1. Identification

Product identifier used on the label

MasterWeld 948 Adhesive also CX948 ADHESIVE

Recommended use of the chemical and restriction on use
Recommended use*: for industrial and professional users

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller’s published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller’s sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: aromatic isocyanates

2. Hazards Identification


Classification of the product

<table>
<thead>
<tr>
<th>Classification</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr./Irrit.</td>
<td>2</td>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Eye Dam./Irrit.</td>
<td>2B</td>
<td>Serious eye damage/eye irritation</td>
</tr>
<tr>
<td>Resp. Sens.</td>
<td>1</td>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td>Skin Sens.</td>
<td>1</td>
<td>Skin sensitization</td>
</tr>
<tr>
<td>Carc.</td>
<td>1B</td>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>STOT RE</td>
<td>2</td>
<td>Specific target organ toxicity — repeated exposure</td>
</tr>
</tbody>
</table>

Label elements
Signal Word:
Danger

Hazard Statement:
H320 Causes eye irritation.
H315 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H350 May cause cancer.
H373 May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

Precautionary Statements (Prevention):
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P201 Obtain special instructions before use.
P260 Do not breathe dust/gas/mist/vapours.
P202 Do not handle until all safety precautions have been read and understood.
P284 [In case of inadequate ventilation] wear respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P341 + P311 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash before reuse.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):
P405 Store locked up.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Labeling of special preparations (GHS):
CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

3. Composition / Information on Ingredients


<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>14807-96-6</td>
<td>&gt;= 25.0 - &lt; 50.0 %</td>
<td>Talc</td>
</tr>
<tr>
<td>101-68-8</td>
<td>&gt;= 10.0 - &lt; 15.0 %</td>
<td>Diphenylmethane-4,4'-diisocyanate (MDI)</td>
</tr>
<tr>
<td>64742-46-7</td>
<td>&gt;= 7.0 - &lt; 10.0 %</td>
<td>Distillates (petroleum), hydrotreated middle</td>
</tr>
<tr>
<td>26447-40-5</td>
<td>&gt;= 3.0 - &lt; 5.0 %</td>
<td>Methylene diphenyl diisocyanate</td>
</tr>
<tr>
<td>9016-87-9</td>
<td>&gt;= 1.0 - &lt; 3.0 %</td>
<td>P-MDI</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. Remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficult breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.
Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
- foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
- water jet

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
- nitrogen oxides, fumes/smoke, isocyanate, vapour

Advice for fire-fighters
Protective equipment for fire-fighting:
- Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
- Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes. Dike spillage.
7. Handling and Storage

Precautions for safe handling
Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion:
Keep away from sources of ignition - No smoking. The relevant fire protection measures should be noted.

Conditions for safe storage, including any incompatibilities
No applicable information available.

Suitable materials for containers: tinned carbon steel (Tinplate)

Further information on storage conditions: Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight. Store protected against freezing.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane-4,4’-diisocyanate (MDI)</td>
<td>CLV 0.02 ppm 0.2 mg/m³ ; CLV 0.02 ppm 0.2 mg/m³ ;</td>
<td>TWA value 0.005 ppm ;</td>
</tr>
<tr>
<td>P-MDI</td>
<td>CLV 0.02 ppm 0.2 mg/m³ ; CLV 0.02 ppm 0.2 mg/m³ ;</td>
<td>TWA value 0.005 ppm ;</td>
</tr>
</tbody>
</table>
talc & OSHA PEL & TWA value 20 millions of particles per cubic foot of air; TWA value 2.4 millions of particles per cubic foot of air Respirable; 
The exposure limit is calculated from the equation, 250/(\%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. 
TWA value 0.1 mg/m3 Respirable; 
The exposure limit is calculated from the equation, 10/(\%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. 
TWA value 0.3 mg/m3 Total dust; 
The exposure limit is calculated from the equation, 30/(\%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. 
TWA value 2 mg/m3 Respirable dust; TWA value 0.3 mg/m3 Total dust; 
The exposure limit is calculated from the equation, 30/(\%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. 
TWA value 0.1 mg/m3 Respirable; 
The exposure limit is calculated from the equation, 10/(\%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. 
TWA value 2.4 millions of particles per cubic foot of air Respirable; 
The exposure limit is calculated from the equation, 250/(\%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. 

