



Chemical Name: 3509 Rust Penetrating Primer

Manufacturer: Blygold

Container size: 1 qt.

Location: VLA

Disposal: Place empty container in trash.

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008









1 Identification of substance

- **Product details**
- **Trade name: REFAMAC 3509 1.2 KG**
- **Article number: 200720202**
- **Application of the substance / the preparation HVAC equipment protection**
- **Manufacturer/Supplier:**
Blygold International B.V.
Hoofdveste 13
3992 DH Houten
tel.: 0031 306 344 344
fax.: 0031 306 344 300
- **Information department:** Product safety department.

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Coating / Metalprotection.

- **Dangerous components:**

266447-40-5	DifenyImethaan-diisocyaanat (mengsel van isomeren) Danger:  3.4.R/1, 3.2/2, 3.3/2A, 3.4.S/1 Warning:  3.1.I/4, 3.8/3	25-50%
64742-95-6	Solvent naphtha (petroleum), light arom. Danger:  3.10/1 Warning:  2.6/3;  3.8/3  4.1.C/2	10-25%
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues Danger:  3.4.R/1, 3.2/2, 3.3/2A, 3.4.S/1 Warning:  3.1.I/4, 3.8/3	10-25%

3 Hazards identification

- **Hazard description:**



Harmful

- **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

Flammable.

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitisation by inhalation and skin contact.

Contains isocyanates. See information supplied by the manufacturer.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 1)

· **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 2
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *2
Fire = 2
Reactivity = 0

· **GHS label elements**



Danger

- 3.4/1 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- 3.10/1 - May be fatal if swallowed and enters airways.
- 3.2/2 - Causes skin irritation.
- 3.3/2A - Causes serious eye irritation.
- 3.4/1 - May cause an allergic skin reaction.



Warning

- 2.6/3 - Flammable liquid and vapour.



Warning

- 3.1/4 - Harmful if inhaled.
- 3.8/3 - May cause respiratory irritation.

- 4.1/3 - Harmful to aquatic life with long lasting effects.

· **Prevention:**

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/ equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.
- In case of inadequate ventilation wear respiratory protection.

· **Response:**

- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- IF ON SKIN: Wash with plenty of soap and water.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- IF INHALED: If breathing is difficult, remove 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.

(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 2)

- Call a POISON CENTER or doctor/physician if you feel unwell.
- Specific treatment (see label).
- Do NOT induce vomiting.
- If skin irritation occurs: Get medical advice/attention.
- If skin irritation or rash occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- Take off contaminated clothing and wash before reuse.
- Wash contaminated clothing before reuse.
- In case of fire: Use for extinction: CO₂, powder or water spray.
- **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/container in accordance with local/regional/national/international regulations.

4 First aid measures

- **General information:**
 - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:**
 - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
 - Inform respective authorities in case of seepage into water course or sewage system.
 - Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
 - Do not flush with water or aqueous cleansing agents

USA

(Contd. on page 4)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· General Information

Form:	Fluid
Color:	According to product specification
Odor:	Characteristic

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	162°C (324°F)

· Flash point: 44°C (111°F)

· Ignition temperature: 400°C (752°F)

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:	0.7 Vol %
Upper:	7.0 Vol %

· Vapor pressure at 20°C (68°F): 1.2 hPa (1 mm Hg)

· Density: Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· Solvent content:

VOC content:	19.2 %
	193.6 g/l / 1.62 lb/gl

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Dangerous reactions No dangerous reactions known.

· Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

· Primary irritant effect:

· on the skin: Irritant to skin and mucous membranes.

· on the eye: Irritating effect.

· Sensitization:

Sensitization possible through inhalation.

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 5)

Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

12 Ecological information

- **Ecotoxicological effects:**

- **Remark:** Harmful to fish

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

13 Disposal considerations

- **Product:**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**



- **Hazard class:**

3

- **Identification number:**

NA1993

- **Packing group:**

III

- **Proper shipping name (technical name):** COMBUSTIBLE LIQUID, N.O.S (Solvent naphtha (petroleum), light arom.)

- **Label**

3

- **Land transport ADR/RID (cross-border):**



- **ADR/RID class:**

3 Flammable liquids

- **Danger code (Kemler):**

30

- **UN-Number:**

1993

- **Packaging group:**

III

- **Label:**

3

(Contd. on page 7)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 6)

· **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **Maritime transport IMDG:**



· **IMDG Class:** 3
 · **UN Number:** 1993
 · **Label:** 3
 · **Packaging group:** III
 · **EMS Number:** F-E,S-E
 · **Marine pollutant:** No
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1993
 · **Label:** 3
 · **Packaging group:** III
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **UN "Model Regulation":** UN1993; FLAMMABLE LIQUID, N.O.S.; 3; III

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

· **TSCA (Toxic Substances Control Act):**

64742-95-6 Solvent naphtha (petroleum), light arom.

