# Safety Data Sheet according to (EC) No 1907/2006



sds no. : 204376
V003.2

Loctite 3423B- Kit component

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier:**
Loctite 3423B- Kit component

**Relevant identified uses of the substance or mixture and uses advised against:**
Intended use:
Epoxy Hardener

**Details of the supplier of the safety data sheet:**
Henkel Ireland Limited
Product Safety & Regulatory Affairs
Tallaght Business Park, Whitestown
Dublin 24

Ireland

Phone: +353 (14046444)
Fax-no.: +353 (14519926)

ua-productsafety.uk@uk.henkel.com



**Emergency Telephone Number:**
24 Hours Emergency Tel: +44 (0)1442 278497

## SECTION 2: Hazards identification

**Classification of the substance or mixture:**

**Classification (DPD):**
Xi - Irritant
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
Xi - Irritant
R43 May cause sensitisation by skin contact.
N - Dangerous for the environment
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Label elements (DPD):**

Xi - Irritant

N - Dangerous for the environment

Risk phrases:

R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S24 Avoid contact with skin.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water and soap.
S37/39 Wear suitable gloves and eye/face protection.
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Contains:

4,4'-Isopropylidenediphenol,
2,2'-Iminodi(ethylamine),
2-Piperazin-1-ylethylamine,
Triethylenetetramine



**Other hazards**:

None if used properly.

## SECTION 3: Composition/information on ingredients

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

| Hazardous components<br>CAS-No. | EC Number<br>REACH-Reg No. | content | Classification |
|---|---|---|---|
| 4,4'-Isopropylidenediphenol<br>80-05-7 | 201-245-8 | 1- < 5 % | Serious eye damage 1<br>H318<br>Toxic to reproduction 2<br>H361f<br>Specific target organ toxicity - single exposure 3<br>H335<br>Skin sensitizer 1<br>H317 |
| 2,2'-Iminodi(ethylamine)<br>111-40-0 | 203-865-4 | 1- 5 % | Skin corrosion 1B<br>H314<br>Acute toxicity 4; Dermal<br>H312<br>Acute toxicity 4; Oral<br>H302<br>Skin sensitizer 1<br>H317 |
| 2-Piperazin-1-ylethylamine<br>140-31-8 | 205-411-0 | 1- 5 % | Acute toxicity 4; Oral<br>H302<br>Acute toxicity 4; Dermal<br>H312<br>Skin corrosion 1B<br>H314<br>Chronic hazards to the aquatic environment 3<br>H412<br>Skin sensitizer 1<br>H317 |
| Triethylenetetramine<br>112-24-3 | 203-950-6 | 1- 5 % | Skin corrosion 1B<br>H314<br>Skin sensitizer 1<br>H317<br>Chronic hazards to the aquatic environment 3<br>H412<br>Acute toxicity 4; Dermal<br>H312 |
| Nonylphenol<br>25154-52-3 | 246-672-0 | 1- < 5 % | Toxic to reproduction 2<br>H361fd<br>Acute toxicity 4; Oral<br>H302<br>Skin corrosion 1B<br>H314<br>Acute hazards to the aquatic environment 1<br>H400<br>Chronic hazards to the aquatic environment 1<br>H410 |



**Only dangerous ingredients for which a CLP classification is already available are displayed in this table.**
**For full text of the H - statements and other abbreviations see section 16 "Other information".**
**Substances without classification may have community workplace exposure limits available.**

**Declaration of ingredients according to DPD (EC) No 1999/45:**

| Hazardous components<br>CAS-No. | EC Number<br>REACH-Reg No. | content | Classification |
|---|---|---|---|
| C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer<br>68082-29-1 | | 40 - 50 % | Xi - Irritant; R38, R41 |
| 4,4'-Isopropylidenediphenol<br>80-05-7 | 201-245-8 | 1 - < 5 % | Xi - Irritant; R37, R41<br>R52<br>R43<br>Toxic for reproduction - category 3.; R62 |
| 2,2'-Iminodi(ethylamine)<br>111-40-0 | 203-865-4 | 1 - 5 % | R43<br>Xn - Harmful; R21/22<br>C - Corrosive; R34 |
| 2-Piperazin-1-ylethylamine<br>140-31-8 | 205-411-0 | 1 - 5 % | C - Corrosive; R34<br>R43<br>Xn - Harmful; R21/22<br>R52/53 |
| Triethylenetetramine<br>112-24-3 | 203-950-6 | 1 - 5 % | Xn - Harmful; R21<br>C - Corrosive; R34<br>R43<br>R52/53 |
| Nonylphenol<br>25154-52-3 | 246-672-0 | 1 - < 5 % | Toxic for reproduction - category 3.; R62, R63<br>Xn - Harmful; R22<br>C - Corrosive; R34<br>N - Dangerous for the environment; R50/53 |

