



LOCTITE[®] 5331[™]

May 2010

PRODUCT DESCRIPTION

LOCTITE[®] 5331[™] provides the following product characteristics:

Technology	Silicone
Chemical Type	Acetoxy silicone
Appearance (uncured)	White paste
Components	One component - requires no mixing
Viscosity	Medium
Cure	Humidity
Application	Thread sealing
Strength	Low

LOCTITE[®] 5331[™] is recommended for use on plastic pipe threaded fittings carrying hot or cold water. This product cures at ambient temperatures under the influence of atmospheric moisture to form a low strength flexible seal against hot and cold water.

NSF International

Registered to NSF Category P1 for use as a sealant where there is no possibility of food contact in and around food processing areas. **Note:** This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Flash Point - See MSDS	
Viscosity, Brookfield - RVT, 25 °C, mPa-s (cP):	
Spindle 7, speed 10 rpm	50,000

Instant Sealing Capability

The cure speed of this product is independent of substrates but requires atmospheric humidity 40% minimum to develop full sealing capability (0.3 MPa) within 12 hours. Instant seal capability is 0.05 MPa water pressure as measured on 25.4 mm fittings. Low temperatures do not reduce the effectiveness of this sealant unless the atmospheric moisture is also low.

TYPICAL CURING PERFORMANCE

Open Time

Open Time @ 25°C, minutes	5
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TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 72 hours @ 22 °C

Breakaway Torque, ISO 10964:	
M10 steel nuts and bolts	N-m 1.5 (lb.in.) (13.3)
Prevail Torque, ISO 10964:	
M10 steel nuts and bolts	N-m 0.5 (lb.in.) (4.42)

Breakloose Torque, ISO 10964, Pre-torqued to 5 N·m:

M10 steel nuts and bolts	N-m 4.5 (lb.in.) (39.8)
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Max. Prevail Torque, ISO 10964, Pre-torqued to 5 N·m:

M10 steel nuts and bolts	N-m 1.0 (lb.in.) (8.85)
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TYPICAL ENVIRONMENTAL RESISTANCE

The low strength of this sealant is maintained at temperatures up to 150 °C

Sealing capability is maintained up to 0.3 MPa in water @ 90 °C. Tests on steel fittings using water/glycol maintained seals cycling 20 to 90 °C for 12 months without leaking.

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Directions for use:

1. Apply the product to the threaded parts (these may be to, "as received" parts or parts cleaned with a damp cloth or paper towel).
2. Product should be applied to both male and female threads and then worked into the threads to ensure good wetting.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.



Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

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Reference 1.2

This safety data sheet has been prepared in accordance with the requirements of EC Directive 88/379/EEC and 91/155/EEC (and other related directives) and provides information relating to the safe handling and use of the product.

1. PRODUCT AND COMPANY INFORMATION

Product Code 0128042
Trade Name 5331
Manufacturer/Supplier Loctite UK
Address Watchmead,
Welwyn Garden City,
Herts., AL71JB.
Phone Number 01 707 358800
Fax Number 01 707 358900
Emergency Phone Number +353-1-4599301/+353-1-87-2629625/+353-1-4046444

2. COMPOSITION / INFORMATION ON INGREDIENTS

Nature Acetoxy curing silicone.
Mixtures of polydimethylsiloxanes, organic fillers and crosslinkers.

Hazardous Components in Product for EC

Component Name	Concentration	R Phrases	Classification
Acetoxy Silane	1.00 - 5.00	R14, R34	C

3. HAZARD IDENTIFICATION

This product is not classified as hazardous.
Acetoxy curing silicones release acetic acid vapours in contact with moisture. Acetic acid is corrosive and irritating to the eyes and respiratory system.

4. FIRST AID MEASURES

First Aid - Inhalation

Volatile by-product released during polymerisation may cause irritation to respiratory system.
Remove affected person to fresh air.

First Aid - Skin

Wash skin with plenty of soap and water.

First Aid - Eyes

Volatile by-product released during polymerisation may cause irritation to eyes.
Flush eyes with plenty of water for at least 15 minutes. If irritation persists seek medical attention.

