

## 1 . IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

**Product Name:** LOXEAL 58-11

**Recommended Use of the Chemical and Restriction on Use:** Anaerobic adhesive and sealant

**Details of Manufacturer or Importer:**

Bromic Group  
1 Suttor Street  
Silverwater NSW 2128

**Phone Number:** 02 9748 3900

**Emergency telephone number:** 1300 276 642

## 2 . HAZARDS IDENTIFICATION

**Hazardous Nature:**

H227 Combustible liquid.

**Label Elements**

**Signal Word** Warning

**Hazard Statements**

H227 Combustible liquid.

**Precautionary Statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P501 Dispose of contents/container in accordance with local/regional/national regulations.

## 3 . COMPOSITION AND INFORMATION ON INGREDIENTS

**Chemical Characterization: Mixtures**

**Description:** Mixture of substances listed below with nonhazardous additions.

**Hazardous Components:**

80-15-9	α,α -dimethylbenzyl hydroperoxide <h2>4 . FIRST AID MEASURES</h2>
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**Inhalation:** If inhaled, remove to fresh air. Seek medical attention if breathing problems develop.

**Skin Contact:**

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

**Eye Contact:**

In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

**Ingestion:**

If swallowed, rinse mouth with water. Give a glass of milk. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

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## 5 . FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Foam, dry chemical, carbon dioxide and water spray.

**Specific Hazards Arising from the Chemical**

Containers close to fire should be removed if safe to do so. Use water to keep fire exposed containers cool. Combustion produces carbon oxide and toxic fumes.

**Special Protective Equipment and Precautions for Fire Fighters**

Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing.

## 6 . ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear Safe Work Australia approved full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation.

**Environmental Precautions:**

In the event of a major spill, prevent spillage from entering drains or water courses.

**Methods and Materials for Containment and Cleaning Up:**

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal.

## 7 . HANDLING AND STORAGE

**Precautions for Safe Handling:**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

**Conditions for Safe Storage:**

Store in a cool, dry and well ventilated area. Keep container tightly closed. Protect from direct sunlight, heat/sparks/open flames/hot surfaces. Do not expose to temperatures exceeding 25 °C. Keep away from strong oxidising agents, strong acids and metals. To avoid contaminations do not refill containers with used product.

## 8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Standards (Safe Work Australia):**

**98-82-8 cumene**

NES	Short-term value: 375 mg/m <sup>3</sup> , 75 ppm
	Long-term value: 125 mg/m <sup>3</sup> , 25 ppm
Sk	

**Engineering Contols:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour below occupational exposure standards.

**Personal Protective Equipment (PPE):**

**Respiratory Protection:** Not necessary if room is well-ventilated.

**Skin Protection:**

Protective gloves (butyl rubber gloves 0.7 mm, breakthrough time 300 min (EN 374), PE or nitrile) and protective clothing. See Australian Standards AS/NZS 2161, 2210.1 and 2210.2 for more information. Gloves should be replaced regularly, especially after extended contact with the product.

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**Eye and Face Protection:**

Safety glasses with top and side shields or goggles. See Australian Standards AS/NZS 1336 and 1337 for more information.

**9 . PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:**

<b>Form:</b>	Viscous liquid
<b>Colour:</b>	Yellow
<b>Odour:</b>	Slightly pungent
<b>Odour Threshold:</b>	No information available
<b>pH-Value:</b>	4-6
<b>Melting point/Melting range:</b>	No information available
<b>Initial Boiling Point/Boiling Range:</b>	No information available
<b>Flash Point:</b>	> 100 °C (COC/DIN/ISO 2592)
<b>Flammability:</b>	Combustible liquid
<b>Auto-ignition Temperature:</b>	>380 °C
<b>Decomposition Temperature:</b>	Not determined.
<b>Explosion Limits:</b>	
<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable
<b>Vapour Pressure at 20 °C:</b>	< 0.5 mbar (DIN 51616)
<b>Relative Density at 20 °C:</b>	1-1.1 g/cm <sup>3</sup> (DIN 51757)
<b>Solubility in Water:</b>	Insoluble
<b>Viscosity:</b>	Viscous liquid
<b>VOC:</b>	<3.00 %

**10 . STABILITY AND REACTIVITY**

**Possibility of Hazardous Reactions:** Polymerisation over 100 °C.

**Chemical Stability:** Stable at ambient temperature and under normal conditions of use.

**Conditions to Avoid:** Heat, sparks, open flames, hot surfaces and direct sunlight.

**Incompatible Materials:** Strong oxidising agents, strong acids and metals.

**Hazardous Decomposition Products:** No information available

**11 . TOXICOLOGICAL INFORMATION**

**Toxicity:**

**LD<sub>50</sub>/LC<sub>50</sub> Values Relevant for Classification:**

**80-15-9 α,α -dimethylbenzyl hydroperoxide**

Oral	LD <sub>50</sub>	382 mg/kg (rat)
Dermal	LD <sub>50</sub>	500 mg/kg (rat)
Inhalation	LC <sub>50</sub> /4 h	220 mg/l (rat)

