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Safety Data Sheet acc. to OSHA HCS

Product identifier			
	l uses of the subs	B-2, B-4, B-6, B-12 Part A s tance or mixture. Activator nixture Activator	
Details of the supp Manufacturer/Sup Royal Adhesives & 800 E. Anaheim St Wilmington. CA 90 (310) 830-9904	pplier: 2 Sealants reet	ata sheet	
		nent protection department.	
ChemTrec: Day or	Night within USA	A and Canada: 1-800-424-9300. 527-3887 (collect calls accepted)	
	Night within USA		
ChemTrec: Day or	Night within USA Canada: +1 703-5		
ChemTrec: Day or Outside USA and (Hazard(s) iden	Night within USA Canada: +1 703-5 t ification	527-3887 (collect calls accepted)	
ChemTrec: Day or Outside USA and (Hazard(s) iden Classification of the	Night within USA Canada: +1 703-5 t ification	527-3887 (collect calls accepted)	
ChemTrec: Day or Outside USA and (Hazard(s) iden	Night within USA Canada: +1 703-5 t ification	527-3887 (collect calls accepted)	
ChemTrec: Day or Outside USA and (Hazard(s) iden Classification of the GHS07	Night within USA Canada: +1 703-5 tification he substance or m	527-3887 (collect calls accepted) nixture	
ChemTrec: Day or Outside USA and C Hazard(s) iden Classification of the GHS07 Acute Tox. 4	Night within USA Canada: +1 703-5 t <mark>ification</mark> he substance or m H302 Harmful į	527-3887 (collect calls accepted) nixture if swallowed.	
ChemTrec: Day or Outside USA and C Hazard(s) iden Classification of the GHS07 Acute Tox. 4 Skin Irrit. 2	Night within USA Canada: +1 703-5 tification he substance or m H302 Harmful i H315 Causes sk	527-3887 (collect calls accepted) nixture if swallowed. kin irritation.	
ChemTrec: Day or Outside USA and C Hazard(s) iden Classification of the GHS07 Acute Tox. 4	Night within USA Canada: +1 703-5 tification the substance or m H302 Harmful (H315 Causes sk H319 Causes se	527-3887 (collect calls accepted) nixture if swallowed. kin irritation. erious eye irritation.	
ChemTrec: Day or Outside USA and O Hazard(s) idem Classification of the Official Characteristics GHS07 Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2A STOT SE 3	Night within USA Canada: +1 703-5 tification he substance or m H302 Harmful i H315 Causes sk H319 Causes se H335 May caus	527-3887 (collect calls accepted) nixture if swallowed. kin irritation. erious eye irritation. se respiratory irritation.	
ChemTrec: Day or Outside USA and O Hazard(s) iden Classification of the Classification of the GHS07 Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2A STOT SE 3 Aquatic Acute 3	Night within USA Canada: +1 703-5 Canada: +1 703-5 Canada: +1 703-5 Canada: +1 703-5 Causes or man H302 Harmful i H315 Causes se H319 Causes se H315 May caus H402 Harmful t	527-3887 (collect calls accepted) nixture if swallowed. kin irritation. erious eye irritation. se respiratory irritation. to aquatic life.	
ChemTrec: Day or Outside USA and C Hazard(s) idem Classification of the Classification of the GHS07 Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2A STOT SE 3 Aquatic Acute 3 Aquatic Chronic 3	Night within USA Canada: +1 703-5 Canada: +1 703-5 Canada: +1 703-5 Canada: +1 703-5 Causes or man H302 Harmful i H315 Causes se H319 Causes se H315 May caus H402 Harmful t	527-3887 (collect calls accepted) nixture if swallowed. kin irritation. erious eye irritation. se respiratory irritation.	
ChemTrec: Day or Outside USA and C Hazard(s) idem Classification of the Classification of the GHS07 Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2A STOT SE 3 Aquatic Acute 3 Aquatic Chronic 3 Label elements	Night within USA Canada: +1 703-5 Canada: +1 703-5 Canada	527-3887 (collect calls accepted) nixture if swallowed. kin irritation. erious eye irritation. se respiratory irritation. to aquatic life.	obally Harmonized System (GHS).