First Aid - Ingestion

Rinse mouth with water then give plenty of water to drink. Do not induce vomiting. Seek medical advice.

5. FIRE FIGHTING MEASURES

No unusual fire hazards.

Non flammable product (flash point is greater than 100°C (CC)).

If product is involved in fire extinguish with dry powder, foam or carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

For small spills wipe up with paper towel and place in container for disposal.

Silicones release by products in contact with moisture which are irritating to eyes and respiratory system.

7. HANDLING AND STORAGE

Handling

No special handling requirements.

Avoid contact with skin and eyes.

Adequate ventilation is recommended to remove traces of odour.

Storage

No special storage conditions required.

Keep in a cool, well-ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Good industrial hygiene practices should be observed.

In circumstances where there is a potential for prolonged or repeated skin contact, the use of disposable gloves (polyethylene, natural rubber or equivalent ester-resistant material) is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Paste.
Colour	White.
Odour	Sharp. Acidic.
pH	Not applicable.
Boiling Range/Point (°C)	---
Flash Point (CC) (°C)	> 100
Specific Gravity	1.14/ml at 20 °C.
Solubility in Water (kg/m³)	Partially soluble.
Solubility in Acetone	Insoluble
Vapour Pressure (mmHg @25°C)	<0.1 mmHg at 20 °C.
Explosion Limits (%)	N/A

10. STABILITY AND REACTIVITY

The product is relatively stable under normal conditions of use.
Polymerisation will occur in the presence of moisture.

11. TOXICOLOGICAL INFORMATION

Inhalation

Due to the low volatility of the product there are no hazards associated with inhalation under normal conditions of use.

Acetic acid released during the polymerisation of acetoxy curing RTV silicones is harmful to the respiratory system.

Skin

This Product is of low toxicity and is not easily absorbed through the skin.

Acetic acid released during polymerisation of acetoxy curing RTV silicones is irritating to the skin.

Eyes

Not considered to be an eye irritant.

Acetic acid released during polymerisation of acetoxy curing RTV silicones is irritating to the eyes.

Ingestion

This product is considered to be of low toxicity.

12. ECOLOGICAL INFORMATION

Keep away from drains and open waters.

Biodegradable product of low ecotoxicity.

Does not contain substances listed on the Montreal protocol.

Cured Loctite products are typical polymers and do not pose any immediate environmental hazards.

Biological and Chemical Oxygen Demands (BOD and COD) of cured Loctite products are insignificant.

Precautions required with respect to Environmental Hazards of articles in which this product is used should be considered.

13. DISPOSAL CONSIDERATIONS

After use, tubes, cartons and bottles containing residual product should be disposed of as "chemically contaminated waste" in an authorised legal land fill site or incinerated.

Large quantities of unused products may be disposed as chemical waste after polymerizing by adding Water.

Dispose of in accordance with local and national regulations.

Contribution of this product to waste is very insignificant in comparison to article in which it is used. Regulations governing disposal of individual articles apply.

14. TRANSPORT INFORMATION

UN Number	Not classified.
Air (IATA)	Not classified.
Sea (IMO)	Not classified.

14. TRANSPORT INFORMATION

Road (ADR)/Rail (RID)	Not classified.
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15. REGULATORY INFORMATION

Contains	N/A
Labelling Information	None
R phrases	None.
S phrases	None.
Voluntary Labelling	Volatile by-products are released during polymerisation. See safety data sheet for further information.

16. OTHER INFORMATION

MSDS first issued	11 February 1996
MSDS data revised	5 March 1999

Prepared by:
Dr. Prabhu Kulkarni FICI., MIOSH., MBIRA.,
Senior Chemist.
Health & Regulatory Affairs - Europe

Further Information may be obtained from:-

Loctite Corporation,
Health and Regulatory Affairs - Europe,
Tallaght Business Park,
Whitestown,
Dublin 24,
Ireland.

Tel: +353-1-4046444.

Fax: +353-1-4510806.

Supersedes Safety Data Sheet No: 0128042 dated 10th November 1997.

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