



Henkel Corporation

Digi-Key Corporation  
16166 125th Ave NE  
Thief River Falls, MN 56701-8489  
United States

Date: 10/20/2021

Dear Valued Customer:

Enclosed please find a new or revised Safety Data Sheet(s) (SDSs). You are receiving this/these in accordance with country/regional regulatory requirements.

<u>Item Number</u>	<u>IDH Number</u>	<u>Product Description</u>
MM00994	386832	LOCTITE 370 SN60 5C 1.63MM S known as 60/40 370 5C 1.63MM 0.5KG AM (
MM02104	796037	LOCTITE C 511 97SC 3C 0.38MM G known as 97SC C511 3C 0.38MM 0.25KG AM
MM01054	450314	LOCTITE C 400 SN63 3C 0.56MM S known as 63/37 C400 3C 0.56MM 0.5KG AM
MM01879	673831	LOCTITE C 400 97SC 3C 1.22MM H known as 97SC C400 3C 1.22MM 0.5KG AM
MM01066	395451	LOCTITE C 502 SN63 5C 0.81MM S known as 63/37 C502 5C 081MM 0.5KG AM (
MM00991	386820	LOCTITE HYDX SN63 3C 0.56MM R known as 63/37 HX 3C 0.56MM 0.25KG AM (
MM01006	397952	LOCTITE 366 HMP 5C 0.56MM R known as HMP 366 5C 0.56MM 0.25KG AM (0
M00449	519430	LOCTITE MP 200 RWF 27U known as Tacky Flux MP200
M00603	760089	LOCTITE MFR 301 known as MFR301 Flux Pen
MM01921	706397	LOCTITE TTC-LF 32 known as MM01921 Tinner Cleaner

Previous versions of these documents should be replaced by the newer version.

SDSs should be forwarded to personnel responsible for workplace safety and to employees who will be handling this/these product(s) to ensure awareness and understanding of safety concerns and regulatory responsibilities. SDSs must also be forwarded on to your customers if you further distribute or resell the product.

If you have any questions, please contact your local Product Safety and Regulatory Affairs Specialist.



Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your\_company.com).

For Safety Data Sheet updates please visit our website  
<https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

Sincerely,

Henkel Product Safety and Regulatory Affairs



Revision Number: 007.0

Issue date: 04/22/2019

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	LOCTITE C 502 SN63 5C 0.81MM S known as 63/37 C502 5C 081MM 0.5KG AM (	<b>IDH number:</b>	395451
<b>Product type/use:</b>	Solder Wire	<b>Item number:</b>	MM01066
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b>	Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** HARMFUL IF SWALLOWED OR IF INHALED.  
MAY CAUSE DROWSINESS OR DIZZINESS.  
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.  
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	4
REPRODUCTIVE TOXICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

**PICTOGRAM(S)**



**Precautionary Statements**

<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, clothing, eye and face protection.
<b>Response:</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF exposed or concerned: Get medical attention.
<b>Storage:</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal:</b>	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Tin	7440-31-5	60 - 80
Lead	7439-92-1	30 - 60

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Do not use water on fires where molten metal is present.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of nitrogen. Oxides of Metals in Section 3. Formaldehyde. High temperatures may produce heavy metal dust, fumes or vapours. The flux medium will give rise to irritating fumes.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up spilled material and place in a closed container for disposal.

## 7. HANDLING AND STORAGE

**Handling:** Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes, skin and clothing. Avoid skin contact with molten resins. When using, do not eat, drink or smoke. Wash thoroughly after handling.

**Storage:** Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tin	2 mg/m3 TWA	2 mg/m3 PEL (as Sn)	None	None
Lead	0.05 mg/m3 TWA (as Pb)	0.05 mg/m3 TWA 0.03 mg/m3 OSHA_ACT	None	None

**Engineering controls:** Use only with adequate ventilation. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:** Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

**Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Solid
<b>Color:</b>	Gray
<b>Odor:</b>	None
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	8.4
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	Product is a solid.
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	< 5 % (calculated)
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Acids. Bases. Oxidizing agents.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Ingestion

**Potential Health Effects/Symptoms**

<b>Inhalation:</b>	Harmful if inhaled. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures. Vapor overexposure may cause drowsiness. Dizziness.
<b>Skin contact:</b>	May cause skin irritation.
<b>Eye contact:</b>	May cause eye irritation.
<b>Ingestion:</b>	Harmful if swallowed. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Symptoms of lead poisoning include abdominal pain, nausea, vomiting, and headache.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Lead	None	Behavioral, Blood, Developmental, Eyes, Gastrointestinal, Kidney, Liver, Muscle, Nervous System, Reproductive, Skin, Some evidence of carcinogenicity, Thyroid

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tin	No	No	No
Lead	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. Do not dispose of in an uncontrolled manner.

**Hazardous waste number:** This product contains a component or components identified as hazardous under 40 CFR 261.24. D008: Lead

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### Water Transportation (IMO/IMDG)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Lead (CAS# 7439-92-1).

**CERCLA Reportable quantity:** Lead (CAS# 7439-92-1) 10 lbs. (4.54 kg)

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

## Canada Regulatory Information

**CEPA DSL/NDSL Status:** Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

## 16. OTHER INFORMATION

**This safety data sheet contains changes from the previous version in sections:** New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 04/22/2019

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.