Signal word Warning
Hazard statements
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

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Trade name: WS-8020 RC B-1/2, B-2, B-4, B-6, B-12 Part A

	(Contd. of page 1
· Precautionary statements	
Avoid breathing dust/fume/gas/mist/vapors/spray	
Wash thoroughly after handling.	
Do not eat, drink or smoke when using this product.	
Use only outdoors or in a well-ventilated area.	
Avoid release to the environment.	
Wear protective gloves / eye protection / face protection.	
If swallowed: Call a poison center/doctor if you feel unwell.	
Rinse mouth.	
If on skin: Wash with plenty of water.	
Specific treatment (see on this label).	
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	1 . 1
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present an	ia easy to ao.
Continue rinsing.	
If skin irritation occurs: Get medical advice/attention.	
Take off contaminated clothing and wash it before reuse.	
If eye irritation persists: Get medical advice/attention.	
Store in a well-ventilated place. Keep container tightly closed.	
Store locked up.	•
Dispose of contents/container in accordance with local/regional/national/international regulat	ions.
· Classification system: · NFPA ratings (scale 0 - 4)	
$\begin{array}{c} 2 \\ 0 \\ Reactivity = 0 \end{array}$	
· HMIS-ratings (scale 0 - 4)	
HEALTH 2 $Health = 2$	
FIRE 1 $Fire = 1$	
Physical hazard $\overline{0}$ 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: Mixture	
· Hazardous components:	
1313-13-9 manganese dioxide	25-50%
61788-32-7 Hydrogenated Terphenyl	25-50%
1218 02 1 zaolito [impurity]	25-3070

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· Hazardous	· Hazardous components:		
1313-13-9	manganese dioxide	25-50%	
	Hydrogenated Terphenyl	25-50%	
1318-02-1	zeolite [impurity]	2.5-10%	
26140-60-3		<u>≤</u> 2.5%	
	Dipentamethylene Thiuram Hexasulphide	<u>≤</u> 2.5%	
	sodium hydroxide [impurity]	<u>≤</u> 2.5%	
557-05-1	zinc distearate, pure	<u>≤</u> 2.5%	
		USA	

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Trade name: WS-8020 RC B-1/2, B-2, B-4, B-6, B-12 Part A

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4 First-aid measures

· Description of first aid measures

• After inhalation:

Supply fresh air or oxygen; call for 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.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: 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
- · 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:		
26140-60-3	Terphenyl	0.45 mg/m3
557-05-1	zinc distearate, pure	30 mg/m3
	Synthetic Amorphous Silica	120 mg/m3
7664-38-2	phosphoric acid	3 mg/m3
· PAC-2:		
26140-60-3	Terphenyl	5 mg/m3
557-05-1	zinc distearate, pure	330 mg/m3
67762-90-7	Synthetic Amorphous Silica	1,300 mg/m3
		(Contd. on page 4

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Trade name: WS-8020 RC B-1/2, B-2, B-4, B-6, B-12 Part A

7664-38-2	phosphoric acid	(Contd. of page 3) 30 mg/m3
· PAC-3:		
26140-60-3		1,400 mg/m3
557-05-1	zinc distearate, pure	2,000 mg/m3
	Synthetic Amorphous Silica	7,900 mg/m3
7664-38-2	phosphoric acid	150 mg/m3

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.

· 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.

· 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.

61788-32-7 Hydrogenated Terphenyl

- *REL* Long-term value: 5 mg/m³, 0.5 ppm
- *TLV* Long-term value: 4.9 mg/m³, 0.5 ppm nonirradiated

26140-60-3 Terphenyl

STEL Short-term value: C 5 mg/m³

557-05-1 zinc distearate, pure

- PEL Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
- REL Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
- TLV Long-term value: 10 mg/m³

• 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. Wash hands before breaks and at the end of work.

