

Dear J-B Weld Customer,

Thank you for your interest in our products. This product is sold in a form where multiple discrete mixtures are present. The SDS for each part is presented below as shown in the table of contents. Please review the safety information for each part. If there are any questions or concerns, please contact our regulatory affairs department at regulatoryaffairs@jbweld.com.

The J-B Weld Team

Product name	: RadiatorWeld™ k
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Product code : 2120AUS

RadiatorWeld™ - Part A	2
RadiatorWeld™ - Part B	13

HPP Lunds 1/195 Jackson Road Sunnybank Hills, Qld , 4109 , Australia sales@hpplunds.com.au Tel: 1300-306-781

Website: www.jbweld.com.au

SAFETY DATA SHEET

RadiatorWeld™ - Part A



Section 1. Identification

Product identifier : RadiatorWeld™ - Part A

Product code : 2120A

Other means of : Resins.
identification

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

RadiatorWeld Radiator Repair Kit is a product designed for permanent or temporary repairs of radiators made from metal and other materials. RadiatorWeld repairs cracks of 4" or less and holes up to 1/4" diameter. Once cured, it is chemical resistant and withstands temperatures up to 250° F. This kit is not recommended for polyethylene or polypropylene repairs.

Uses advised against	Reason
See information supplied by the manufacturer.	

Supplier's details : HPP Lunds

1/195 Jackson Road

Sunnybank Hills, Qld, 4109, Australia

sales@hpplunds.com.au Tel: 1300-306-781

Website: www.jbweld.com.au

Emergency telephone

number

: US: +1 (800) 535-5053 (INFOTRAC®)

Outside USA: +1 (352) 323-3500 (INFOTRAC® INTL)

Section 2. Hazard(s) identification

Classification of the : SKIN CORROSION/IRRITATION - Category 2

substance or mixture SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

SKIN SENSITIZATION - Category 1

AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms





Signal word : WARNING

Hazard statements : Causes skin irritation.

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

Toxic to aquatic life with long lasting effects.

Precautionary statements

General: Read carefully and follow all instructions. Keep out of reach of children. If medical

advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Avoid release to the

environment. Avoid breathing vapor. Wash thoroughly after handling.

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Section 2. Hazard(s) identification

Response

: Collect spillage. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. 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 or attention.

Storage

: Not applicable.

Disposal

: Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Supplemental label

elements

: Not applicable.

Other hazards which do not : None known.

result in classification

Section 3. Composition and ingredient information

Substance/mixture Other means of identification

: Mixture : Resins.

Ingredient name	% (w/w)	Identifiers
reaction product: bisphenol-A-(epichlorhydrin)		CAS: 25068-38-6 EC: 500-033-5

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

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eve contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion: No specific data.

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It

may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear

gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being

discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide halogenated compounds

Special protective actions : Pro

for fire-fighters

: 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.

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

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: 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. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. 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. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

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Section 8. Exposure controls and personal protection

Appropriate engineering controls

Environmental exposure controls

- : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- : 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.

Individual protection measures

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: 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, gases 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 protection

Hand protection

: 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.

Body protection

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.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

<u>Appearance</u>

Physical state : Liquid.

Color : Black.

Odor : Characteristic.
Odor threshold : Not available.
pH : Not available.
Melting point/freezing point : Not available.
Boiling point or initial : Not available.

range

boiling point and boiling

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : Not available.

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Section 9. Physical and chemical properties and safety characteristics

Flammability Not available. Lower and upper explosion

limit/flammability limit

: Not available.

Vapor pressure

: 0.004 kPa (0.03 mm Hg)

Relative vapor density : Not available. : Not available. Relative density Solubility in water : Not available.

Miscible with water : No.

Partition coefficient: n-

octanol/water

: Not applicable.

Auto-ignition temperature Decomposition temperature

: Not available. : Not available.

Viscosity

Dynamic (room temperature): Not available. Kinematic (room temperature): Not available.

Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous

reactions

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

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name Result

reaction product: bisphenol-A-(epichlorhydrin) Rabbit - Skin - Moderate irritant

> Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 uL

Rabbit - Skin - Severe irritant

Duration of treatment/exposure: 24 hours Amount/concentration applied: 2 mg

Conclusion/Summary [Product] : Not available.

