Material Safety Data Sheet

RG+ Concrete Adhesive

1. Product and company identification

Product name : RG+ Concrete Adhesive

Material uses : Adhesive.

Supplier/Manufacturer : Techniseal
300, avenue Liberté
Candiac, QC, Canada, J5R 6X1
Tel: (514) 523-2110
Toll free: 1-800-465-7325
Fax: (450) 633-3035

Validation date : 3/7/2016

Prepared by : IHS

In case of emergency : CANUTEC (613) 996-6666

2. Hazards identification

Physical state : Liquid. [Paste.]

Color : Beige.

Odor : Solvent. [Strong]

Emergency overview

Signal word : DANGER!

Hazard statements : FLAMMABLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER. REPRODUCTIVE HAZARD.

Precautions : Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not get on skin or clothing. Avoid contact with eyes. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Keep container tightly closed.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Dermal contact. Eye contact. Inhalation.

Potential acute health effects

Inhalation : Can cause central nervous system (CNS) depression. Moderately irritating to the respiratory system.

Ingestion : Can cause central nervous system (CNS) depression.

Skin : Moderately irritating to the skin.

Eyes : Moderately irritating to eyes.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Can impair fertility.

Target organs : Contains material which may cause damage to the following organs: the nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
respiratory tract irritation
coughing
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Eyes : Adverse symptoms may include the following:
irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

United States

Name	CAS number	%
methyl acetate	79-20-9	30-60
vinyl acetate	108-05-4	0.1-1

Canada

Name	CAS number	%
methyl acetate	79-20-9	30-60
vinyl acetate	108-05-4	0.1-1
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	0.1-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
methyl acetate	**ACGIH TLV (United States, 3/2015).** TWA: 200 ppm 8 hours. TWA: 606 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 757 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 200 ppm 10 hours. TWA: 610 mg/m³ 10 hours. STEL: 250 ppm 15 minutes. STEL: 760 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 200 ppm 8 hours. TWA: 610 mg/m³ 8 hours.
vinyl acetate	**ACGIH TLV (United States, 3/2015).** TWA: 10 ppm 8 hours. TWA: 35 mg/m³ 8 hours. STEL: 15 ppm 15 minutes. STEL: 53 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** CEIL: 4 ppm 15 minutes. CEIL: 15 mg/m³ 15 minutes.

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	**List name**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**Notations**
methyl acetate	US ACGIH 3/2015	200	606	-	250	757	-	-	-	-	
	AB 4/2009	200	606	-	250	757	-	-	-	-	
	BC 5/2015	200	-	-	250	-	-	-	-	-	
	ON 7/2015	200	606	-	250	757	-	-	-	-	
	QC 1/2014	200	606	-	250	757	-	-	-	-	
	SK	-	-	200 PPM	-	-	250 PPM	-	-	-	
vinyl acetate	US ACGIH 3/2015	10	35	-	15	53	-	-	-	-	
	AB 4/2009	10	35	-	15	53	-	-	-	-	
	BC 5/2015	10	-	-	15	-	-	-	-	-	
	ON 7/2015	10	35	-	15	53	-	-	-	-	
	QC 1/2014	10	35	-	15	53	-	-	-	-	
	SK	-	-	10 PPM	-	-	15 PPM	-	-	-	

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Liquid. [Paste.]
Flash point : Closed cup: -13°C (8.6°F) [Setaflash.]
Auto-ignition temperature : Not available.
Flammable limits : Not available.
Color : Beige.
Odor : Solvent. [Strong]
pH : Not available.
Boiling/condensation point : 54.44°C (130°F)
Melting/freezing point : Not available.
Relative density : 1.306
Density : Not available.
Vapor pressure : Not available.
Vapor density : Not available.
Volatility : 30.13% (w/w)
Odor threshold : Not available.
Evaporation rate : >1 (butyl acetate = 1)

Viscosity : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

$LogK_{ow}$: Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
vinyl acetate	LC50 Inhalation Gas.	Rat	3680 ppm	4 hours
	LC50 Inhalation Vapor	Rat	11400 mg/m³	4 hours
	LD50 Dermal	Rabbit	2335 mg/kg	-
	LD50 Oral	Rat	2900 mg/kg	-
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	LD50 Oral	Rat	4880 mg/kg	-

Chronic toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
methyl acetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-

Skin : Causes skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : Causes eye irritation.

Respiratory : May cause respiratory irritation.

Sensitizer

Not available.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
vinyl acetate	A3	2B	-	-	-	-

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : This material is harmful to aquatic life with long lasting effects.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
methyl acetate	Acute EC50 1026.7 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 320000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
vinyl acetate	Acute LC50 10000 to 100000 µg/l Marine water	Crustaceans - Crangon crangon - Larvae	48 hours
	Acute LC50 14000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
methyl acetate	301D Ready Biodegradability - Closed Bottle Test	75 % - 19 days	-	-
vinyl acetate	301C Ready Biodegradability - Modified MITI Test (I)	82 to 98 % - 14 days	-	-

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1133	Adhesives	3	III		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 60 L **Cargo aircraft** Quantity limitation: 220 L **Special provisions** B1, B52, IB3, T2, TP1
TDG Classification	UN1133	ADHESIVES	3	III		Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3). **Explosive Limit and Limited Quantity Index** 5 **Passenger Carrying Road or Rail Index** 60
IMDG Class	UN1133	ADHESIVES	3	III		**Emergency schedules (EmS)** F-E, S-D **Special provisions** 223, 955 **Viscous substance exemption** This class 3 material is not subject to regulation in packagings up to 30 L. Exempted according to 2.3. 2.5 (Viscous substance exemption)

RG+ Concrete Adhesive						
IATA-DGR Class	UN1133	Adhesives	3	III		**Passenger and Cargo Aircraft**Quantity limitation: 60 L Packaging instructions: 355 **Cargo Aircraft Only** Quantity limitation: 220 L Packaging instructions: 366 **Limited Quantities - Passenger Aircraft** Quantity limitation: 10 L Packaging instructions: Y344 **Special provisions** A3

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Flammable liquid
Irritating material
Carcinogen
Target organ effects

U.S. Federal regulations : **TSCA 8(a) PAIR**: methyl acetate
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 12(b) one-time export: methyl acetate

SARA 302/304: vinyl acetate
SARA 311/312 Hazards identification: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: vinyl acetate

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	vinyl acetate	108-05-4	0.1-1
Supplier notification	vinyl acetate	108-05-4	0.1-1

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHYL ACETATE

New York : The following components are listed: Vinyl acetate

New Jersey : The following components are listed: METHYL ACETATE; ACETIC ACID, METHYL ESTER; VINYL ACETATE; ACETIC ACID ETHENYL ESTER

Pennsylvania : The following components are listed: ACETIC ACID, METHYL ESTER; ACETIC ACID ETHENYL ESTER

California Prop. 65

None of the components are listed.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists : **Australia inventory (AICS)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory (ENCS): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan Chemical Substances Inventory (TCSI): Not determined.
Turkey inventory: Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements :

FLAMMABLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER. REPRODUCTIVE HAZARD.

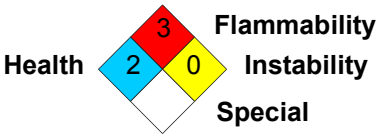
Hazardous Material Information System (U.S.A.) :

Health	*	2
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Date of previous issue : 3/21/2013

Version : 2

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.