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· 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:



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Tightly sealed goggles

Safety glasses with side shields. • **Body protection:** Protective work clothing

9 Physical and chemical properties

· Information on basic physical and	chemical properties	
· General Information		
· Appearance:		
Form:	Paste	
Color:	Black	
• Odor:	Characteristic	
• Odor threshold:	Not determined.	
· pH-value:	Not determined.	
· Change in condition		
Melting point:	Undetermined.	
Boiling point:	Undetermined	
· Flash point:	>99 °C (>210.2 °F)	
· Flammability (solid, gaseous):	Not applicable.	
· Ignition temperature:	373 °C (703.4 °F)	
· 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	
		(Contd. on page 6)

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		(Contd. of page 5
Upper:	Not determined	
· Vapor pressure:	Not determined.	
· Specific gravity at 20 °C (68 °F):	1.76 g/cm ³ (14.6872 lbs/gal)	
· Relative density	Not determined.	
· Vapor density	Not determined.	
· Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
· Partition coefficient (n-octanol/wate	r): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Solvent content:		
Organic solvents:	0.0 %	
Solids content:	Not available.	
• Other information	Grams VOC/Liter [less water. less exempts] 2.4	

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 No further relevant information available.

· Incompatible materials: Reacts with oxidizing agents.

· Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

Hydrocarbons

11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

· LD/LC50 values that are relevant for classification: 1313-13-9 manganese dioxide Oral LD50 40 mg/kg (mouse) ≥1,490 mg/kg (rat) 61788-32-7 Hydrogenated Terphenyl Oral LD50 >12,500 mg/kg (rat) Dermal LD50 >2,000 mg/kg (rabbit) Inhalative LC50/4 h > 4.7 mg/l (rat)1310-73-2 sodium hydroxide [impurity] Oral LD50 2,000 mg/kg (rat) (Contd. on page 7) USA

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Trade name: WS-8020 RC B-1/2, B-2, B-4, B-6, B-12 Part A

· Prima	iry irritant	t effect:
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• on the skin: Irritant to skin and mucous membranes.

• on the eye: Irritating effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

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

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

1318-02-1 zeolite [impurity]

· 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.
- · Ecotoxical effects:
- · Remark: Harmful to 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.

· UN-Number		
· DOT, ADN, IMDG, IATA	not regulated	
· UN proper shipping name		
· DOT, ADN, IMDG, IATA	not regulated	

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Trade name: WS-8020 RC B-1/2, B-2, B-4, B-6, B-12 Part A

	(Contd. of page 7)
· Transport hazard class(es)	
· DOT, ADN, IMDG, IATA · Class	not regulated
· Packing group · DOT, IMDG, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
• Transport in bulk according to Annex II o MARPOL73/78 and the IBC Code	n f Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN ''Model Regulation'':	not regulated

15 Regulatory information

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

Section	355	(extremelv	hazardous	substances):
Decuon	555	(CAH CHICLY	nuzuruous	Substances	

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

1313-13-9 manganese dioxide

557-05-1 zinc distearate, pure

7664-38-2 phosphoric acid

• 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 Dosmestic 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:

26140-60-3 Terphenyl

1310-73-2 sodium hydroxide [impurity]

557-05-1 zinc distearate, pure

7664-38-2 phosphoric acid

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New Jersey Special Hazardous Substance List:	
1310-73-2 sodium hydroxide [impurity]	CO, R
7664-38-2 phosphoric acid	CO
Pennsylvania Right-to-Know List:	
26140-60-3 Terphenyl	
1310-73-2 sodium hydroxide [impurity]	
557-05-1 zinc distearate, pure	
7664-38-2 phosphoric acid	
Pennsylvania Special Hazardous Substance List:	
1310-73-2 sodium hydroxide [impurity]	
557-05-1 zinc distearate, pure	
7664-38-2 phosphoric acid	
Cancerogenity categories	·
EPA (Environmental Protection Agency)	
1313-13-9 manganese dioxide	D
557-05-1 zinc distearate, pure	D, I, .
TLV (Threshold Limit Value established by ACGIH)	L
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)	

· 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.