Revision Number: 004.0

Issue date: 07/12/2018

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	LOCTITE HYDX SN63 3C 0.56MM R known as 63/37 HX 3C 0.56MM 0.25KG AM (	<b>IDH number:</b>	386820
<b>Product type:</b>	Solder Wire	<b>Item number:</b>	MM00991
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b>	Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** HARMFUL IF SWALLOWED OR IF INHALED.  
MAY CAUSE DROWSINESS OR DIZZINESS.  
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.  
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	4
REPRODUCTIVE TOXICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

**PICTOGRAM(S)**



**Precautionary Statements**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, clothing, eye and face protection.

**Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF exposed or concerned: Get medical attention.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal:** Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Tin	7440-31-5	60 - 70
Lead	7439-92-1	30 - 40
Polyethylene glycol MW 4000	25322-68-3	1 - 5

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Do not use water on fires where molten metal is present.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of nitrogen. Oxides of Metals in Section 3. Formaldehyde. High temperatures may produce heavy metal dust, fumes or vapours. The flux will give rise to irritating fumes.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up spilled material and place in a closed container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

**Handling:** Use only in well-ventilated areas. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes, skin and clothing. When using do not eat, drink or smoke. Wash thoroughly after handling.

**Storage:** Store in original container until ready to use. Store in a cool, dry, well-ventilated area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tin	2 mg/m3 TWA	2 mg/m3 PEL (as Sn)	None	None
Lead	0.05 mg/m3 TWA (as Pb)	0.05 mg/m3 TWA 0.03 mg/m3 OSHA_ACT	None	None
Polyethylene glycol MW 4000	None	None	10 mg/m3 TWA Particulate.	None

**Engineering controls:** Use adequate ventilation to remove molten vapors or fumes. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:** Safety goggles or safety glasses with side shields.

**Skin protection:** Chemical resistant, impermeable gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Solid
<b>Color:</b>	Gray
<b>Odor:</b>	None
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	Not available.
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	Does not flash.
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	< 5 % (calculated)
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Strong acids and strong bases. Oxidizing agents.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Ingestion

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	Harmful if inhaled. Inhalation of processing fumes may be harmful. Vapor overexposure may cause drowsiness. Dizziness. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.
<b>Skin contact:</b>	May cause skin irritation.
<b>Eye contact:</b>	May cause eye irritation.
<b>Ingestion:</b>	Harmful if swallowed. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Symptoms of lead poisoning include abdominal pain, nausea, vomiting, and headache.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Lead	None	Behavioral, Blood, Developmental, Eyes, Gastrointestinal, Kidney, Liver, Muscle, Nervous System, Reproductive, Skin, Some evidence of carcinogenicity, Thyroid
Polyethylene glycol MW 4000	None	Irritant

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tin	No	No	No
Lead	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No
Polyethylene glycol MW 4000	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. Do not dispose of in an uncontrolled manner.

**Hazardous waste number:** D008: Lead

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### Water Transportation (IMO/IMDG)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Lead (CAS# 7439-92-1).

**CERCLA Reportable quantity:** Lead (CAS# 7439-92-1) 10 lbs. (4.54 kg)

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

#### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 07/12/2018

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



Revision Number: 005.0

Issue date: 07/19/2018

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	LOCTITE C 400 97SC 3C 1.22MM H known as 97SC C400 3C 1.22MM 0.5KG AM	<b>IDH number:</b>	673831
<b>Product type:</b>	Solder Wire	<b>Item number:</b>	MM01879
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b>	Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

NOT CLASSIFIED. READ ENTIRE SAFETY DATA SHEET.

HAZARD CLASS	HAZARD CATEGORY
None	None

**PICTOGRAM(S)**

None

**Precautionary Statements**

<b>Prevention:</b>	Not prescribed
<b>Response:</b>	Not prescribed
<b>Storage:</b>	Not prescribed
<b>Disposal:</b>	Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Hazardous Component(s)	CAS Number	Percentage*
Tin	7440-31-5	90 - 100
Silver	7440-22-4	1 - 5

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.
<b>Symptoms:</b>	See Section 11.

#### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide. Do not use water on molten metal.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Formaldehyde. Oxides of Metals in Section 3. High temperatures may produce heavy metal dust, fumes or vapors. Thermal decomposition can lead to release of irritating gases and vapors.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up as much material as possible. Keep in suitable and closed containers for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Use only in well-ventilated areas. Wear suitable protective clothing, gloves and eye/face protection. Avoid skin contact with molten resins. Avoid contact with eyes, skin and clothing. When using, do not eat, drink or smoke. Wash thoroughly after handling.
<b>Storage:</b>	Store in original container until ready to use. Store in a cool, dry area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.



## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tin	2 mg/m3 TWA	2 mg/m3 PEL (as Sn)	None	None
Silver	0.1 mg/m3 TWA Dust and fume.	0.01 mg/m3 PEL (as Ag)	None	None

<b>Engineering controls:</b>	Use adequate ventilation to remove molten vapors or fumes. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
<b>Respiratory protection:</b>	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
<b>Eye/face protection:</b>	Safety goggles or safety glasses with side shields.
<b>Skin protection:</b>	Chemical resistant, impermeable gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Solid
<b>Color:</b>	Gray
<b>Odor:</b>	None
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Negligible vapor pressure at ambient temperatures.
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	217 °C (422.6 °F) (solder alloy)
<b>Specific gravity:</b>	7.5
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	Product is a solid.
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	Negligible
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Strong oxidizing agents. Strong acids and strong bases.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

### Potential Health Effects/Symptoms

**Inhalation:** Inhalation of processing fumes may be harmful. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.

**Skin contact:** May cause skin irritation. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).

**Eye contact:** May cause eye irritation.

**Ingestion:** May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Silver	Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg	Allergen, Eyes, Irritant, Respiratory, Skin

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tin	No	No	No
Silver	No	No	No

## 12. ECOLOGICAL INFORMATION

Ecological information: Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. Do not dispose of in an uncontrolled manner.

**Hazardous waste number:** D011. Silver.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

Water Transportation (IMO/IMDG)  
Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

## 15. REGULATORY INFORMATION

### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.  
**TSCA 12 (b) Export Notification:** None above reporting de minimis  
**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Silver (CAS# 7440-22-4).  
**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 07/19/2018

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.





Revision Number: 006.0

Issue date: 07/12/2018

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE C 400 SN63 3C 0.56MM S</b> known as <b>63/37 C400 3C 0.56MM</b> <b>0.5KG AM</b>	<b>IDH number:</b>	450314
<b>Product type:</b>	Solder Wire	<b>Item number:</b>	MM01054
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b>	Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** HARMFUL IF SWALLOWED OR IF INHALED.  
MAY CAUSE DROWSINESS OR DIZZINESS.  
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.  
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	4
REPRODUCTIVE TOXICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

**PICTOGRAM(S)**



**Precautionary Statements**

<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, clothing, eye and face protection.
<b>Response:</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF exposed or concerned: Get medical attention.
<b>Storage:</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal:</b>	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Tin	7440-31-5	60 - 70
Lead	7439-92-1	30 - 40

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Do not use water on fires where molten metal is present.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of nitrogen. Oxides of Metals in Section 3. Formaldehyde. High temperatures may produce heavy metal dust, fumes or vapours. The flux will give rise to irritating fumes.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up spilled material and place in a closed container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

**Handling:** Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes, skin and clothing. When using do not eat, drink or smoke. Wash thoroughly after handling.

**Storage:** For safe storage, store between 15 °C (59°F) and 30 °C (86°F) Keep cool in accordance with information on label and in Technical Data Sheets.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tin	2 mg/m3 TWA	2 mg/m3 PEL (as Sn)	None	None
Lead	0.05 mg/m3 TWA (as Pb)	0.05 mg/m3 TWA 0.03 mg/m3 OSHA_ACT	None	None

**Engineering controls:** Use adequate ventilation to remove molten vapors or fumes. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:** Safety goggles or safety glasses with side shields.

**Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Solid
<b>Color:</b>	Gray
<b>Odor:</b>	None
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	183 °C (361.4 °F)
<b>Specific gravity:</b>	8.4
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	Product is a solid.
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	< 5 % (calculated)
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Strong oxidizing agents. Strong acids and strong bases.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Ingestion

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	Harmful if inhaled. Inhalation of processing fumes may be harmful. Vapor overexposure may cause drowsiness. Dizziness. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels.
<b>Skin contact:</b>	May cause skin irritation.
<b>Eye contact:</b>	May cause eye irritation.
<b>Ingestion:</b>	Harmful if swallowed. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Symptoms of lead poisoning include abdominal pain, nausea, vomiting, and headache.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Lead	None	Behavioral, Blood, Developmental, Eyes, Gastrointestinal, Kidney, Liver, Muscle, Nervous System, Reproductive, Skin, Some evidence of carcinogenicity, Thyroid

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tin	No	No	No
Lead	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.



### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. Do not dispose of in an uncontrolled manner.

**Hazardous waste number:** D008: Lead

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### Water Transportation (IMO/IMDG)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Lead (CAS# 7439-92-1).

**CERCLA Reportable quantity:** Lead (CAS# 7439-92-1) 10 lbs. (4.54 kg)

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

#### Canada Regulatory Information

**CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 07/12/2018

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



Revision Number: 006.0

Issue date: 04/24/2019

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE 366 HMP 5C 0.56MM R</b> known as <b>HMP 366 5C 0.56MM 0.25KG AM (0)</b>	<b>IDH number:</b>	397952
<b>Product type/use:</b>	Solder Wire	<b>Item number:</b>	MM01006
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b>	Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkeln.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** HARMFUL IF SWALLOWED OR IF INHALED.  
MAY CAUSE DROWSINESS OR DIZZINESS.  
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.  
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	4
REPRODUCTIVE TOXICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

**PICTOGRAM(S)**



**Precautionary Statements**

<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, clothing, eye and face protection.
<b>Response:</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF exposed or concerned: Get medical attention.
<b>Storage:</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal:</b>	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Lead	7439-92-1	80 - 100
Tin	7440-31-5	1 - 5
Silver	7440-22-4	1 - 5

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Do not use water on fires where molten metal is present.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. High temperatures may produce heavy metal dust, fumes or vapours. The flux medium will give rise to irritating fumes.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear protective clothing, gloves and safety glasses. Scrape up spilled material and place in a closed container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

**Handling:** Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes, skin and clothing. Avoid skin contact with molten resins. When using, do not eat, drink or smoke. Wash thoroughly after handling.