**Acute Health Effects**

**Inhalation:** Not expected to be a hazard.

**Skin:** May cause skin irritation.

**Eye:** May cause eye irritation.

**Ingestion:** Not expected to be a hazard.

**Skin Corrosion / Irritation:** Not expected to be a hazard.

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**Serious Eye Damage / Irritation:** Not expected to be a hazard.**Respiratory or Skin Sensitisation:** No sensitising effects known.**Germ Cell Mutagenicity:** No information available**Carcinogenicity:** This product does NOT contain any IARC listed chemicals.**Reproductive Toxicity:** No information available**Specific Target Organ Toxicity (STOT) - Single Exposure:** No information available**Specific Target Organ Toxicity (STOT) - Repeated Exposure:** No information available**Aspiration Hazard:** No information available**Chronic Health Effects:**

Prolonged contact with skin, especially with grazes, may cause sensitisation and dermatitis.

**Existing Conditions Aggravated by Exposure:** No information available**12 . ECOLOGICAL INFORMATION****Ecotoxicity:** No further relevant information available.**Aquatic toxicity:** Slightly hazardous for water.**Persistence and Degradability:** No further relevant information available.**Bioaccumulative Potential:** No further relevant information available.**Mobility in Soil:** No further relevant information available.**13 . DISPOSAL CONSIDERATIONS****Disposal Methods and Containers:** Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

**14 . TRANSPORT INFORMATION****UN Number** Not applicable**Proper Shipping Name** Not applicable**Dangerous Goods Class** Not applicable**Packing Group:** Not applicable**Marine pollutant:** No**15 . REGULATORY INFORMATION****Australian Inventory of Chemical Substances:**80-15-9 |  $\alpha,\alpha$  -dimethylbenzyl hydroperoxide**16 . OTHER INFORMATION****Creation Date:** 24.06.2013**Prepared by:** MSDS.COM.AU Pty Ltd[www.msds.com.au](http://www.msds.com.au)**Abbreviations and acronyms:**

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

VOC: Volatile Organic Compounds

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LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
IARC: International Agency for Research on Cancer  
STEL: Short Term Exposure Limit  
TWA: Time Weighted Average

**Disclaimer**

This MSDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011"

The information contained in this material safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Bromic Group makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. MSDS.COM.AU Pty Ltd is not in a position to warrant the accuracy of the data herein. The user is cautioned to make their own determinations as to the suitability of the information provided to the particular circumstances in which the product is used.

### Description

Anaerobic curing adhesive for sealing of metal thread joints only.

Approved for Gas (DVGW, DIN-EN 751-1), high pressure gas and GLP (Australian Gas Association - Approval No. 5048) for working pressure up to 20 Bars.

Approved for use with gaseous oxygen up to 10 Bars and +60°C (BAM 1432/95 4-755).

WRAS listed for contact with wholesome (potable) water, approval number 1310513.

NSF registered in cat. P1(n. 141234) as acceptable for use as a sealant in and around food processing area

It replaces PTFE tape and yarn and gives instant sealing against moderate pressure.

It seals against gas, water, LPG, hydrocarbons, oils and other chemicals.

Thixotropic property prevents migration of sealant from thread before or during curing.

Shock and vibrations resistant, sealing properties unaffected over the temperature range from -55°C to +150°C.

### Physical properties

Composition :	anaerobic methacrylate
Colour :	yellow
Fluorescence :	under blue light
Viscosity (+25°C - mPa s) :	20.000 - 80.000 thixotropic
Specific weight (+25°C - g/ml) :	1,1
gap filling :	M56 / 2" / 0,30 mm
Flash point :	> +100°C
Shelf life +25°C :	1 year in original unopened packaging

### Curing performance

Curing rate depends on the assembly clearance, material surfaces and temperature. In case of passive surfaces and/or low temperature a fast cure can be obtained using Loxeal activator 11.

### Curing properties (typical)

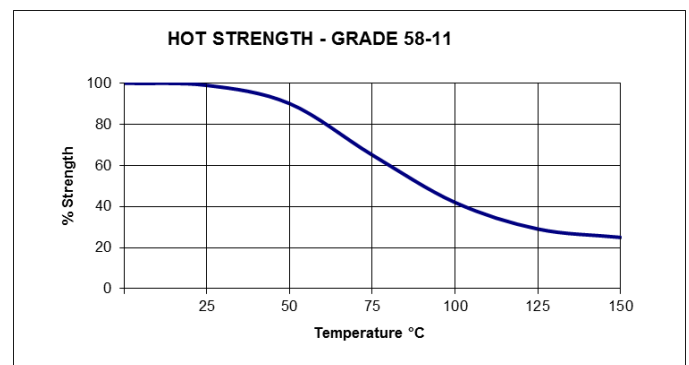
Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C :	
Handling cure time :	15 - 30 minutes
Functional cure time :	1 - 3 hours
Shear strength(ISO 10123) :	6 - 13 N/mm <sup>2</sup>
Locking torque (ISO 10964) :	
- breakaway :	18 - 24 N m
- prevailing :	7 - 14 N m
Temperature range :	-55°C/ +150°C

### Environmental resistance

#### Hot strength

The graph below shows the mechanical strength vs. temperature.