- · Creation Date: 09/06/2017
- · Date of preparation / last revision 07/30/2018 / 2
- Abbreviations and acronyms: 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

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Trade name: WS-8020 RC B-1/2, B-2, B-4, B-6, B-12 Part A

(Contd. of page 9) 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 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 Aquatic Acute 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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Identification		
, and the second s		
Product identifier		
Trade name: <u>WS-8020 RC B-1/2</u> Relevant identified uses of the su Application of the substance / th	ibstance or mixture. Sealant	
Details of the supplier of the safe Manufacturer/Supplier: Royal Adhesives & Sealants 800 E. Anaheim Street Wilmington. CA 90744 (310) 830-9904	ety data sheet	
	nment protection department. USA and Canada: 1-800-424-9300. 13-527-3887 (collect calls accepted)	
Hazard(s) identification		
Classification of the substance o	r mixture	
Aquatic Acute 3 H402 Harmf	ul to aquatic life.	
Aquatic Chronic 3 H412 Harmf	ul to aquatic life with long lasting effects.	
Hazard pictograms Void Signal word Void Hazard statements Harmful to aquatic life. Harmful to aquatic life with long Precautionary statements Avoid release to the environment Dispose of contents/container in Classification system: NFPA ratings (scale 0 - 4)		
Health = 1 Fire = 1 Reactivity = 0		
HMIS-ratings (scale 0 - 4)		
HEALTH1Health = 1FIRE1Fire = 1PHYSICAL HAZARDPhysical Ha	zard = 0	
Other hazards Results of PBT and vPvB assess PBT: Not applicable.	ment	(Contd. on page

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• **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture

	50-100%
471-34-1 calcium carbonate	5-20%
	2.5-10%
108-95-2 phenol	<i>≤</i> 0.5%
95-48-7 o-cresol	<u>≤</u> 0.5%
50-00-0 formaldehyde	<i>≤</i> 0.05%

4 First-aid measures

· Description of first aid measures

• After inhalation:

Supply fresh air or oxygen; call for 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.
- · After eye contact:

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

· After swallowing: Seek medical treatment.

· 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

· 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.

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3) USA —

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Trade name: WS-8020 RC B-1/2, B-2, B-4, B-6, B-12 Part B

_		(Contd. of page 2)
	uate ventilation.	
	o other sections	
	7 for information on safe handling.	
	8 for information on personal protection equipment.	
	13 for disposal information.	
• Protective A	ction Criteria for Chemicals	
· PAC-1:		
471-34-1	calcium carbonate	45 mg/m3
67762-90-7	Synthetic Amorphous Silica	120 mg/m3
13463-67-7	titanium dioxide	30 mg/m3
108-95-2	phenol	15 ppm
50-00-0	formaldehyde	0.90 ppm
· PAC-2:		
471-34-1	calcium carbonate	210 mg/m3
67762-90-7	Synthetic Amorphous Silica	1,300 mg/m3
13463-67-7	titanium dioxide	330 mg/m3
108-95-2	phenol	23 ppm
50-00-0	formaldehyde	14 ppm
· PAC-3:		
471-34-1	calcium carbonate	1,300 mg/m3
67762-90-7	Synthetic Amorphous Silica	7,900 mg/m3
13463-67-7	titanium dioxide	2,000 mg/m3
108-95-2	phenol	200 ppm
50-00-0	formaldehyde	56 ppm

7 Handling and storage

· Handling:

- · Precautions for safe handling
- 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.
- 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 constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