**Storage:** Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Store in original container until ready to use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Lead	0.05 mg/m3 TWA (as Pb)	0.05 mg/m3 TWA 0.03 mg/m3 OSHA_ACT	None	None
Tin	2 mg/m3 TWA	2 mg/m3 PEL (as Sn)	None	None
Silver	0.1 mg/m3 TWA Dust and fume.	0.01 mg/m3 PEL (as Ag)	None	None

**Engineering controls:** Use adequate ventilation to remove molten vapors or fumes. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:** Safety goggles or safety glasses with side shields.

**Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Solid, Paste
<b>Color:</b>	Gray
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	11.1
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	> 100 °C (> 212°F)
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	< 5 %
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Strong oxidizing agents. Strong acids and strong bases.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Ingestion

**Potential Health Effects/Symptoms**

<b>Inhalation:</b>	Harmful if inhaled. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures. Vapor overexposure may cause drowsiness. Dizziness.
<b>Skin contact:</b>	May cause skin irritation. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).
<b>Eye contact:</b>	May cause eye irritation.
<b>Ingestion:</b>	Harmful if swallowed. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Symptoms of lead poisoning include abdominal pain, nausea, vomiting, and headache.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Lead	None	Behavioral, Blood, Developmental, Eyes, Gastrointestinal, Kidney, Liver, Muscle, Nervous System, Reproductive, Skin, Some evidence of carcinogenicity, Thyroid
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Silver	Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg	Allergen, Eyes, Irritant, Respiratory, Skin

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Lead	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No
Tin	No	No	No
Silver	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: D011. Silver. D008: Lead

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

#### International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

#### Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Lead (CAS# 7439-92-1). Silver (CAS# 7440-22-4).  
**CERCLA Reportable quantity:** Lead (CAS# 7439-92-1) 10 lbs. (4.54 kg)

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

#### Canada Regulatory Information

**CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 04/24/2019

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.





Revision Number: 006.0

Issue date: 12/17/2019

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE C 511 97SC 3C 0.38MM G</b> known as <b>97SC C511 3C 0.38MM</b> <b>0.25KG AM</b>	<b>IDH number:</b>	796037
<b>Product type/use:</b>	Solder Wire	<b>Item number:</b>	MM02104
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b>	Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

NOT CLASSIFIED. READ ENTIRE SAFETY DATA SHEET.

HAZARD CLASS	HAZARD CATEGORY
None	None

**PICTOGRAM(S)**

None

**Precautionary Statements**

<b>Prevention:</b>	Not prescribed
<b>Response:</b>	Not prescribed
<b>Storage:</b>	Not prescribed
<b>Disposal:</b>	Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Hazardous Component(s)	CAS Number	Percentage*
Tin	7440-31-5	80 - 100
Silver	7440-22-4	1 - 5

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.
<b>Symptoms:</b>	See Section 11.

#### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Do not use water on fires where molten metal is present.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Metal oxide fumes. Formaldehyde. High temperatures may produce heavy metal dust, fumes or vapors. The flux will give rise to irritating fumes.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear protective clothing, gloves and safety glasses. Scrape up spilled material and place in a closed container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Avoid skin contact with molten resins. Avoid contact with eyes, skin and clothing. When using do not eat, drink or smoke. Wash thoroughly after handling.
<b>Storage:</b>	Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tin	2 mg/m <sup>3</sup> TWA Inhalable fraction.	2 mg/m <sup>3</sup> PEL (as Sn)	None	None
Silver	0.1 mg/m <sup>3</sup> TWA Dust and fume.	0.01 mg/m <sup>3</sup> PEL (as Ag)	None	None

<b>Engineering controls:</b>	Use adequate ventilation to remove molten vapors or fumes. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
<b>Respiratory protection:</b>	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
<b>Eye/face protection:</b>	Safety goggles or safety glasses with side shields.
<b>Skin protection:</b>	Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Cored Wire
<b>Color:</b>	Metallic, Gray
<b>Odor:</b>	None
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Negligible vapor pressure at ambient temperatures.
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	217 °C (422.6 °F) (solder alloy)
<b>Specific gravity:</b>	7.5
<b>Vapor density:</b>	Heavier than air.
<b>Flash point:</b>	Does not flash.
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	0 %; 0 g/l
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Metal oxide fumes. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Oxidizing agents. Acids and bases.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

### Potential Health Effects/Symptoms

**Inhalation:** Inhalation of processing fumes may be harmful. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.

**Skin contact:** May cause skin irritation. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).

**Eye contact:** May cause eye irritation.

**Ingestion:** May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Silver	Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg	Allergen, Eyes, Irritant, Respiratory, Skin

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tin	No	No	No
Silver	No	No	No

## 12. ECOLOGICAL INFORMATION

Ecological information: Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. Do not dispose of in an uncontrolled manner.