**For full text of the R-Phrases indicated by codes see section 16 'Other Information'.**
**Substances without classification may have community workplace exposure limits available.**

## SECTION 4: First aid measures



**Description of first aid measures:**

Inhalation:
Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:
Rinse with running water and soap.
Seek medical advice.

Eye contact:
Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:
Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.
Seek medical advice.

**Most important symptoms and effects, both acute and delayed:**
SKIN: Rash, Urticaria.

**Indication of any immediate medical attention and special treatment needed:**
See section: Description of first aid measures

## SECTION 5: Firefighting measures

**Extinguishing media:**
**Suitable extinguishing media:**
Carbon dioxide, foam, powder

**Extinguishing media which must not be used for safety reasons:**
None known

**Special hazards arising from the substance or mixture:**
Oxides of carbon, oxides of nitrogen, irritating organic vapors.

**Advice for firefighters:**
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**
Avoid skin and eye contact.

**Environmental precautions:**
Do not let product enter drains.

**Methods and material for containment and cleaning up:**
For small spills wipe up with paper towel and place in container for disposal.
For large spills absorb onto inert absorbent material and place in sealed container for disposal.
Wash spillage site thoroughly with soap and water or detergent solution.

**Reference to other sections:**
See advice in chapter 8

## SECTION 7: Handling and storage

**Precautions for safe handling:**
Use only in well-ventilated areas.
Avoid skin and eye contact.
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

Hygiene measures:
Good industrial hygiene practices should be observed.



**Conditions for safe storage, including any incompatibilities:**
Store in a cool, well-ventilated place.

**Specific end use(s):**
Epoxy Hardener

## SECTION 8: Exposure controls/personal protection

**Control parameters:**
Valid for
Great Britain
Basis
UK EH40 WELs

| Ingredient | ppm | mg/m3 | Type | Category | Remarks |
|---|---|---|---|---|---|
| 2,2'-IMINODI(ETHYLAMINE) 111-40-0 | | | Skin designation: | Can be absorbed through the skin. | EH40 WEL |
| 2,2'-IMINODI(ETHYLAMINE) 111-40-0 | 1 | 4,3 | Time Weighted Average (TWA): | | EH40 WEL |

**Exposure controls:**

Respiratory protection:
Ensure adequate ventilation.
Do not inhale vapors and fumes.

Hand protection:
Avoid skin-contact.
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Avoid eye contact.
Tightly fitting safety goggles

## SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties:**

| | |
|---|---|
| Appearance | paste<br>beige |
| Odor | amine-like |
| pH | No data available / Not applicable |
| Initial boiling point | No data available / Not applicable |
| Flash point | 124 °C (255.2 °F) |
| Decomposition temperature | No data available / Not applicable |
| Vapour pressure | 0,04 mbar |
| Density<br>() | 1 g/cm3 |
| Bulk density | No data available / Not applicable |
| Viscosity | No data available / Not applicable |
| Viscosity (kinematic) | No data available / Not applicable |
| Explosive properties | No data available / Not applicable |
| Solubility (qualitative)<br>(Solvent: Water) | Insoluble |
| Solidification temperature | No data available / Not applicable |
| Melting point | No data available / Not applicable |
| Flammability | No data available / Not applicable |
| Auto-ignition temperature | No data available / Not applicable |
| Explosive limits | No data available / Not applicable |
| Partition coefficient: n-octanol/water | No data available / Not applicable |
| Evaporation rate | No data available / Not applicable |
| Vapor density | No data available / Not applicable |
| Oxidising properties | No data available / Not applicable |