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his time, the remaining constituent has no known exposure limits. -34-1 calcium carbonate L Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction L Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction 7 TLV withdrawn 63-67-7 titanium dioxide L Long-term value: 15* mg/m ³ *total dust L See Pocket Guide App. A Z Long-term value: 10 mg/m ³ -95-2 phenol L Long-term value: 19 mg/m ³ , 5 ppm Skin L Long-term value: 19 mg/m ³ , 5 ppm Ceiling limit value: 60* mg/m ³ , 15.6* ppm *15-min; Skin	
 Long-term value: 15* 5** mg/m³ *total dust **respirable fraction Long-term value: 10* 5** mg/m³ *total dust **respirable fraction TLV withdrawn 63-67-7 titanium dioxide Long-term value: 15* mg/m³ *total dust L See Pocket Guide App. A L Long-term value: 10 mg/m³ c-95-2 phenol L Long-term value: 19 mg/m³, 5 ppm Skin L Long-term value: 19 mg/m³, 5 ppm C Long-term value: 19 mg/m³, 5 ppm 	
 *total dust **respirable fraction Long-term value: 10* 5** mg/m³ *total dust **respirable fraction / TLV withdrawn 63-67-7 titanium dioxide Long-term value: 15* mg/m³ *total dust Lsee Pocket Guide App. A / Long-term value: 10 mg/m³ -95-2 phenol Long-term value: 19 mg/m³, 5 ppm Skin Long-term value: 19 mg/m³, 5 ppm Ceiling limit value: 60* mg/m³, 15.6* ppm 	
 Long-term value: 10* 5** mg/m³ *total dust **respirable fraction / TLV withdrawn 63-67-7 titanium dioxide Long-term value: 15* mg/m³ *total dust L See Pocket Guide App. A / Long-term value: 10 mg/m³ -95-2 phenol Long-term value: 19 mg/m³, 5 ppm Skin L Long-term value: 19 mg/m³, 5 ppm C Long-term value: 19 mg/m³, 5 ppm C Long-term value: 60* mg/m³, 15.6* ppm 	
 *total dust **respirable fraction TLV withdrawn 63-67-7 titanium dioxide Long-term value: 15* mg/m³ *total dust L See Pocket Guide App. A Z Long-term value: 10 mg/m³ -95-2 phenol L Long-term value: 19 mg/m³, 5 ppm Skin L Long-term value: 19 mg/m³, 5 ppm C Long-term value: 19 mg/m³, 5 ppm C Long-term value: 19 mg/m³, 5 ppm C Long-term value: 60* mg/m³, 15.6* ppm 	
 TLV withdrawn 63-67-7 titanium dioxide Long-term value: 15* mg/m³ *total dust See Pocket Guide App. A Long-term value: 10 mg/m³ -95-2 phenol Long-term value: 19 mg/m³, 5 ppm Skin Long-term value: 19 mg/m³, 5 ppm Ceiling limit value: 60* mg/m³, 15.6* ppm 	
63-67-7 titanium dioxide L Long-term value: 15* mg/m ³ *total dust L See Pocket Guide App. A / Long-term value: 10 mg/m ³ -95-2 phenol L Long-term value: 19 mg/m ³ , 5 ppm Skin L Long-term value: 19 mg/m ³ , 5 ppm Ceiling limit value: 60* mg/m ³ , 15.6* ppm	
 total dust See Pocket Guide App. A Long-term value: 10 mg/m³ -95-2 phenol Long-term value: 19 mg/m³, 5 ppm Skin Long-term value: 19 mg/m³, 5 ppm Ceiling limit value: 60 mg/m³, 15.6* ppm 	
 total dust See Pocket Guide App. A Long-term value: 10 mg/m³ -95-2 phenol Long-term value: 19 mg/m³, 5 ppm Skin Long-term value: 19 mg/m³, 5 ppm Ceiling limit value: 60 mg/m³, 15.6* ppm 	
/ Long-term value: 10 mg/m ³ -95-2 phenol L Long-term value: 19 mg/m ³ , 5 ppm Skin L Long-term value: 19 mg/m ³ , 5 ppm Ceiling limit value: 60* mg/m ³ , 15.6* ppm	
-95-2 phenol L Long-term value: 19 mg/m ³ , 5 ppm Skin L Long-term value: 19 mg/m ³ , 5 ppm Ceiling limit value: 60* mg/m ³ , 15.6* ppm	
 L Long-term value: 19 mg/m³, 5 ppm Skin L Long-term value: 19 mg/m³, 5 ppm Ceiling limit value: 60* mg/m³, 15.6* ppm 	
Skin L Long-term value: 19 mg/m³, 5 ppm Ceiling limit value: 60* mg/m³, 15.6* ppm	
L Long-term value: 19 mg/m³, 5 ppm Ceiling limit value: 60* mg/m³, 15.6* ppm	
Ceiling limit value: $60^* mg/m^3$, 15.6* ppm	
*1.5-min: Skin	
/ Long-term value: 19 mg/m ³ , 5 ppm Skin; BEI	
48-7 o-cresol	
L Long-term value: 22 mg/m ³ , 5 ppm	
Skin	
L Long-term value: 10 mg/m ³ , 2.3 ppm	
Long-term value: 20* mg/m ³	
Skin; *as inhalable fraction and vapor	
00-0 formaldehyde	
L Short-term value: 2 ppm	
Long-term value: 0.75 ppm	
see 29 CFR 1910.1048(c)	
L Long-term value: 0.016 ppm Ceiling limit value: 0.1* ppm	
*15-min; See Pocket Guide App. A	
/ Short-term value: 0.37 mg/m ³ , 0.3 ppm	
Long-term value: 0.12 mg/m ³ , 0.1 ppm	
DSEN; RSEN	
redients with biological limit values:	
-95-2 phenol	
250 mg/g creatinine	
Medium: urine	
Time: end of shift	
Parameter: Phenol with hydrolysis (background, nonspecific) litional information: The lists that were valid during the creation were used as basis.	
posure controls	
sonal protective equipment (see listings below) neral protective and hygienic measures:	
<i>p away from foodstuffs, beverages and feed.</i>	
sh hands before breaks and at the end of work.	