14807-96-6 Talc (Mg₃H₂(SiO₃)₄)

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

64742-47-8 Distillates (petroleum), hydrotreated light

2835-68-9 p-aminobenzamide

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 8)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 7)

· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)
--

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	D;CBD
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· IARC (International Agency for Research on Cancer)

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	3
------------	---	---

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3
-----------	--	---

· NTP (National Toxicology Program)
None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4
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· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.
--

· Hazard symbols:

Harmful

· Hazard-determining components of labelling:
--

Difenylnmethaan-diisocyanaat (mengsel van isomeren)

Solvent naphtha (petroleum), light arom.
--

diphenylmethanediisocyanate, isomeres and homologues
--

· Risk phrases:

Flammable.

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.
--

May cause sensitisation by inhalation and skin contact.

· Safety phrases:

Keep container in a well-ventilated place.
--

Do not breathe gas/fumes/vapour/spray.
--

Avoid contact with skin.

Wear suitable gloves.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Avoid release to the environment. Refer to special instructions/safety data sheets.

· Special labeling of certain preparations:
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Contains isocyanates. See information supplied by the manufacturer.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
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· Department issuing MSDS: Product-safety-department

(Contd. on page 9)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 8)

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

VOC: Volatile Organic Compounds (USA, EU)

USA

Material Safety Data Sheet

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1 Identification of substance

- **Product details**
- **Trade name: REFAMAC 3509 1.2 KG**
- **Article number: 200720202**
- **Application of the substance / the preparation HVAC equipment protection**
- **Manufacturer/Supplier:**
Blygold International B.V.
Hoofdveste 13
3992 DH Houten
tel.: 0031 306 344 344
fax.: 0031 306 344 300
- **Information department:** Product safety department.

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Coating / Metalprotection.

- **Dangerous components:**

266447-40-5	DifenyImethaan-diisocyaanoot (mengsel van isomeren) Danger:  3.4.R/1, 3.2/2, 3.3/2A, 3.4.S/1 Warning:  3.1.I/4, 3.8/3	25-50%
64742-95-6	Solvent naphtha (petroleum), light arom. Danger:  3.10/1 Warning:  2.6/3;  3.8/3  4.1.C/2	10-25%
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues Danger:  3.4.R/1, 3.2/2, 3.3/2A, 3.4.S/1 Warning:  3.1.I/4, 3.8/3	10-25%

3 Hazards identification

- **Hazard description:**



Harmful

- **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

Flammable.

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitisation by inhalation and skin contact.

Contains isocyanates. See information supplied by the manufacturer.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 1)

· **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 2
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *2
Fire = 2
Reactivity = 0

· **GHS label elements**



Danger

- 3.4/1 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- 3.10/1 - May be fatal if swallowed and enters airways.
- 3.2/2 - Causes skin irritation.
- 3.3/2A - Causes serious eye irritation.
- 3.4/1 - May cause an allergic skin reaction.



Warning

- 2.6/3 - Flammable liquid and vapour.



Warning

- 3.1/4 - Harmful if inhaled.
- 3.8/3 - May cause respiratory irritation.

- 4.1/3 - Harmful to aquatic life with long lasting effects.

· **Prevention:**

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/ equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.
- In case of inadequate ventilation wear respiratory protection.

· **Response:**

- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- IF ON SKIN: Wash with plenty of soap and water.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- IF INHALED: If breathing is difficult, remove 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.

(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 2)

- Call a POISON CENTER or doctor/physician if you feel unwell.
- Specific treatment (see label).
- Do NOT induce vomiting.
- If skin irritation occurs: Get medical advice/attention.
- If skin irritation or rash occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- Take off contaminated clothing and wash before reuse.
- Wash contaminated clothing before reuse.
- In case of fire: Use for extinction: CO₂, powder or water spray.
- **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/container in accordance with local/regional/national/international regulations.

4 First aid measures

- **General information:**
 - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:**
 - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
 - Inform respective authorities in case of seepage into water course or sewage system.
 - Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
 - Do not flush with water or aqueous cleansing agents

USA

(Contd. on page 4)

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Printing date 05/09/2008

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Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· General Information

Form:	Fluid
Color:	According to product specification
Odor:	Characteristic

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	162°C (324°F)

· Flash point: 44°C (111°F)

· Ignition temperature: 400°C (752°F)

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:	0.7 Vol %
Upper:	7.0 Vol %

· Vapor pressure at 20°C (68°F): 1.2 hPa (1 mm Hg)

· Density: Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· Solvent content:

VOC content:	19.2 %
	193.6 g/l / 1.62 lb/gl

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Dangerous reactions No dangerous reactions known.

· Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

· Primary irritant effect:

· on the skin: Irritant to skin and mucous membranes.

· on the eye: Irritating effect.

· Sensitization:

Sensitization possible through inhalation.

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 5)

Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

12 Ecological information

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

13 Disposal considerations

· **Product:**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **DOT regulations:**



· **Hazard class:**

3

· **Identification number:**

NA1993

· **Packing group:**

III

· **Proper shipping name (technical name):** COMBUSTIBLE LIQUID, N.O.S (Solvent naphtha (petroleum), light arom.)

· **Label**

3

· **Land transport ADR/RID (cross-border):**



· **ADR/RID class:**

3 Flammable liquids

· **Danger code (Kemler):**

30

· **UN-Number:**

1993

· **Packaging group:**

III

· **Label:**

3

(Contd. on page 7)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 6)

· **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **Maritime transport IMDG:**



· **IMDG Class:** 3
 · **UN Number:** 1993
 · **Label:** 3
 · **Packaging group:** III
 · **EMS Number:** F-E,S-E
 · **Marine pollutant:** No
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1993
 · **Label:** 3
 · **Packaging group:** III
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **UN "Model Regulation":** UN1993; FLAMMABLE LIQUID, N.O.S.; 3; III

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

· **TSCA (Toxic Substances Control Act):**

64742-95-6 Solvent naphtha (petroleum), light arom.

14807-96-6 Talc (Mg₃H₂(SiO₃)₄)

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

64742-47-8 Distillates (petroleum), hydrotreated light

2835-68-9 p-aminobenzamide

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 8)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 7)

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

D;CBD

· **IARC (International Agency for Research on Cancer)**

14807-96-6 Talc (Mg₃H₂(SiO₃)₄)

3

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

14807-96-6 Talc (Mg₃H₂(SiO₃)₄)

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Harmful

· **Hazard-determining components of labelling:**

Difenylnmethaan-diisocynaat (mengsel van isomeren)

Solvent naphtha (petroleum), light arom.

diphenylmethanediisocyanate, isomeres and homologues

· **Risk phrases:**

Flammable.

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitisation by inhalation and skin contact.

· **Safety phrases:**

Keep container in a well-ventilated place.

Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin.

Wear suitable gloves.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Avoid release to the environment. Refer to special instructions/safety data sheets.

· **Special labeling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Product-safety-department

(Contd. on page 9)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 8)

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

VOC: Volatile Organic Compounds (USA, EU)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008









1 Identification of substance

- **Product details**
- **Trade name: REFAMAC 3509 1.2 KG**
- **Article number: 200720202**
- **Application of the substance / the preparation HVAC equipment protection**
- **Manufacturer/Supplier:**
Blygold International B.V.
Hoofdveste 13
3992 DH Houten
tel.: 0031 306 344 344
fax.: 0031 306 344 300
- **Information department:** Product safety department.

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Coating / Metalprotection.

- **Dangerous components:**

266447-40-5	DifenyImethaan-diisocyaanaat (mengsel van isomeren) Danger:  3.4.R/1, 3.2/2, 3.3/2A, 3.4.S/1 Warning:  3.1.I/4, 3.8/3	25-50%
64742-95-6	Solvent naphtha (petroleum), light arom. Danger:  3.10/1 Warning:  2.6/3;  3.8/3  4.1.C/2	10-25%
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues Danger:  3.4.R/1, 3.2/2, 3.3/2A, 3.4.S/1 Warning:  3.1.I/4, 3.8/3	10-25%

3 Hazards identification

- **Hazard description:**



Harmful

- **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.
Flammable.
Harmful by inhalation.
Irritating to eyes, respiratory system and skin.
May cause sensitisation by inhalation and skin contact.
Contains isocyanates. See information supplied by the manufacturer.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 1)

· NFPA ratings (scale 0 - 4)



Health = 2
Fire = 2
Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *2
Fire = 2
Reactivity = 0

· GHS label elements

**Danger**

- 3.4/1 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- 3.10/1 - May be fatal if swallowed and enters airways.
- 3.2/2 - Causes skin irritation.
- 3.3/2A - Causes serious eye irritation.
- 3.4/1 - May cause an allergic skin reaction.

**Warning**

- 2.6/3 - Flammable liquid and vapour.