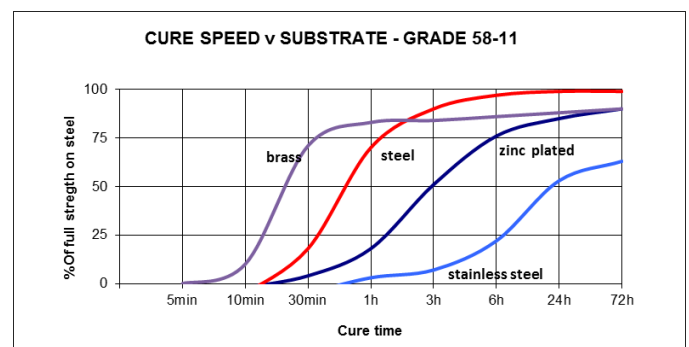
ISO 10964 - Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C - pre-torque 5 N m



#### Cure speed v substrate

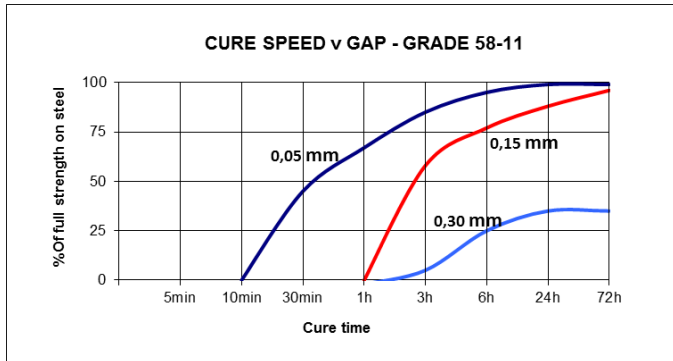
The graph hereunder shows the breakaway strength development of the product (with time) on nuts/bolts M10 x 20 in comparison among several substrates.

Tested in accordance with ISO 10964 at + 25°C.



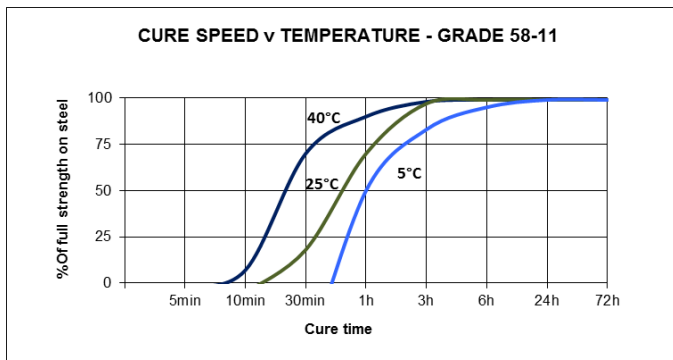
**Cure speed v gap**

The graph below shows the product shear strength (as %) at different controlled gaps. Steel pins/collars, tested in accordance with ISO 10123 at + 25°C.



**Cure speed v temperature**

The following graph shows the breakaway strength of the product (as %) at different temperatures. Steel nuts/bolts M10 x 20, tested according to ISO 10964.

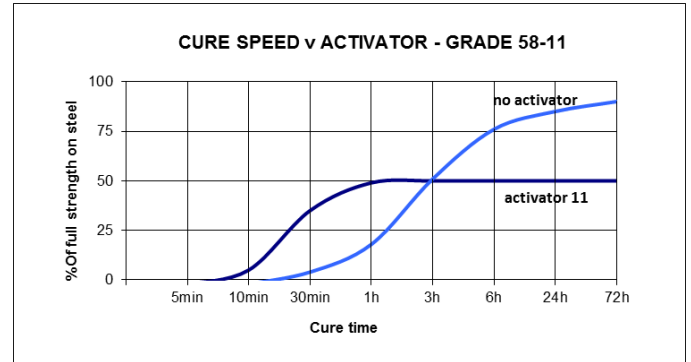


**Cure speed v activator**

Curing could be slowed down by the nature of the substrate or large gaps; cure speed can be improved by applying appropriate activator to the substrate(s).

The following graph shows the breakaway strength of the product (as %) and the cure speed developments using our activator 11 compared to the ones with no activator.