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- 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.
- · Body protection: Protective work clothing

9 Physical and chemical properties

General Information	ical and chemical properties	
Appearance:		
Form:	Paste	
Color:	Whitish	
Odor:	Characteristic	
Odor threshold:	Not determined.	
Change in condition		
Melting point:	Undetermined.	
Boiling point:	Undetermined	
Flash point:	>100 °C (>212 °F)	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Flammable limits:		
Lower:	Not determined	
Upper:	Not determined	
Specific gravity at 20 $^{\circ}C$ (6	8 •F): 1.46 g/cm ³ (12.1837 lbs/gal)	
Solubility in / Miscibility w	ith	
Water:	Not miscible or difficult to mix.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
Organic solvents:	Not available	
Solids content:	Not available.	
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Safety Data Sheet acc. to OSHA HCS

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• Other information

Grams VOC/LIter [less water. less exempts] 9.4

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 strong oxidizing agents.

• Hazardous decomposition products:

Carbon monoxide and carbon dioxide Sulfur oxides (SOx)

Sulfur Oxides (SOX

Trace amounts of the following may be formed:

Hydrogen sulfide

Phenol

Formaldehyde

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· Primary irritant effect:

• on the skin: May irritate the skin.

• on the eye: May irritate the eye.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

13463-67-7 titanium dioxide

108-95-2 phenol

50-00-0 formaldehyde

· NTP (National Toxicology Program)

50-00-0 formaldehyde

· OSHA-Ca (Occupational Safety & Health Administration)

50-00-0 formaldehyde

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.

· Ecotoxical effects:

· Remark: Harmful to fish

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 \cdot Additional ecological information:

- General notes: At present there are no ecotoxicological assessments.
- · Results of PBT and vPvB assessment

• **PBT:** Not applicable.

- **vPvB:** Not applicable.
- $\cdot \textit{Other adverse effects} \textit{ No further relevant information available}.$

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.

· UN-Number	
· DOT, ADN, IMDG, IATA	not regulated
	novregulated
· UN proper shipping name · DOT, ADN, IMDG, IATA	not regulated
• Transport hazard class(es)	0
· DOT, ADN	
· Class	not regulated
· IMDG, IATA	
· Class	not regulated
Chuss	Not Regulated
· Packing group	
· DOT, IMDG, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN ''Model Regulation'':	not regulated

15 Regulatory information

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

· Section 355 (extremely hazardous substances):		
108-95-2		
95-48-7	7 o-cresol	
50-00-0) formaldehyde	
	(Contd. on pa	nge 8)