Distillates (petroleum), hydrotreated middle & OSHA PEL & PEL 5 mg/m3 Mist; TWA value 5 mg/m3 Mist; 
ACGIH TLV & TWA value 2 mg/m3 Respirable fraction; 
The value is for particulate matter containing no asbestos and <1% crystalline silica.

Included in the regulation, but with no data values - See the regulation for further details.
Exposure by all routes should be carefully controlled to levels as low as possible.
TWA value 5 mg/m3 Inhalable fraction;

Advice on system design:
No applicable information available.
Personal protective equipment

Respiratory protection:
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facemask pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves should be worn to prevent all skin contact. Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, fluoroelastomer (Viton), depending upon conditions of use.

Eye protection:
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Cover as much of the exposed skin as possible to prevent all skin contact. Suitable materials may include, saran-coated material, depending upon conditions of use.

General safety and hygiene measures:
Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

9. Physical and Chemical Properties

Form: paste
Odour: oily, mild
Odour threshold: No applicable information available.
Colour: tan
pH value: neutral to slightly alkaline
Melting point: not applicable
Boiling point: No applicable information available.
Sublimation point: No applicable information available.
Flash point: > 200 °F
> 93.34 °C
Flammability: not determined
Lower explosion limit: 1.6 %(V)
Upper explosion limit: 10.2 %(V)
Autoignition: No data available.
Vapour pressure: No data available.
Density: 1.26 g/cm³
Relative density: No applicable information available.
Bulk density: 1.26 g/cm³
Vapour density: Heavier than air.
Partitioning coefficient n-octanol/water (log Pow): No data available.
Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic: No applicable information available.
Viscosity, kinematic: No applicable information available.
Solubility in water: slightly soluble
Solubility (quantitative): No applicable information available.
Solubility (qualitative): No applicable information available.
10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents, strong reducing agents

Hazardous decomposition products
Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. Virtually nontoxic after a single ingestion.

Oral
No applicable information available.

Inhalation
Type of value: ATE
No applicable information available.

Dermal
No applicable information available.
Assessment other acute effects
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Sensitization
Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapour-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Aspiration Hazard
Study scientifically not justified.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Genetic toxicity
Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.

Carcinogenicity
Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Information on: P-MDI
Assessment of carcinogenicity: Based on the ingredients there is a suspicion of a carcinogenic effect in humans. IARC Group 3 (not classifiable as to human carcinogenicity).

Information on: Distillates (petroleum), hydrotreated middle
Assessment of carcinogenicity: The substance caused cancer in animal studies.

Information on: Methylene diphenyl diisocyanate
Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.
Reproductive toxicity
Assessment of reproduction toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity
Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Other Information
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

Symptoms of Exposure
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Medical conditions aggravated by overexposure
The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

12. Ecological Information

Toxicity
Aquatic toxicity
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability
Assessment biodegradation and elimination (H2O)
Not readily biodegradable (by OECD criteria).

Bioaccumulative potential
Assessment bioaccumulation potential
Based on a weight of evidence, the compound will not bioaccumulate.
Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters. Do not allow to enter soil, waterways or waste water channels. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with local authority regulations. Do not discharge into drains/surface waters/groundwater.

14. Transport Information

Land transport
USDOT
Not classified as a dangerous good under transport regulations

Sea transport
IMDG
Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO
Not classified as a dangerous good under transport regulations

Further information
DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this MSDS for the RQ for this product.

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Chronic

CERCLA RQ CAS Number Chemical name
5000 LBS 7664-38-2 phosphoric acid; Methylethylketone; Diphenylmethane-4,4'-diisocyanate (MDI); P-MDI
78-93-3; 101-68-8; 9016-87-9

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2015/03/17

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END OF DATA SHEET