SAFETY DATA SHEET

Issuing Date 07-June-2016 **Revision Date** 07-June-2016 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product SDS Name **Epoxy Steel Resin – Repair Kit - Part A**

J-B Weld FG SKU Part Numbers Covered

2110, 2120

J-B Weld Product Names Covered

J-B TankWeld Repair Kit™, J-B Radiator Repair Kit™

J-B Weld Product Type

Epoxy Resin

Recommended use of the chemical and restrictions on use

Recommended Use	General Purpose Repair Adhesive
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier Name	J-B WELD COMPANY,LLC
Supplier Address	1130 COMO ST SULPHUR SPRINGS, TX 75482 USA
Emergency Telephone Numbers	Transportation Emergencies: Chemtrec (24 hour transportation emergency response info): 800-424-9300 or 703-527-3887 Poison/Medical Emergencies: Poison Control Centers (24 hour emergency poison / medical response info): 800-222-1222
Supplier Email	info@jbweld.com
Supplier Phone Number	903-885-7696

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS classification in accordance with OSHA (29 CFR 1910.1200)

Skin corrosion / irritation (chapter 3.2), Cat. 2
Eye damage / irritation (chapter 3.3), Cat. 2B
Sensitization, skin (chapter 3.4), Cat. 1

GHS label elements, including precautionary statements

Pictogram

Signal Word Warning

Hazard statement(s)

H315	Causes skin irritation
H320	Causes eye irritation
H317	May cause an allergic skin reaction

Precautionary statement(s)

P264	Wash … thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P321	Specific treatment (see … on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P501	Dispose of contents/container to …

Other hazards which do not result in classification This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Hazardous components

Bisphenol A Epoxy Resin

Concentration	>20-<40% (Weight)
Other names/synonyms	Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-,homopolymer
CAS no.	25085-99-8

Epoxy resin

Concentration	>10-<20% (Weight)
Other names/synonyms	Phenol, polymer with formaldehyde, glycidyl ether
CAS no.	28064-14-4

Carbon black (airborne, unbound particles of respirable size

Concentration	>0.001-<1% (Weight)
Other names/synonyms	Acetylene black; Carbon Black; channel black; furnace black; lamp black; lampblack; Oil Black 9Lampblack); thermal black
CAS no.	1333-86-4

Calcium carbonate (Natural)

Concentration	>=20-<=40% (Weight)
Other names/synonyms	Agricultural limestone; limestone; Marble chips, Natural calcium carbonate
CAS no.	1317-65-3

4. FIRST AID MEASURES

Description of necessary first-aid measures

General advice	First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
If inhaled	Move person to fresh air; if effects occur, consult a physician.
In case of skin contact	Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.
In case of eye contact	Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.
If swallowed	Ingestion: No emergency medical treatment necessary.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of first aid measures (above) and indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of immediate medical attention and special treatment needed, if necessary

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as a blanket for fire extinguishment.

Specific hazards arising from the chemical
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen.

Special protective actions for fire-fighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.
Environmental precautions:	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods for cleaning up:	Contain spilled material if possible. Absorb with materials such as: Sand. Polypropylene fiber products. Polyethylene fiber products. Remove residual with soap and hot water. Collect in suitable and properly labeled containers. Residual can be removed with solvent. Solvents are not recommended for clean-up unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent Safety Data Sheet for handling information and exposure guidelines. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid prolonged or repeated contact with skin. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire. Application of a direct flame to a container of liquid epoxy resin can also cause explosion and/or fire. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Conditions for safe storage, including any incompatabilities	Storage temperature: 2 - 43 °C (35 - 109 °F)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

1. Carbon black (CAS: 1333-86-4)
PEL (Inhalation): 3.5 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

2. Carbon black (CAS: 1333-86-4)
PEL (Inhalation): 3.5 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

3. Carbon black (CAS: 1333-86-4)
REL (Inhalation): 3.5 mg/m3Ę without PAHs); when PAHs are present, NIOSH considers carbon black to be a potential occupational carcinogen., See Appendix A,ƀee Appendix C (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

4. Calcium Carbonate (CAS: 1317-65-3)
PEL (Inhalation): see PNOR (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

5. Calcium Carbonate, Total dust (CAS: 1317-65-3)
PEL (Inhalation): 15 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

6. Calcium Carbonate, Total dust (CAS: 1317-65-3)
PEL (Inhalation): 10 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

7. Calcium Carbonate, Total dust (CAS: 1317-65-3)
REL (Inhalation): 10 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

8. Calcium Carbonate, Respirable fraction (CAS: 1317-65-3)
PEL (Inhalation): 5 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

9. Calcium Carbonate, Respirable fraction (CAS: 1317-65-3)
PEL (Inhalation): 5 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

10. Calcium Carbonate, Respirable fraction (CAS: 1317-65-3)
REL (Inhalation): 5 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

11. Limestone (CAS: 1317-65-3)
PEL (Inhalation): see PNOR (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

12. Limestone, Total dust (CAS: 1317-65-3)
PEL (Inhalation): 15 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

13. Limestone, Total dust (CAS: 1317-65-3)
PEL (Inhalation): 10 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

14. Limestone, Total dust (CAS: 1317-65-3)
REL (Inhalation): 10 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

15. Limestone, Respirable fraction (CAS: 1317-65-3)
PEL (Inhalation): 5 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

16. Limestone, Respirable fraction (CAS: 1317-65-3)
PEL (Inhalation): 5 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

17. Limestone, Respirable fraction (CAS: 1317-65-3)
REL (Inhalation): 5 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

18. Marble (CAS: 1317-65-3)
PEL (Inhalation): See PNOR (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

19. Marble, Total dust (CAS: 1317-65-3)
PEL (Inhalation): 15 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

20. Marble, Total dust (CAS: 1317-65-3)
PEL (Inhalation): 10 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

21. Marble, Total dust (CAS: 1317-65-3)
REL (Inhalation): 10 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

22. Marble, Respirable fraction (CAS: 1317-65-3)
PEL (Inhalation): 5 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

23. Marble, Respirable fraction (CAS: 1317-65-3)
PEL (Inhalation): 5 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

24. Marble, Respirable fraction (CAS: 1317-65-3)

REL (Inhalation): 5 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

Appropriate engineering controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Use safety glasses (with side shields).