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Section 313 (Specific toxic chemical listings):	
108-95-2 phenol	
95-48-7 o-cresol	
50-00-0 formaldehyde	
TSCA (Toxic Substances Control Act):	
All components of this product are on the TSCA Inventory or are exempt	t from TSCA Inventory requirements.
Proposition 65	
Chemicals known to cause cancer:	
13463-67-7 titanium dioxide	
50-00-0 formaldehyde	
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 Dosmestic Substance List	
All components of this product are on the DSL(Canada Domestic Substarequirements.	ince list) or are exempt from DSL
New Jersey Right-to-Know List:	
• •	
68611-50-7 Polysulphide Polymer 13463-67-7 titanium dioxide	
108-95-2 phenol	
95-48-7 o-cresol	
50-00-0 formaldehyde	
New Jersey Special Hazardous Substance List:	
• •	
108-95-2 phenol	<i>MU</i> , <i>F</i> 2
108-95-2 phenol 95-48-7 o-cresol	CA, F2
108-95-2 phenol	CA, F2
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde	CA, F2
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Right-to-Know List:	CA, F2
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde	CA, F2
108-95-2phenol95-48-7o-cresol50-00-0formaldehydePennsylvania Right-to-Know List:68611-50-7Polysulphide Polymer	CA, F2
108-95-2phenol95-48-7o-cresol50-00-0formaldehydePennsylvania Right-to-Know List:68611-50-7Polysulphide Polymer13463-67-7titanium dioxide	CA, F2
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Right-to-Know List: 68611-50-7 Polysulphide Polymer 13463-67-7 titanium dioxide 108-95-2 phenol	CA, F2
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde Pennsylvanite Right-to-Know List: 68611-50-7 Polysulphide Polymer 13463-67-7 titanium dioxide 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde	CA, F2
108-95-2phenol95-48-7o-cresol50-00-0formaldehyde• Pennsylvania Right-to-Know List:68611-50-7Polysulphide Polymer13463-67-7titanium dioxide108-95-2phenol95-48-7o-cresol50-00-0formaldehyde• Pennsylvania Special Hazardous Substance List:	CA, F2 CA, CO, MU,
108-95-2phenol95-48-7o-cresol50-00-0formaldehyde• Pennsylvania Right-to-Know List:68611-50-7Polysulphide Polymer13463-67-7titanium dioxide108-95-2phenol95-48-7o-cresol50-00-0formaldehyde• Pennsylvania Special Hazardous Substance List:108-95-2phenol	CA, F2 CA, CO, MU,
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Right-to-Know List: 68611-50-7 Polysulphide Polymer 13463-67-7 titanium dioxide 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Special Hazardous Substance List: 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde	CA, F2 CA, CO, MU,
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Right-to-Know List: 68611-50-7 68611-50-7 Polysulphide Polymer 13463-67-7 titanium dioxide 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Special Hazardous Substance List: 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Special Hazardous Substance List: 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde	CA, F2 CA, CO, MU,
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Right-to-Know List: 68611-50-7 Polysulphide Polymer 13463-67-7 titanium dioxide 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Special Hazardous Substance List: 108-95-2 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Special Hazardous Substance List: 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Cancerogenity categories •	CA, F2 CA, CO, MU,
108-95-2phenol95-48-7o-cresol50-00-0formaldehyde• Pennsylvania Right-to-Know List:68611-50-7Polysulphide Polymer13463-67-7titanium dioxide108-95-2phenol95-48-7o-cresol50-00-0formaldehyde• Pennsylvania Special Hazardous Substance List:108-95-2phenol95-48-7o-cresol50-00-0formaldehyde• Cancerogenity categories• EPA (Environmental Protection Agency)	CA, F2 CA, CO, MU,
108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Right-to-Know List: 68611-50-7 Polysulphide Polymer 13463-67-7 titanium dioxide 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde • Pennsylvania Special Hazardous Substance List: 108-95-2 phenol 95-48-7 o-cresol 50-00-0 formaldehyde	

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50-00-0 fa	rmaldehyde	(Contd. of page 8) B1
•	hold Limit Value established by ACGIH)	
,	titanium dioxide	A4
108-95-2	phenol	A4
50-00-0	formaldehyde	A2
· MAK (Germ	an Maximum Workplace Concentration)	
13463-67-7	titanium dioxide	3A
108-95-2	phenol	3B
95-48-7	o-cresol	3A
50-00-0	formaldehyde	4
· NIOSH-Ca	(National Institute for Occupational Safety and Health)	
13463-67-7	titanium dioxide	
50-00-0	formaldehyde	

· 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: 09/11/2017
- Date of preparation / last revision 07/30/2018 / 5
- · Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation 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 BEI: Biological Exposure Limit Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3

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