**Warning**

- 3.1/4 - Harmful if inhaled.
- 3.8/3 - May cause respiratory irritation.

- 4.1/3 - Harmful to aquatic life with long lasting effects.

· Prevention:

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/ equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.
- In case of inadequate ventilation wear respiratory protection.

· Response:

- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- IF ON SKIN: Wash with plenty of soap and water.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- IF INHALED: If breathing is difficult, remove 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.

(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 2)

- Call a POISON CENTER or doctor/physician if you feel unwell.
- Specific treatment (see label).
- Do NOT induce vomiting.
- If skin irritation occurs: Get medical advice/attention.
- If skin irritation or rash occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- Take off contaminated clothing and wash before reuse.
- Wash contaminated clothing before reuse.
- In case of fire: Use for extinction: CO₂, powder or water spray.
- **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/container in accordance with local/regional/national/international regulations.

4 First aid measures

- **General information:**
 - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:**
 - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
 - Inform respective authorities in case of seepage into water course or sewage system.
 - Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
 - Do not flush with water or aqueous cleansing agents

USA

(Contd. on page 4)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· General Information

Form:	Fluid
Color:	According to product specification
Odor:	Characteristic

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	162°C (324°F)

· Flash point: 44°C (111°F)

· Ignition temperature: 400°C (752°F)

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:	0.7 Vol %
Upper:	7.0 Vol %

· Vapor pressure at 20°C (68°F): 1.2 hPa (1 mm Hg)

· Density: Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· Solvent content:

VOC content:	19.2 %
	193.6 g/l / 1.62 lb/gl

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Dangerous reactions No dangerous reactions known.

· Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

· Primary irritant effect:

· on the skin: Irritant to skin and mucous membranes.

· on the eye: Irritating effect.

· Sensitization:

Sensitization possible through inhalation.

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 5)

Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

12 Ecological information

- **Ecotoxicological effects:**

- **Remark:** Harmful to fish

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

13 Disposal considerations

- **Product:**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**



- **Hazard class:**

3

- **Identification number:**

NA1993

- **Packing group:**

III

- **Proper shipping name (technical name):** COMBUSTIBLE LIQUID, N.O.S (Solvent naphtha (petroleum), light arom.)

- **Label**

3

- **Land transport ADR/RID (cross-border):**



- **ADR/RID class:**

3 Flammable liquids

- **Danger code (Kemler):**

30

- **UN-Number:**

1993

- **Packaging group:**

III

- **Label:**

3

(Contd. on page 7)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 6)

· **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **Maritime transport IMDG:**



· **IMDG Class:** 3
 · **UN Number:** 1993
 · **Label:** 3
 · **Packaging group:** III
 · **EMS Number:** F-E,S-E
 · **Marine pollutant:** No
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1993
 · **Label:** 3
 · **Packaging group:** III
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)

· **UN "Model Regulation":** UN1993; FLAMMABLE LIQUID, N.O.S.; 3; III

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

· **TSCA (Toxic Substances Control Act):**

64742-95-6 Solvent naphtha (petroleum), light arom.

14807-96-6 Talc (Mg₃H₂(SiO₃)₄)

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

64742-47-8 Distillates (petroleum), hydrotreated light

2835-68-9 p-aminobenzamide

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 8)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

Reviewed on 05/09/2008

Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 7)

· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)
--

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	D;CBD
-----------	--	-------

· IARC (International Agency for Research on Cancer)

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	3
------------	---	---

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3
-----------	--	---

· NTP (National Toxicology Program)
None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4
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· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.
--

· Hazard symbols:

Harmful

· Hazard-determining components of labelling:
--

Difenylnmethaan-diisocyanaat (mengsel van isomeren)

Solvent naphtha (petroleum), light arom.
--

diphenylmethanediisocyanate, isomeres and homologues
--

· Risk phrases:

Flammable.

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.
--

May cause sensitisation by inhalation and skin contact.

· Safety phrases:

Keep container in a well-ventilated place.
--

Do not breathe gas/fumes/vapour/spray.
--

Avoid contact with skin.

Wear suitable gloves.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Avoid release to the environment. Refer to special instructions/safety data sheets.

· Special labeling of certain preparations:
--

Contains isocyanates. See information supplied by the manufacturer.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
--

· Department issuing MSDS: Product-safety-department

(Contd. on page 9)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/09/2008

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Trade name: REFAMAC 3509 1.2 KG

(Contd. of page 8)

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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HMIS: Hazardous Materials Identification System (USA)

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

VOC: Volatile Organic Compounds (USA, EU)

USA