**Hazardous waste number:** D011. Silver.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

Water Transportation (IMO/IMDG)  
Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

## 15. REGULATORY INFORMATION

### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Silver (CAS# 7440-22-4).

**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

### Canada Regulatory Information

**CEPA DSL/NDSL Status:** Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 12/17/2019

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.



Revision Number: 005.0

Issue date: 04/24/2019

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE 370 SN60 5C 1.63MM S</b> known as 60/40 370 5C 1.63MM 0.5KG <b>AM (</b>	<b>IDH number:</b>	386832
<b>Product type/use:</b>	Solder Wire	<b>Item number:</b>	MM00994
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b>	Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** HARMFUL IF SWALLOWED OR IF INHALED.  
MAY CAUSE DROWSINESS OR DIZZINESS.  
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.  
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	4
REPRODUCTIVE TOXICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

**PICTOGRAM(S)**



**Precautionary Statements**

<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, clothing, eye and face protection.
<b>Response:</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF exposed or concerned: Get medical attention.
<b>Storage:</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal:</b>	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Tin	7440-31-5	30 - 60
Lead	7439-92-1	30 - 60

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Do not use water on fires where molten metal is present.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. High temperatures may produce heavy metal dust, fumes or vapours. The flux medium will give rise to irritating fumes.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear protective clothing, gloves and safety glasses. Scrape up spilled material and place in a closed container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

- Handling:** Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes, skin and clothing. Avoid skin contact with molten resins. When using, do not eat, drink or smoke. Wash thoroughly after handling.
- Storage:** Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Store in original container until ready to use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tin	2 mg/m3 TWA	2 mg/m3 PEL (as Sn)	None	None
Lead	0.05 mg/m3 TWA (as Pb)	0.05 mg/m3 TWA 0.03 mg/m3 OSHA_ACT	None	None

- Engineering controls:** Use adequate ventilation to remove molten vapors or fumes. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
- Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
- Eye/face protection:** Safety goggles or safety glasses with side shields.
- Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- |   |                 |
|---|-----------------|
| <b>Physical state:</b>                          | Solid           |
| <b>Color:</b>                                   | Gray            |
| <b>Odor:</b>                                    | Metallic        |
| <b>Odor threshold:</b>                          | Not available.  |
| <b>pH:</b>                                      | Not available.  |
| <b>Vapor pressure:</b>                          | Not available.  |
| <b>Boiling point/range:</b>                     | Not available.  |
| <b>Melting point/ range:</b>                    | Not available.  |
| <b>Specific gravity:</b>                        | 8.5             |
| <b>Vapor density:</b>                           | Not available.  |
| <b>Flash point:</b>                             | Does not flash. |
| <b>Flammable/Explosive limits - lower:</b>      | Not available.  |
| <b>Flammable/Explosive limits - upper:</b>      | Not available.  |
| <b>Autoignition temperature:</b>                | Not available.  |
| <b>Flammability:</b>                            | Not applicable  |
| <b>Evaporation rate:</b>                        | Not available.  |
| <b>Solubility in water:</b>                     | Insoluble       |
| <b>Partition coefficient (n-octanol/water):</b> | Not available.  |
| <b>VOC content:</b>                             | 0.00 %; 0 g/l   |
| <b>Viscosity:</b>                               | Not available.  |
| <b>Decomposition temperature:</b>               | Not available.  |



## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Strong oxidizing agents. Strong acids and strong bases.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Ingestion

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	Harmful if inhaled. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures. Vapor overexposure may cause drowsiness. Dizziness.
<b>Skin contact:</b>	May cause skin irritation.
<b>Eye contact:</b>	May cause eye irritation.
<b>Ingestion:</b>	Harmful if swallowed. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Symptoms of lead poisoning include abdominal pain, nausea, vomiting, and headache.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Lead	None	Behavioral, Blood, Developmental, Eyes, Gastrointestinal, Kidney, Liver, Muscle, Nervous System, Reproductive, Skin, Some evidence of carcinogenicity, Thyroid

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tin	No	No	No
Lead	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. Do not dispose of in an uncontrolled manner.

**Hazardous waste number:** D008: Lead

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

Water Transportation (IMO/IMDG)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### 15. REGULATORY INFORMATION

United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Lead (CAS# 7439-92-1).

**CERCLA Reportable quantity:** Lead (CAS# 7439-92-1) 10 lbs. (4.54 kg)

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 04/24/2019

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.



Revision Number: 006.1

Issue date: 01/09/2020

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE TTC-LF 32 known as MM01921 Tinner Cleaner</b>	<b>IDH number:</b>	706397
<b>Product type/use:</b>	Tip Tinner/Cleaner	<b>Item number:</b>	MM01921
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	<b>Contact information:</b>		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** CAUSES SKIN IRRITATION.  
 CAUSES SERIOUS EYE DAMAGE.  
 CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
SERIOUS EYE DAMAGE	1
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

**PICTOGRAM(S)**



**Precautionary Statements**

**Prevention:** Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, eye protection, and face protection.

**Response:** IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if you feel unwell. If skin irritation occurs: Get medical attention. Take off contaminated clothing.

**Storage:** Not prescribed

**Disposal:** Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Hazardous Component(s)	CAS Number	Percentage*
Tin	7440-31-5	30 - 60
Monoammonium phosphate	7722-76-1	30 - 60
Carboxylic acid	Proprietary	5 - 10
Quartz (SiO <sub>2</sub> ), <1% respirable	14808-60-7	1 - 5
Silver	7440-22-4	1 - 5
Organic acid	Proprietary	0.1 - 1

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Symptoms:</b>	See Section 11.

#### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of Metals in Section 3. High temperatures may produce heavy metal dust, fumes or vapors. Thermal decomposition can lead to release of irritating gases and vapors.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up spilled material and place in a closed container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes, skin and clothing. Avoid skin contact with molten resins. Do not wear contact lenses. Wash thoroughly after handling.
<b>Storage:</b>	Store in a cool, dry, well-ventilated area. Store in original container until ready to use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tin	2 mg/m <sup>3</sup> TWA Inhalable fraction.	2 mg/m <sup>3</sup> PEL (as Sn)	None	None
Monoammonium phosphate	None	None	None	None
Carboxylic acid	None	None	None	None
Quartz (SiO <sub>2</sub> ), <1% respirable	0.025 mg/m <sup>3</sup> TWA Respirable fraction.	0.05 mg/m <sup>3</sup> TWA (Respirable dust.) (Respirable dust.) 0.025 mg/m <sup>3</sup> OSHA ACT (Respirable dust.) 0.05 mg/m <sup>3</sup> PEL Respirable dust. 2.4 MPPCF TWA Respirable. 0.1 mg/m <sup>3</sup> TWA Respirable.	None	None
Silver	0.1 mg/m <sup>3</sup> TWA Dust and fume.	0.01 mg/m <sup>3</sup> PEL (as Ag)	None	None
Organic acid	None	None	None	None

<b>Engineering controls:</b>	Heat only in areas with appropriate exhaust ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
<b>Respiratory protection:</b>	Where the potential exists for exposure to decomposition products due to heating or elevated temperatures, wear NIOSH approved respiratory protection as appropriate.
<b>Eye/face protection:</b>	Safety goggles or safety glasses with side shields.
<b>Skin protection:</b>	Heat and chemical resistant gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Paste, Solid
<b>Color:</b>	Gray
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	217 °C (422.6 °F)
<b>Specific gravity:</b>	3.5
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	Does not flash.
<b>Flammable/Explosive limits - lower:</b>	Not available.

Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	< 1 %
Viscosity:	Not available.
Decomposition temperature:	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of Metals in Section 3. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Oxidizing agents. Acids and bases. Reacts with alkalis: spontaneous decomposition and production of heat
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Inhalation of processing fumes may be harmful. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.
<b>Skin contact:</b>	Causes skin irritation. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).
<b>Eye contact:</b>	Causes serious eye damage.
<b>Ingestion:</b>	May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tin	None	Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System
Monoammonium phosphate	None	Irritant, Eyes, Kidney
Carboxylic acid	Oral LD50 (Rat) = 6,730 mg/kg Oral LD50 (Mouse) = 5,040 mg/kg	Allergen, Corrosive, Eyes, Irritant
Quartz (SiO <sub>2</sub> ), <1% respirable	None	Immune system, Lung, Some evidence of carcinogenicity
Silver	Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg	Allergen, Eyes, Irritant, Respiratory, Skin
Organic acid	None	Corrosive, Irritant, Nervous System

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tin	No	No	No
Monoammonium phosphate	No	No	No
Carboxylic acid	No	No	No
Quartz (SiO <sub>2</sub> ), <1% respirable	Known To Be Human Carcinogen.	Group 1	Yes
Silver	No	No	No
Organic acid	No	No	No

## 12. ECOLOGICAL INFORMATION

Ecological information: Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. Do not dispose of in an uncontrolled manner.

**Hazardous waste number:** D011. Silver.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None



#### International Air Transportation (ICAO/IATA)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

#### Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

## 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health

**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Monoammonium phosphate (CAS# 7722-76-1). Silver (CAS# 7440-22-4).

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer.

#### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 01/09/2020

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.



Revision Number: 006.2

Issue date: 07/13/2018

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE MFR 301 known as MFR301 Flux Pen</b>	<b>IDH number:</b>	760089
<b>Product type:</b>	Liquid Flux	<b>Item number:</b>	M00603
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	<b>Contact information:</b>		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** ASPIRATION HAZARD IF SWALLOWED.  
 HIGHLY FLAMMABLE LIQUID AND VAPOR.  
 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.  
 CAUSES SKIN IRRITATION.  
 MAY CAUSE AN ALLERGIC SKIN REACTION.  
 CAUSES SERIOUS EYE IRRITATION.  
 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.  
 MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
SKIN IRRITATION	2
EYE IRRITATION	2A
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
ASPIRATION HAZARD	1

**PICTOGRAM(S)**



**Precautionary Statements**

**Prevention:**

Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection. In case of inadequate ventilation wear respiratory protection.

