



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

### SECTION 1: Identification

#### 1.1. Product identifier

SCOTCH-WELD(TM) 2214 HI-TEMP NEW FORMULA EPOXY ADHESIVE

#### Product Identification Numbers

62-3491-2830-6      62-3491-8530-6      HB-0041-2082-8

#### 1.2. Recommended use and restrictions on use

##### Intended Use

Adhesive

##### Restrictions on use

Not applicable

#### 1.3. Supplier's details

<b>Company:</b>	3M Canada Company
<b>Division:</b>	Industrial Adhesives and Tapes Division
<b>Address:</b>	1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1
<b>Telephone:</b>	(800) 364-3577
<b>Website:</b>	www.3M.ca

#### 1.4. Emergency telephone number

Medical Emergency Telephone: (519) 451-2500, Ext. 2222; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

Carcinogenicity: Category 1A.

#### 2.2. Label elements

##### Signal word

Danger

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### Symbols

Exclamation mark | Health Hazard |

### Pictograms



### Hazard statements

Causes eye irritation. May cause an allergic skin reaction. May cause cancer.

### Precautionary statements

#### Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves. Wash exposed skin thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

#### Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice/attention.

#### Storage:

Store locked up.

#### Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

### 2.3. Other hazards

None known.

5% of the mixture consists of ingredients of unknown acute oral toxicity.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt	Common Name
Aluminum Pigments	7429-90-5	30 - 60	Aluminum
Epoxy Resin 1	25068-38-6	30 - 60 Trade Secret *	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
Epoxy Resin 2	28064-14-4	5 - 10 Trade Secret *	Phenol, polymer with formaldehyde, glycidyl ether
Amorphous Silica	67762-90-7	1 - 5	Siloxanes and Silicones, di-Me, reaction products with silica
Calcium Carbonate	471-34-1	1 - 5	Carbonic acid calcium salt (1:1)
Nickel Salt	15751-00-5	1 - 5 Trade Secret *	Nickel(2+), hexakis(1H-imidazole-N3)-, dichloride, (OC-6-11)-

\*The actual concentration of this ingredient has been withheld as a trade secret.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

### 5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

### Hazardous Decomposition or By-Products

**Substance**

Aldehydes  
Carbon monoxide  
Carbon dioxide

**Condition**

During Combustion  
During Combustion  
During Combustion

### 5.3. Special protective actions for fire-fighters

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with

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applicable local/regional/national/international regulations.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Avoid skin contact with hot material. For industrial or professional use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

#### 7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from amines.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Aluminum Pigments	7429-90-5	ACGIH	TWA(respirable fraction):1 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

#### 8.2. Exposure controls

##### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

##### 8.2.2. Personal protective equipment (PPE)

###### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

###### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

###### Respiratory protection

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An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

### Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Solid
Specific Physical Form:	Paste
Appearance/Odour	Gray, epoxy odour.
Odour threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point/Freezing point	<i>Not Applicable</i>
Boiling point	$\geq 260$ °C
Flash Point	$\geq 248.9$ °C [ <i>Test Method</i> : Closed Cup]
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapour Pressure	<i>Not Applicable</i>
Vapour Density	<i>Not Applicable</i>
Density	1.5 g/ml
Relative density	1.5 [ <i>Ref Std</i> : WATER=1]
Water solubility	Nil
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>Not Applicable</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	$\geq 800,000$ mPa-s [ <i>@ 23 °C</i> ]
Molecular weight	<i>No Data Available</i>
VOC Less H <sub>2</sub> O & Exempt Solvents	0 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
VOC Less H <sub>2</sub> O & Exempt Solvents	0 % [ <i>Test Method</i> :calculated per CARB title 2]

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Avoid curing large quantities of material to prevent a premature reaction (exotherm) with production of intense heat and smoke.

**10.5. Incompatible materials**

Strong oxidizing agents  
 Strong acids  
 Strong bases  
 Amines

**10.6. Hazardous decomposition products**

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

**SECTION 11: Toxicological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

**11.1. Information on Toxicological effects**

**Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Skin Contact:**

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Additional Health Effects:**

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
NI CMPDS NOT ALLOYS	15751-00-5	Known human carcinogen	National Toxicology Program Carcinogens
NICKEL COMPOUNDS	15751-00-5	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

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Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Aluminum Pigments	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum Pigments	Ingestion		LD50 estimated to be > 5,000 mg/kg
Aluminum Pigments	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.888 mg/l
Epoxy Resin 1	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin 1	Ingestion	Rat	LD50 > 1,000 mg/kg
Epoxy Resin 2	Dermal	Rabbit	LD50 > 6,000 mg/kg
Epoxy Resin 2	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Epoxy Resin 2	Ingestion	Rat	LD50 > 4,000 mg/kg
Amorphous Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Amorphous Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Aluminum Pigments	Rabbit	No significant irritation
Epoxy Resin 1	Rabbit	Mild irritant
Epoxy Resin 2	Rabbit	Minimal irritation
Amorphous Silica	Rabbit	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Aluminum Pigments	Rabbit	No significant irritation
Epoxy Resin 1	Rabbit	Moderate irritant
Epoxy Resin 2	Rabbit	Mild irritant
Amorphous Silica	Rabbit	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation

**Skin Sensitization**

Name	Species	Value
Aluminum Pigments	Guinea pig	Not classified
Epoxy Resin 1	Human and animal	Sensitizing
Epoxy Resin 2	Human and animal	Sensitizing
Amorphous Silica	Human and animal	Not classified
Nickel Salt	similar compounds	Sensitizing

**Respiratory Sensitization**

Name	Species	Value
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Aluminum Pigments	Human	Not classified
Epoxy Resin 1	Human	Not classified

**Germ Cell Mutagenicity**

Name	Route	Value
Aluminum Pigments	In Vitro	Not mutagenic
Epoxy Resin 1	In vivo	Not mutagenic
Epoxy Resin 1	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epoxy Resin 2	In Vitro	Some positive data exist, but the data are not sufficient for classification
Amorphous Silica	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Epoxy Resin 1	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Amorphous Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Nickel Salt	Not Specified	similar compounds	Carcinogenic

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Epoxy Resin 1	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin 1	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin 1	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy Resin 1	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Amorphous Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Amorphous Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Amorphous Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Calcium Carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	prematuring & during gestation

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Aluminum Pigments	Inhalation	nervous system   respiratory system	Not classified	Human	NOAEL Not available	occupational exposure



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Epoxy Resin 1	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy Resin 1	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy Resin 1	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Amorphous Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Calcium Carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

**SECTION 12: Ecological information**

No data available.

**SECTION 13: Disposal considerations**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

**SECTION 14: Transport Information**

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

**SECTION 16: Other information**

**National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.**

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**Health:** 2 **Flammability:** 1 **Instability:** 2 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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