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Section 11. Toxicological information

Serious eye damage/eye irritation

Product/ingredient name

Rabbit - Eyes - Mild irritant

Result

reaction product: bisphenol-A-(epichlorhydrin)

Amount/concentration applied: 100 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

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Section 11. Toxicological information

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product]: Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed

to very low levels.

Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

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Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product]: Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin)	2.64 to 3.78	31	Low

Mobility in soil

Soil/Water partition coefficient

: Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADG	ADR/RID	IMDG	IATA
UN number	Not available.	UN3082	Not available.	Not available.
UN proper shipping name	Not available. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin)		Not available.	Not available.

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Section 14. Transport information

Transport hazard class(es)	Not available.	9	Not available.	Not available.
Packing group	-	III	-	-
Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : This product is not regulated as a dangerous good when transported in sizes of ≤5 L

or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2

and 4.1.1.4 to 4.1.1.8. Tunnel code (-)

The environmentally hazardous substance mark may appear if required by other **IATA**

transportation regulations.

Special precautions for user : Transport within user's premises: always transport in closed containers that are

upright and secure. Ensure that persons transporting the product know what to do in

the event of an accident or spillage.

Transport in bulk according : Not available.

to IMO instruments

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted. Canada : All components are listed or exempted. China : All components are listed or exempted.

Eurasian Economic Union : Russian Federation inventory: All components are listed or exempted.

Japan inventory (CSCL): All components are listed or exempted. Japan

Japan inventory (ISHL): All components are listed or exempted.

New Zealand : All components are listed or exempted. **Philippines** : All components are listed or exempted. Republic of Korea : All components are listed or exempted.

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RadiatorWeld™ - Part A

Section 15. Regulatory information

Taiwan : All components are listed or exempted.
Thailand : All components are listed or exempted.
Turkey : All components are listed or exempted.
United States : All components are listed or exempted.
Viet Nam : All components are listed or exempted.

Section 16. Any other relevant information

History

revision

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Key to abbreviations

: ADG = Australian Dangerous Goods

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group

SUSMP = Standard Uniform Schedule of Medicine and Poisons

UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

References : Not available

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 abovenamed 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.

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SAFETY DATA SHEET

RadiatorWeld™ - Part B



Section 1. Identification

Product identifier : RadiatorWeld™ - Part B

Product code : 2120B

Other means of identification

: Hardener for resins.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

RadiatorWeld Radiator Repair Kit is a product designed for permanent or temporary repairs of radiators made from metal and other materials. RadiatorWeld repairs cracks of 4" or less and holes up to 1/4" diameter. Once cured, it is chemical resistant and withstands temperatures up to 250° F. This kit is not recommended for polyethylene or polypropylene repairs.

Uses advised against	Reason
See information supplied by the manufacturer.	

Supplier's details : HPP Lunds

1/195 Jackson Road

Sunnybank Hills, Qld, 4109, Australia

sales@hpplunds.com.au Tel: 1300-306-781

Website: www.jbweld.com.au

Emergency telephone

number

: US: +1 (800) 535-5053 (INFOTRAC®)

Outside USA: +1 (352) 323-3500 (INFOTRAC® INTL)

Section 2. Hazard(s) identification

Classification of the substance or mixture

: ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity:

90%

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal

toxicity: 90%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the

aquatic environment: 100%

GHS label elements

Hazard pictograms



Signal word : WARNING

Hazard statements : Harmful if swallowed or in contact with skin.

Causes skin irritation.

Causes serious eye irritation.

Precautionary statements

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RadiatorWeld™ - Part B

Section 2. Hazard(s) identification

: Read carefully and follow all instructions. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention

: Wear protective gloves and protective clothing. Wear eye or face protection. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response

IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. 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 or attention.

Storage

: Not applicable.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label

elements

Not applicable.

Other hazards which do not : None known.

result in classification

Section 3. Composition and ingredient information

Substance/mixture

: Mixture

Other means of identification

: Hardener for resins.

Ingredient name	% (w/w)	Identifiers
2,4,6-tris(dimethylaminomethyl)phenol		CAS: 90-72-2 EC: 202-013-9

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

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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Section 4. First aid measures

Ingestion

: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards. Skin contact : Harmful in contact with skin. Causes skin irritation.

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

> pain or irritation watering

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

> irritation redness

redness

Ingestion : No specific data.