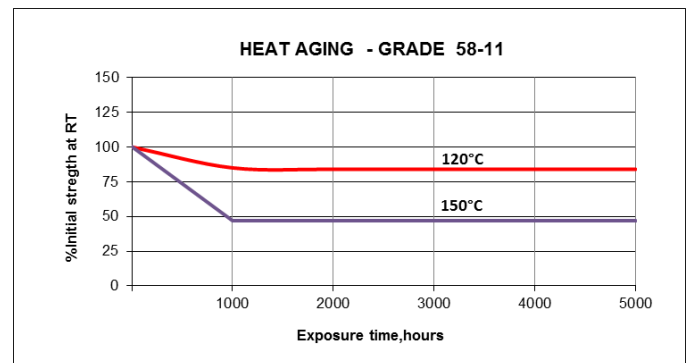
Zn nuts/bolts M10 x 20, tested according to ISO 10964 at a temperature of + 25°C.



**Heat aging**

The graph below shows the strength resistance behavior as a function of temperature/time .

Zn nuts/bolts M10 x 20 - (pre-torque of 5 N m, cured 7 days at +25°C) - aged at temperature indicated and tested at +25°C according to ISO 10964.



**Chemical resistance**

Aged under conditions below after 24 hours from polymerisation at indicated temperature.

Substance	°C	Resistance after 100 h	Resistance after 500 h	Resistance after 1000 h
Motor oil	125	excellent	excellent	excellent
Gear box oil	125	excellent	excellent	excellent
Gasoline	25	excellent	excellent	excellent
Water/glycol 50%	87	excellent	excellent	good
Hydraulic oil	25	excellent	excellent	good

For information on resistance with other chemicals, contact Loxeal Technical Service.

**General instructions for use**

The product is recommended for use on metal thread joints only.

Clean and degrease parts before bonding with Loxeal Cleaner 10.

Cut back stepped nozzle to give required bead size. Do not contaminate adhesive with metal.

Apply continuous bead circumferentially, 1-2 threads from the leading edge. Ensure sufficient is applied to give a complete seal.

Assemble and tighten the joint.

Wipe off any uncured excess adhesive from outside the joint.

Allow to cure. The time taken to reach a full cure will depend on the metals being used.

**TIME TO CURE FOR USE WITH WHOLESOME (POTABLE) WATER**

For Brass, Copper and Cast Iron allow 24 hours at +21.1°C.

For Stainless Steel and Aluminium allow 7 days at +21.1°C.

WRAS Approval number: 1310513 for use with cold and hot water up to +85°C.

Liquid product can damage coating, some plastics and elastomers and late stress-cracking events might be induced if used with some thermoplastics.

For application on non metal materials, contact Loxeal Technical Service. For disassembly, use normal tools and eventually heat pieces at +150°C/+250°C, remove any residue of cured product mechanically and clean parts with Acetone

**Storage**

Keep product in a cool and dry room at no more than +25°C.

To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Loxeal Technical Service

**Safety and handling**

Consult Material Safety Data Sheet before use.

**Note**

The data contained herein, obtained in Loxeal laboratories, are given for information only; if specifics are required, please contact Loxeal Technical Department.

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# Certificate of Approval

This certificate confirms that the company below complies with the following standard(s):

Company Name	<b>Bromic Pty Ltd</b>	Client ID	<b>100177</b>
Company Other Name		Type of Certification	<b>Product Certification; System 1</b>
Certification Standard	<b>AS/NZS 4020-2005 : Testing of products for use in contact with drinking water</b>		
Certification Review Date	<b>16/12/2008</b>	Certification Expiry Date	<b>16/12/2017</b>
Certificate Issue Date	<b>12/01/2009</b>	Certificate Last Update Date	<b>20/12/2014</b>

**APPROVED COMPANY/SITE ADDRESS(ES):**

**1 Suttor Street Silverwater 2128 NSW Australia**

This certification remains valid until the above mentioned expiry date and subject to the organisation's continued compliance with the certification standard, and Global-Mark's Terms and Conditions. This Certificate of Approval remains the property of Global-Mark Pty Ltd, Company Number: ACN.108-087-654. The use of the Accreditation Mark indicates accreditation by the Joint Accreditation System of Australia and New Zealand in respect to those activities covered by JAS-ANZ accreditation. Refer to [www.jas-anz.org/register](http://www.jas-anz.org/register) for verification.



**Certification Manager**



Unique Certificate Code: **381593761CEB5EDCCA257DB3007C0558**

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Model Identification	Model Name	Brand Name	Product Description/Attributes	Date Approved
Loxal 58-11	Loxal 58-11	Loxal	Anaerobic Adhesive, Maximum Temperature 80 Degree C.	12/01/2009

Comments:

End of the document



**Certification Manager**