**Response:**

IF SWALLOWED: Immediately call a physician or poison control center. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. If experiencing respiratory symptoms: Call a poison center or physician. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

**Disposal:**

Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
2-Propanol	67-63-0	80 - 90
Hydrocarbon aliphatic aromatic naphthenic C9-12	64742-88-7	10 - 20
Glutaric acid	110-94-1	1 - 5
Colophony	8050-09-7	1 - 5
Adipic acid	124-04-9	1 - 5

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Symptoms:</b>	See Section 11.
<b>Notes to physician:</b>	Aspiration may cause pulmonary edema or aspiration pneumonia.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Unusual fire or explosion hazards:**

Vapors may form explosive mixtures with air.

**Hazardous combustion products:**

Oxides of carbon. Thermal decomposition can lead to release of irritating gases and vapors.

## 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:**

Do not allow product to enter sewer or waterways.

**Clean-up methods:**

Ventilate area. Remove all sources of ignition. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye/face protection. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal. Spilled liquid is combustible and can be ignited by heat, flames, sparks, or other sources of ignition. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

**Handling:**

Keep away from heat, spark and flame. Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.

**Storage:**

For safe storage, store between 15 °C (59°F) and 30 °C (86°F)  
Store away from ignition sources. Keep away from heat, spark and flame.  
Store in original container until ready to use.

**For information on product shelf life, please review labels on container or check the Technical Data Sheet.**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2-Propanol	200 ppm TWA 400 ppm STEL	400 ppm (980 mg/m <sup>3</sup> ) PEL	None	None
Hydrocarbon aliphatic aromatic naphthenic C9-12	100 ppm TWA 200 mg/m <sup>3</sup> TWA (as total hydrocarbon vapor) Non-aerosol. (SKIN) (as total hydrocarbon vapor) Non-aerosol.	500 ppm (2,900 mg/m <sup>3</sup> ) TWA 100 ppm (400 mg/m <sup>3</sup> ) PEL	None	None
Glutaric acid	None	None	None	None
Colophony	Exposure by all routes should be carefully controlled to levels as low as possible. Included in the regulation but with no data values. See regulation for further details (Respiratory sensitization) (Dermal sensitization)	None	None	None
Adipic acid	5 mg/m <sup>3</sup> TWA	None	None	None

**Engineering controls:**

Use only with adequate ventilation. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:**

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:**

Safety goggles or safety glasses with side shields.

**Skin protection:**

Chemical resistant, impermeable gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Color:</b>	Pale yellow
<b>Odor:</b>	Alcoholic
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not determined
<b>Vapor pressure:</b>	6.6 kPa (25 °C (77°F))
<b>Boiling point/range:</b>	82 °C (179.6 °F)
<b>Melting point/ range:</b>	Not determined
<b>Specific gravity:</b>	0.801
<b>Vapor density:</b>	Heavier than air.
<b>Flash point:</b>	14 °C (57.2 °F)
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	2.93 (Butyl acetate = 1)
<b>Solubility in water:</b>	Soluble
<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>VOC content:</b>	93 %; 744 g/l
<b>Viscosity:</b>	1.0 mPa.s
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions. Electrostatic charge may build-up during handling. Grounding of equipment is recommended.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Irritating fumes. Formaldehyde.
<b>Incompatible materials:</b>	Incompatible with oxidising agents. Dissolves aluminium and zinc slowly with formation of hydrogen.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Keep away from open flames, hot surfaces and sources of ignition.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Ingestion

**Potential Health Effects/Symptoms**

<b>Inhalation:</b>	Inhalation of processing fumes may be harmful. May cause allergic respiratory reaction. Vapor overexposure may cause drowsiness. Dizziness. Aspiration may cause lung damage.
<b>Skin contact:</b>	Causes skin irritation. May cause allergic skin reaction.
<b>Eye contact:</b>	Causes serious eye irritation.
<b>Ingestion:</b>	This product may be fatal if it is swallowed. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
2-Propanol	Oral LD50 (Rat) = 5,045 mg/kg Oral LD50 (Mouse) = 3,600 mg/kg Oral LD50 (Rabbit) = 6,410 mg/kg Oral LD50 (Rat) = 4.7 g/kg Oral LD50 (Mouse) = 4.5 g/kg Oral LD50 (Rabbit) = 8.0 g/kg Oral LD50 (Rabbit) = 5.03 g/kg Dermal LD50 (Rabbit) = 12,800 mg/kg	Allergen, Central nervous system, Irritant
Hydrocarbon aliphatic aromatic naphthenic C9-12	None	Central nervous system, Irritant
Glutaric acid	None	Irritant, Nervous System
Colophony	None	Allergen, Irritant, Respiratory
Adipic acid	Oral LD50 (Mouse) = 1,900 mg/kg Oral LD50 (Rabbit) = > 11,000 mg/kg Oral LD50 (Rat) = > 11,000 mg/kg	Irritant, Kidney, Liver, Nervous System, Respiratory

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2-Propanol	No	No	No
Hydrocarbon aliphatic aromatic naphthenic C9-12	No	No	No
Glutaric acid	No	No	No
Colophony	No	No	No
Adipic acid	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.

**Hazardous waste number:** D001: Ignitable.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Flammable liquids, n.o.s. (Isopropanol, Naphtha)  
**Hazard class or division:** 3  
**Identification number:** UN 1993  
**Packing group:** II

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Flammable liquid, n.o.s. (Isopropanol, Naphtha)  
**Hazard class or division:** 3  
**Identification number:** UN 1993  
**Packing group:** II

### Water Transportation (IMO/IMDG)

**Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Isopropanol, Naphtha)  
**Hazard class or division:** 3  
**Identification number:** UN 1993  
**Packing group:** II

## 15. REGULATORY INFORMATION

### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.  
**TSCA 12 (b) Export Notification:** None above reporting de minimis  
**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health, Fire  
**CERCLA/SARA Section 313:** None above reporting de minimis.  
**California Proposition 65:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 07/13/2018

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.





Revision Number: 003.0

Issue date: 05/30/2019

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE MP 200 RWF 27U known as Tacky Flux MP200</b>	<b>IDH number:</b>	519430
<b>Product type/use:</b>	Rework flux	<b>Item number:</b>	M00449
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	<b>Contact information:</b>		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** COMBUSTIBLE LIQUID.  
 CAUSES SKIN IRRITATION.  
 MAY CAUSE AN ALLERGIC SKIN REACTION.  
 CAUSES SERIOUS EYE IRRITATION.  
 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	4
SKIN IRRITATION	2
EYE IRRITATION	2A
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1

**PICTOGRAM(S)**



**Precautionary Statements**

<b>Prevention:</b>	Keep away from heat, sparks, open flames, hot surfaces - no smoking. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection. In case of inadequate ventilation wear respiratory protection.
<b>Response:</b>	IF ON SKIN: Wash with plenty of water. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. If experiencing respiratory symptoms: Call a poison center or physician. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.
<b>Storage:</b>	Store in a well-ventilated place. Keep cool.
<b>Disposal:</b>	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Colophony	8050-09-7	5 - 10
Amine salt	Proprietary	0.1 - 1
Substituted Amine	Proprietary	0.1 - 1

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
<b>Unusual fire or explosion hazards:</b>	In case of fire, keep containers cool with water spray.
<b>Hazardous combustion products:</b>	Oxides of carbon. Formaldehyde. The flux medium will give rise to irritating fumes.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

**Handling:** Use only in area provided with appropriate exhaust ventilation. Wear suitable protective clothing, gloves and eye/face protection. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.

**Storage:** Keep in a cool, well ventilated area. Store away from heat, sparks, flames, or other sources of ignition. Keep container closed.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Colophony	Exposure by all routes should be carefully controlled to levels as low as possible. Included in the regulation but with no data values. See regulation for further details (Respiratory sensitization) (Dermal sensitization)	None	None	None
Amine salt	None	None	None	None
Substituted Amine	None	None	None	None

**Engineering controls:** Use only with adequate ventilation. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:** Safety goggles or safety glasses with side shields. Safety showers and eye wash stations should be available.

**Skin protection:** Chemical resistant, impermeable gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Paste, Liquid
<b>Color:</b>	Light brown
<b>Odor:</b>	Pine
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not determined
<b>Vapor pressure:</b>	Not determined
<b>Boiling point/range:</b>	210 - 256 °C (410°F - 492.8 °F)
<b>Melting point/ range:</b>	Not determined
<b>Specific gravity:</b>	0.815
<b>Vapor density:</b>	Heavier than air.
<b>Flash point:</b>	93 °C (199.4 °F)
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	202 °C (395.6 °F)
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not determined

VOC content: 50 %; 408 g/l  
 Viscosity: Not available.  
 Decomposition temperature: Not available.

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under recommended storage conditions.

**Hazardous reactions:** Will not occur.

**Hazardous decomposition products:** Oxides of carbon. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.

**Incompatible materials:** Incompatible with oxidising agents.

**Reactivity:** Not available.

**Conditions to avoid:** Keep away from open flames, hot surfaces and sources of ignition. Store away from incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

**Potential Health Effects/Symptoms**

**Inhalation:** Inhalation of dust generated by this material may cause respiratory tract irritation. May cause allergic respiratory reaction. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen.

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

**Eye contact:** Causes serious eye irritation.

**Ingestion:** May cause gastrointestinal disturbances.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Colophony	None	Allergen, Irritant, Respiratory
Amine salt	None	Kidney
Substituted Amine	Oral LD50 (Rat) = 3,000 mg/kg	Irritant, Allergen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Colophony	No	No	No
Amine salt	No	No	No
Substituted Amine	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.  
Hazardous waste number: Not a RCRA hazardous waste.

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

#### International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

#### Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated  
Hazard class or division: None  
Identification number: None  
Packing group: None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** One or more components of this product are not listed on the U.S. Toxic Substances Control Act (TSCA) inventory. As such, this product may only be used for research and development purposes as described in 40 CFR 720.36. Research and development products must be used by, or directly under the supervision of, a technically qualified individual. Exercise due care. This product may not be used, processed or distributed for a commercial purpose in the U.S.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** None above reporting de minimis.

**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

#### Canada Regulatory Information

**CEPA DSL/NDSL Status:** One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 05/30/2019

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.