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

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

: No specific treatment.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides sulfur oxides

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Section 5. Fire-fighting measures

Special protective actions for fire-fighters

: 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.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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 and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

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. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. 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. 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. See Section 10 for incompatible materials before handling or use.

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Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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.

Individual protection measures

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.

Eye/face protection

: 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, gases 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 protection

Hand protection

: 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.

Body protection

: 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.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.
Color : White.

Odor : Characteristic.
Odor threshold : Not available.
pH : Not available.

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Section 9. Physical and chemical properties and safety characteristics

Melting point/freezing point : Not available.

Boiling point or initial : Not available.

boiling point and boiling range

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : Not available.
Flammability : Not available.
Lower and upper explosion : Not available.

limit/flammability limit

ilmit/fiammability limit

Vapor pressure : 0.004 kPa (0.03 mm Hg)

Relative vapor density: Not available.

Relative density : 1.13

Solubility in water : Not available.

Miscible with water : No.

Partition coefficient: n-

octanol/water

: Not applicable.

Auto-ignition temperature

Ingredient name	°C	°F	Method
2,4,6-tris(dimethylaminomethyl)phenol	382	719.6	EU A.15

Decomposition temperature: Not available.

Viscosity : Dynamic (room temperature): Not available.

Kinematic (room temperature): 1000 to 1600 mm²/s (1000 to 1600 cSt)

Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous

reactions

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

Conditions to avoid : No specific data.

Incompatible materials: No specific data.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name Result

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Section 11. Toxicological information

2,4,6-tris(dimethylaminomethyl)phenol

Rat - Oral - LD50

1200 mg/kg

<u>Toxic effects</u>: Peripheral Nerve and Sensation - Flaccid paralysis without anesthesia (usually neuromuscular blockage)

Lung, Thorax, or Respiration - Dyspnea

Rat - Dermal - LD50

1280 mg/kg

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name Result

2,4,6-tris(dimethylaminomethyl)phenol Rat - Skin - Mild irritant

Amount/concentration applied: 0.025 MI

Rat - Skin - Severe irritant

Amount/concentration applied: 0.25 MI

Rabbit - Skin - Severe irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 2 mg **Rabbit - Skin - Severe irritant**

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 500 uL

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name Result

2,4,6-tris(dimethylaminomethyl)phenol Rabbit - Eyes - Severe irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 50 ug

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product]: Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product]: Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

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Section 11. Toxicological information

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product]: Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.Skin contact : Harmful in contact with skin. Causes skin irritation.

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

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Section 11. Toxicological information

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.
 Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)		Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
RadiatorWeld™ - Part B	1200.0	1280	N/A	N/A	N/A
2,4,6-tris(dimethylaminomethyl)phenol	1200	1280	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary [Product]: Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product]: Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2,4,6-tris (dimethylaminomethyl) phenol	0.219	-	Low

Mobility in soil

Soil/Water partition : Not available.

coefficient

Other adverse effects

No known significant effects or critical hazards.

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Section 13. Disposal considerations

Disposal methods

: 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADG	ADR/RID	IMDG	IATA
UN number	Not available.	Not available.	Not available.	Not available.
UN proper shipping name	Not available.	Not available.	Not available.	Not available.
Transport hazard class(es)	Not available.	Not available.	Not available.	Not available.
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available. to IMO instruments

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

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Section 15. Regulatory information

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union: Russian Federation inventory: All components are listed or exempted.

Japan : Japan inventory (CSCL): All components are listed or exempted.

Japan inventory (ISHL): All components are listed or exempted.

New Zealand : All components are listed or exempted. : All components are listed or exempted. **Philippines** Republic of Korea : All components are listed or exempted. **Taiwan** : All components are listed or exempted. **Thailand** : All components are listed or exempted. **Turkey** : All components are listed or exempted. **United States** : All components are active or exempted. **Viet Nam** : All components are listed or exempted.

Section 16. Any other relevant information

History

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Key to abbreviations : ADG = Australian Dangerous Goods

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group

SUSMP = Standard Uniform Schedule of Medicine and Poisons

UN = United Nations

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION/IRRITATION - Category 2	Calculation method Calculation method Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method

References : Not available.

▼ Indicates information that has changed from previously issued version.

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Section 16. Any other relevant information

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed 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.

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