**Other information:**

No data available / Not applicable

## SECTION 10: Stability and reactivity

**Reactivity:**
Reaction with strong acids.
Reacts with strong oxidants.

**Chemical stability:**
Stable under recommended storage conditions.

**Possibility of hazardous reactions:**
See section reactivity

**Conditions to avoid:**
Stable under normal conditions of storage and use.

**Incompatible materials:**
No data available.

**Hazardous decomposition products:**
carbon oxides.

## SECTION 11: Toxicological information

**General toxicological information:**
The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**Oral toxicity:**
May cause irritation to the digestive tract.

**Inhalative toxicity:**
May cause irritation to respiratory system.

**Skin irritation:**
Irritating to the skin.

**Eye irritation:**
Risk of serious damage to eyes

**Sensitizing:**
May cause sensitization by skin contact.



**Acute toxicity:**

| Hazardous components<br>CAS-No. | Value type | Value | Route of application | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol<br>80-05-7 | LD50<br>LD50 | 5.000 mg/kg<br>3.600 mg/kg | oral<br>dermal | | rat<br>rabbit | OECD Guideline 401 (Acute Oral Toxicity) |
| Nonylphenol<br>25154-52-3 | LD50<br>LD50 | 1.900 mg/kg<br>> 2.000 mg/kg | oral<br>dermal | | rat<br>rabbit | OECD Guideline 401 (Acute Oral Toxicity) |

**Skin corrosion/irritation:**

| Hazardous components<br>CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| Nonylphenol<br>25154-52-3 | corrosive | | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

| Hazardous components<br>CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| Nonylphenol<br>25154-52-3 | not irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

**Respiratory or skin sensitization:**

| Hazardous components<br>CAS-No. | Result | Test type | Species | Method |
|---|---|---|---|---|
| Nonylphenol<br>25154-52-3 | not sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| Nonylphenol<br>25154-52-3 | not sensitising | Buehler test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |

**Germ cell mutagenicity:**

| Hazardous components CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol 80-05-7 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | |
| Triethylenetetramine 112-24-3 | positive | bacterial reverse mutation assay (e.g Ames test) | with and without | | |
| Nonylphenol 25154-52-3 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | |

**Repeated dose toxicity**

| Hazardous components CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---|---|---|---|---|---|
| Nonylphenol 25154-52-3 | NOAEL=100 mg/kg | oral: feed | 28 days daily | rat | OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents) |

## SECTION 12: Ecological information

**General ecological information:**

Do not empty into drains / surface water / ground water.
Toxic to aquatic organisms
May cause long-term adverse effects in the aquatic environment.
The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**Mobility:**

Cured adhesives are immobile.

**Toxicity:**

| Hazardous components CAS-No. | Value type | Value | Acute Toxicity Study | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol 80-05-7 | LC50 | 9,9 mg/l | Fish | 96 h | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 4,4'-Isopropylidenediphenol 80-05-7 | EC50 | 3,9 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 4,4'-Isopropylidenediphenol 80-05-7 | EC50 | 2,5 mg/l | Algae | 96 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2'-Iminodi(ethylamine) 111-40-0 | LC50 | > 9,8 mg/l | Fish | 48 h | Leuciscus idus | |
| 2,2'-Iminodi(ethylamine) 111-40-0 | EC50 | 64,6 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 2,2'-Iminodi(ethylamine) 111-40-0 | EC50 | 187 mg/l | Algae | 72 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | EU Method C.3 (Algal Inhibition test) |
| 2-Piperazin-1-ylethylamine 140-31-8 | LC50 | > 100 mg/l | Fish | 96 h | Salmo gairdneri (new name: Oncorhynchus mykiss) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 2-Piperazin-1-ylethylamine 140-31-8 | EC50 | 32 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 2-Piperazin-1-ylethylamine 140-31-8 | EC50 | 495 mg/l | Algae | 72 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Triethylenetetramine 112-24-3 | LC50 | 570 mg/l | Fish | 96 h | Poecilia reticulata | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Triethylenetetramine 112-24-3 | EC50 | 31 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Triethylenetetramine 112-24-3 | EC50 | 20 mg/l | Algae | 72 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Nonylphenol 25154-52-3 | LC50 | 0,23 mg/l | Fish | 96 h | | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Nonylphenol 25154-52-3 | EC50 | 0,14 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Nonylphenol 25154-52-3 | EC50 | 1,3 mg/l | Algae | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |



**Persistence and degradability:**

| Hazardous components CAS-No. | Result | Route of application | Degradability | Method |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol 80-05-7 | readily biodegradable | aerobic | 67 - 70 % | EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test) |
| 2,2'-Iminodi(ethylamine) 111-40-0 | | aerobic | 10 - 13 % | EU Method C.4-B (Determination of the "Ready" BiodegradabilityModified OECD Screening Test) |
| 2-Piperazin-1-ylethylamine 140-31-8 | under test conditions no biodegradation observed | aerobic | 0 % | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Nonylphenol 25154-52-3 | | aerobic | 0 % | |

**Bioaccumulative potential / Mobility in soil:**

| Hazardous components CAS-No. | LogKow | Bioconcentration factor (BCF) | Exposure time | Species | Temperature | Method |
|---|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol 80-05-7 | | 5,1 - 13,8 | 42 d | Cyprinus carpio | 25 °C | |
| 4,4'-Isopropylidenediphenol 80-05-7 | 3,4 | | | | 21,5 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 2,2'-Iminodi(ethylamine) 111-40-0 | -2,13 | | | | | |
| 2-Piperazin-1-ylethylamine 140-31-8 | -1,48 | | | | | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Triethylenetetramine 112-24-3 | -2,65 | | | | | |



## SECTION 13: Disposal considerations

**Waste treatment methods:**

Product disposal:

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.
Disposal must be made according to official regulations.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

## SECTION 14: Transport information

**Road transport ADR:**

| | |
|---|---|
| Class: | 9 |
| Packaging group: | III |
| Classification code: | M6 |
| Hazard ident. number: | 90 |
| UN no.: | 3082 |
| Label: | 9 |
| Technical name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dimer fatty acid(C36)poly amido amine resin) |
| Tunnelcode: | (E) |

**Railroad transport RID:**

| | |
|---|---|
| Class: | 9 |
| Packaging group: | III |
| Classification code: | M6 |
| Hazard ident. number: | 90 |
| UN no.: | 3082 |
| Label: | 9 |
| Technical name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dimer fatty acid(C36)poly amido amine resin) |
| Tunnelcode: | |

**Inland water transport ADN:**

| | |
|---|---|
| Class: | 9 |
| Packaging group: | III |
| Classification code: | M6 |
| Hazard ident. number: | |
| UN no.: | 3082 |
| Label: | 9 |
| Technical name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dimer fatty acid(C36)poly amido amine resin) |

**Marine transport IMDG:**

| | |
|---|---|
| Class: | 9 |
| Packaging group: | III |
| UN no.: | 3082 |
| Label: | 9 |
| EmS: | F-A ,S-F |
| Seawater pollutant: | Marine pollutant |
| Proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dimer fatty acid(C36)poly amido amine resin) |



**Air transport IATA:**

| | |
|---|---|
| Class: | 9 |
| Packaging group: | III |
| Packaging instructions (passenger) | 964 |
| Packaging instructions (cargo) | 964 |
| UN no.: | 3082 |
| Label: | 9 |
| Proper shipping name: | Environmentally hazardous substance, liquid, n.o.s. (dimer fatty acid(C36)poly amido amine resin) |

## SECTION 15: Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

| | |
|---|---|
| VOC content (2004/42/EC) | < 3,00 % Combined A/B |

## SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

R21 Harmful in contact with skin.
R21/22 Harmful in contact with skin and if swallowed.
R22 Harmful if swallowed.
R34 Causes burns.
R37 Irritating to respiratory system.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52 Harmful to aquatic organisms.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62 Possible risk of impaired fertility.
R63 Possible risk of harm to the unborn child.

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H361f Suspected of damaging fertility.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.



**Further information:**

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

This safety data sheet was prepared in accordance with Council Directive 67/548/EEC and it's subsequent amendments, and Commission Directive 1999/45/EC.