessment

PBT:

FIRE

3194-55-6 1,2,5,6,9,10- hexabromocyclododecane

vPvB: Not applicable.

3: COMPOSITION OF MIXTURE

Description: Mixture of the substances listed below with nonhazardous additions.

CAS No.	Description	% Range
CAS: 7440-31-5 EINECS: 231-141-8	TIN (Sn)	40-55%
CAS: 7439-92-1 EINECS: 231-100-4	LEAD (Pb) © Carc. 2, H351; Repr. 1B, H360; STOT RE 2, H373 © Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	25-40%
CAS: 61790-85-0	Ethoxylated Amines Eve Dam. 1, H318 Skin Irrit. 2, H315	1-<3%
CAS: 98-55-5 EINECS: 202-680-6	p-menth-1-en-8-ol	1.0-3.0%
CAS: 68439-49-6	Proprietary Solvent	1.0-3.0%
	Organic Acid	1.0-3.0%
	Rosin	1.0-3.0%
CAS: 102-60-3 EINECS: 203-041-4	Proprietary Amine	1.0-3.0%
CAS: 111-42-2 EINECS: 203-868-0	diethanolamine Carc. 2, H351; STOT RE 2, H373 Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302	0.1-≤1%

4: FIRST AID MEASURES

4.1 Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Follow general first aid procedures.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Seek immediate medical advice.

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

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4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture in case of fire, the following can be released:

5.3 Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device.

6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 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.

7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Thorough dedusting.

Prevent formation of dust.

Information about protection against explosions and fires: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store in a cool location. Information about storage in one common storage facility: Not required. Further information about storage conditions: Keep receptacle tightly sealed. 7.3 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.

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

	-31-5 TIN (Sn)	
	Long-term value: 2 mg/m ³	
	metal	
REL	Long-term value: 2 mg/m ³	
TLV	Long-term value: 2 mg/m ³	
	metal	
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7439-92-1 LEAD (Pb) PEL Long-term value: 0.05* mg/m³

see 29 CFR 1910.1025 REL | Long-term value: 0.05 mg/m³ *8-hr TWA, excl. lead arsenate; See PocketGuideApp.C TLV Long-term value: 0.05* mg/m³

*and inorganic compounds, as Pb; BEI

Additional information:

PEL = Permissible Exposure Limit (OSHA) TLV= Threshold Limit Value (ACGIH) OSHA= Occupational Safety and Health Administration ACGIH= American Conference of Governmental Industrial Hygienists

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Breathing equipment:

When ventilation is not sufficient to remove fumes from the breathing zone, a safety approved respirator or self-contained breathing apparatus should be worn. Not necessary if room is well-ventilated.

Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands:



Protective gloves

Material of gloves: Nitrile rubber, NBR Natural rubber, NR 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



Face Shield with Safety Glasses when refilling.

9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties **General Information**

Appearance:

Form: Color:

Pasty According to product specification Mild

pH-value:

Odor:

Not applicable.

Change in condition Melting point/Melting range: Undetermined.

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Boiling point/Boiling range:	240 °C (464 °F)	(Conta: of page 3)
Flash point:	92 °C (198 °F)	
Flammability (solid, gaseous):	: Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Vapor pressure:	Not applicable.	
Density: Vapor density	Not determined. Not applicable.	
Solubility in / Miscibility with Water:	Insoluble.	
Solvent content: Organic solvents:	1.1 % 0.0 g/l / 0.00 lb/gl	
Solids content:	94.9 %	

10: STABILITY AND REACTIVITY

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: Strong acids, strong oxidizers.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects Acute toxicity: Harmful if swallowed or if inhaled. Primary irritant effect: on the skin: Based on available data, the classification criteria are not met. on the eye: Causes serious eye irritation. Sensitization: May cause an allergic skin reaction. Additional toxicological information:

Carcinoge	nic categories	
	rnational Agency for Research on Cancer)	
	LEAD (Pb)	2B
	2,2',2"-nitrilotriethanol	3
111-42-2	diethanolamine	2B
	onal Toxicology Program)	
7439-92-1	LEAD (Pb)	R
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OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12: ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment

PBT:

3194-55-6 1,2,5,6,9,10- hexabromocyclododecane

vPvB: Not applicable.

13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation:

Disposal must be made according to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14: TRANSPORT INFORMATION

14.1 UN-Number DOT, ADR, ADN, IMDG, IATA 14.2 UN proper shipping name DOT, ADR, ADN, IMDG, IATA 14.3 Transport hazard class(es)	Not applicable Not applicable
DOT, ADR, ADN, IMDG, IATA Class 14.4 Packing group	Not applicable
DOT, IMDG, IATA	Not applicable
Marine pollutant: 14.6 Special precautions for user 14.7 Transport in bulk according to Annex II o	No Not applicable. f
MARPOL73/78 and the IBC Code UN "Model Regulation":	Not applicable. Not applicable

15: REGULATORY INFORMATION

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

USA The following information relates to product regulation specific to the USA.

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SARA (Superfund Amendments and Reauthorization Act)

Section 355 (extremely hazardous substances):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

7439-92-1 LEAD (Pb) 111-42-2 diethanolamine

TSCA (Toxic Substances Control Act): Kester certifies that all components listed below for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSCA Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

All ingredients are listed or exempt from listing.

California Proposition 65

Chemicals known to cause cancer:

LEAD (Pb)

diethanolamine

Chemicals known to cause reproductive toxicity:

LEAD (Pb)

Carcinogenic categories

EPA (Environmental Protection Agency)			
7439-92-1 LEAD (Pb)	B2		
68439-49-6 Proprietary Solvent	Non-hazardous		
NIOSH-Ca (National Institute for Occupational Safety and Health)			

None of the ingredients is listed.

CANADA:

Not classified.

Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labeled according to the CLP regulation. **Hazard pictograms**



Signal word Danger

Hazard-determining components of labeling: LEAD (Pb) Rosin
Hazard statements
Harmful if swallowed or if inhaled.
Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of causing cancer.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Precautionary statements
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves.



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(Contd. of page 8) Wear 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. Contaminated work clothing must not be allowed out of the workplace. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Get medical advice/attention if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of water. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16: OTHER INFORMATION

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on this Material Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Material Safety Data Sheet as a source for hazard information.

Department issuing Safety Data Sheet (SDS): Product Compliance / EHS Department Contact: EHS_Kester@kester.com

Date of preparation / last revision 04/12/2016 / 4

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) IMDĞ: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals 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) WHMIS: Workplace Hazardous Materials Information System (Canada) 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 Flam, Liq, 4: Flammable liquids, Hazard Category 4 Asute Tory 4: Acute torisity, Mazard Category 4

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 1: Reproductive toxicity, Hazard Category 1

Repr. 1B: Reproductive toxicity, Hazard Category 1B

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STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2 * **Data compared to the previous version altered.**

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US