Skin protection
Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL").
Nitrile/butadiene rubber ("nitrile" or "NBR"). Neoprene. Polyvinyl chloride ("PVC" or "vinyl").
NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Body protection
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Respiratory protection
Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance/form	viscous paste
Odor	Odorless to mild

Odor threshold	Not determined
pH	Not determined
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not determined
Flash point	264C/507F
Evaporation rate	Not determined
Flammability (solid, gas)	Not applicable
Upper/lower flammability limits	Not determined
Upper/lower explosive limits	Not applicable
Vapor pressure	Not determined
Vapor density	Not determined
Relative density	Not determined
Solubility(ies)	Not determined
Partition coefficient: n-octanold/water	Not determined
Auto-ignition temperature	Not applicable
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	No EEC A14
Oxidizing properties	No

10. STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under recommended storage conditions. See Storage, Section 7.
Possibility of hazardous reactions	Polymerization will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.
Incompatible materials	Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.
Hazardous decomposition products	Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects	
Acute toxicity	Ingestion LD 50, rat>15,000 mg/kg Dermal LD50, rabbit 23,000 mg/kg
Skin corrosion/irritation	Brief contact may cause moderate skin irritation with local redness. Skin sensitization: Has caused allergic skin reactions in humans. Has demonstrated the potential for contact allergy in mice.

Serious eye damage/irritation	Eye damage/eye irritation May cause moderate eye irritation.
Respiratory or skin sensitization	Inhalation: The LC50 has not been determined.
Carcinogenicity	Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBPA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBPA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBPA is carcinogenic.
Reproductive toxicity	In animal studies, did not interfere with reproduction. Resins based on the diglycidyl ether of bisphenol A (DGEBPA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.
STOT-single exposure	No relevant data found.
STOT-repeated exposure	Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.
Additional information	Genetic Toxicology: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

Toxicity	Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10mg/L in the most sensitive species tested). Fish Acute & Prolonged Toxicity: LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 h: 2 mg/l Aquatic Invertebrate Acute Toxicity: EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 1.8 mg/l Aquatic Plant Toxicity: ErC50, Scenedesmus capricornutum (fresh water algae), static test, Growth rate inhibition, 72 h: 11mg/l Toxicity to Micro-organisms: IC50; Bacteria, 18 h: > 42.6 mg/l Aquatic Invertebrates Chronic Toxicity Value: Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, NOEC: 0.3 mg/l
Persistence and degradability	Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Biodegradation: 12%, Exposure time: 28 days, Method: OCED 302B Test, 10 Day Window: Not applicable. Rate Constant: 6.69E-11 cm3/s, Atmospheric Half-life: 1.92h, Method: Estimated. Theoretical Oxygen Demand: 2.35 mg/mg
Bioaccumulative potential	Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Partition coefficient, n-octanol/water (log Pow): 3.242 Estimated.
Mobility in soil	Mobility in soil: Potential for mobility in soil is low (Koc between 500 and 2000). Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Partition coefficient, soil organic carbon/water (Koc): 1,800 - 4,400 Estimated. Henry's Law Constant (H): 4.93E-05 Pa*m3/mole.; 25 °C
Results of PBT and vPvB assessment	No data found.

13. DISPOSAL CONSIDERATIONS

Disposal of the product	DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.
Disposal of contaminated packaging	Dispose in normal method for emptied containers. Follow all applicable regulations.

14. TRANSPORT INFORMATION

DOT (US)	Not Regulated
IMDG	Not Regulated
IATA	Not Regulated

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question	
New Jersey Right to Know Components	Common name: CARBON BLACK CAS number: 1333-86-4
Pennsylvania Right to Know Components	Chemical name: Carbon black CAS number: 1333-86-4
New Jersey Right to Know Components	Common name: CALCIUM CARBONATE CAS number: 1317-65-3
Pennsylvania Right to Know Components	Chemical name: Limestone CAS number: 1317-65-3
Chemical Safety Assessment	OSHA Hazard Communication Standard This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 Immediate (Acute) Health Hazard Yes Delayed (Chronic) Health Hazard No Fire Hazard No Reactive Hazard No Sudden Release of Pressure Hazard No

	Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313. To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute. California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986). This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute. US. Toxic Substances Control Act All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.
HMIS Rating	Health: 2 Flammability: 0 Physical hazard: 0 Personal protection: X
NFPA Rating	Health hazard: 2 Fire hazard: 0 Reactivity hazard: 0 Special hazard

16. OTHER INFORMATION

Indentified Uses: Adhesive used in bonding and repairing.

N/A Not available
W/W Weight/Weight
OEL Occupational Exposure Limit
STEL Short Term Exposure Limit
TWA Time Weighted Average
ACGIH American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG Dow Industrial Hygiene Guideline
WEEL Workplace Environmental Exposure Level
HAZ_DES Hazard Designation
Action Level A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet