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

1.1 Product identifier

Doming IC 300

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses

Production of adhesives

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

NEUMANN
VAKUUM- UND DOSIERTECHNIK
Weidenauer Str. 206
57076 Siegen / GERMANY
Phone + 49 271 24 01 19 58
Homepage www.doming-maschine.de
E-mail robneu2000@yahoo.de

Address enquiries to

Technical information robneu2000@yahoo.de
Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Company +4915233952212

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute Tox. 4: H332 Harmful if inhaled.
Skin Sens. 1: H317 May cause an allergic skin reaction.
STOT SE 3: H335 May cause respiratory irritation.

2.2 Label elements

The product is required to be labelled in accordance with GHS/CLP-Directives.

Hazard pictograms

![WARNING]

Contains:

Hexamethylene diisocyanate, oligomers
Hexamethylene-diisocyanate

Hazard statements

H332 Harmful if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing vapours / dust.
P312 Call a POISON CENTER / doctor if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

Special labelling

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

Environmental hazards

Does not contain any PBT or vPvB substances.

Other hazards

Further hazards were not determined with the current level of knowledge.
SECTION 3: Composition / Information on ingredients

Product-type:
The product is a mixture.

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 - 100</td>
<td>Hexamethylene diisocyanate, oligomers</td>
</tr>
<tr>
<td></td>
<td>CAS: 28182-81-2, EINECS/ELINCS: Polymer, Reg-No.: 01-2119485796-17-XXXX</td>
</tr>
<tr>
<td>&lt; 0,25</td>
<td>Hexamethylene-diisocyanate</td>
</tr>
<tr>
<td></td>
<td>CAS: 822-06-0, EINECS/ELINCS: 212-485-8, EU-INDEX: 615-011-00-1, Reg-No.: 01-2119457571-37-XXXX</td>
</tr>
</tbody>
</table>

Comment on component parts
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Remove contaminated soaked clothing immediately and dispose of safely.
Remove affected person from danger area, lay down.

Inhalation
Get medical advice.
Remove the victim into fresh air and keep him calm.

Skin contact
When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion
Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms of poisoning may not occur for many hours, therefore keep under medical supervision for at least 48 hours.

4.3 Indication of any immediate medical attention and special treatment needed
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
All extinguishing media are suitable but method must take into account the surrounding area to minimize dispersion.

Extinguishing media that must not be used
Full water jet

5.2 Special hazards arising from the substance or mixture
Risk of formation of toxic pyrolysis products.
Carbon dioxide (CO2)
Carbon monoxide (CO)
Nitrogen oxides (NOx).
Metal oxides.
5.3 Advice for firefighters

Use self-contained breathing apparatus.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use breathing apparatus if exposed to vapours/aerosol.
Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up
Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections
See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Use only in well-ventilated areas.
The product is combustible.
Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities
Keep only in unopened original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep under lock and key. Should only be accessible to specialists or people authorized by them.
Keep in a cool place. Store in a dry place.
Keep container in a well-ventilated place.

Storage class (TRGS 510)
Storage class 10 (VCI)

7.3 Specific end use(s)
See product use, SECTION 1.2
SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (DE)

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS: 822-06-0, EINECS/ELINCS: 212-485-8, EU-INDEX: 615-011-00-1, Reg-No.: 01-2119457571-37-XXXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene-diisocyanate</td>
<td>0,005 ppm, 0,035 mg/m³, DFG, 12,11, Sa</td>
</tr>
</tbody>
</table>

Factor: 1:2=1(i)

Expositionsende, bzw. Schichtende

DNEL

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS: 822-06-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene-diisocyanate</td>
<td></td>
</tr>
<tr>
<td>Industrial, inhalative, Long-term - local effects: 0,035 mg/m³.</td>
<td></td>
</tr>
<tr>
<td>Industrial, inhalative, Acute - local effects: 0,07 mg/m³.</td>
<td></td>
</tr>
<tr>
<td>Industrial, inhalative, Long-term - systemic effects: 0,035 mg/m³.</td>
<td></td>
</tr>
</tbody>
</table>

PNEC

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS: 822-06-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene-diisocyanate</td>
<td></td>
</tr>
<tr>
<td>soil, 0.0026 mg/kg dw.</td>
<td></td>
</tr>
<tr>
<td>sediment (seaater), 0.001334 mg/kg dw.</td>
<td></td>
</tr>
<tr>
<td>sediment (freshwater), 0.01334 mg/kg dw.</td>
<td></td>
</tr>
<tr>
<td>sewage treatment plants (STP), 8,42 mg/l.</td>
<td></td>
</tr>
<tr>
<td>seawater, 0.0774 mg/l.</td>
<td></td>
</tr>
<tr>
<td>freshwater, 0.0774 mg/l.</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Additional advice on system design

Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

Eye protection

Tightly fitting goggles (EN 166:2001).

Hand protection

The details concerned are recommendations. Please contact the glove supplier for further information.

0,7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3).

Skin protection

Protective clothing.

Other

Avoid contact with eyes and skin.

Do not wear used work clothes outside of the work area. Mark work areas.

Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation.

Short term: filter apparatus, filter A. (DIN EN 14387)

Thermal hazards

No information available.

Delimitation and monitoring of the environmental exposition

Protect the environment by applying appropriate control measures to prevent or limit emissions.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Form**: liquid
- **Color**: colourless
- **Odor**: almost odourless
- **Odour threshold**: not determined
- **pH-value**: not determined
- **pH-value [1%]**: not determined
- **Boiling point [°C]**: > 200
- **Flash point [°C]**: > 150
- **Flammability (solid, gas) [°C]**: not applicable
- **Lower explosion limit**: not determined
- **Upper explosion limit**: not determined
- **Oxidising properties**: no
- **Vapour pressure/gas pressure [kPa]**: 1 hPa
- **Density [g/ml]**: 1.16
- **Bulk density [kg/m³]**: not applicable
- **Solubility in water**: virtually insoluble
- **Partition coefficient [n-octanol/water]**: not determined
- **Viscosity**: 1200 mPas (DIN EN ISO 3219)
- **Relative vapour density determined in air**: not determined
- **Evaporation speed**: not determined
- **Melting point [°C]**: not determined
- **Autoignition temperature [°C]**: > 400
- **Decomposition temperature [°C]**: not determined

9.2 Other information

- none

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with water, with formation of carbon dioxide.

10.4 Conditions to avoid

Contact with moisture.

10.5 Incompatible materials

Polymerized by contact with water, alcohols, amines or alkalis.

10.6 Hazardous decomposition products

No hazardous decomposition products known.
## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Toxicological effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE-mix, inhalative, 11 mg/L (4h).</td>
<td></td>
</tr>
<tr>
<td>ATE-mix, dermal, &gt; 2000 mg/kg.</td>
<td></td>
</tr>
<tr>
<td>ATE-mix, oral, &gt; 2000 mg/kg.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicological effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene-diisocyanate, CAS: 822-06-0</td>
<td></td>
</tr>
<tr>
<td>LD50, dermal, Rat: &gt; 7000 mg/kg bw.</td>
<td></td>
</tr>
<tr>
<td>LD50, oral, Rat: 959 mg/kg bw.</td>
<td></td>
</tr>
<tr>
<td>LC50, inhalative, Rat: 0.124 mg/l 4h.</td>
<td></td>
</tr>
<tr>
<td>NOAEL, inhalative, Rat: &lt; 0.055 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

#### Serious eye damage/irritation
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

#### Skin corrosion/irritation
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

#### Respiratory or skin sensitisation
May cause an allergic skin reaction.
Toxicological data of complete product are not available.

#### Specific target organ toxicity — single exposure
May cause respiratory irritation.
Toxicological data of complete product are not available.

#### Specific target organ toxicity — repeated exposure
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

#### Mutagenicity
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

#### Reproduction toxicity
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

#### Carcinogenicity
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

#### Aspiration hazard
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

#### General remarks

## SECTION 12: Ecological information

### 12.1 Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicological effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene-diisocyanate, CAS: 822-06-0</td>
<td></td>
</tr>
<tr>
<td>EC50, (72h), Desmodesmus subspicatus: &gt; 77,4 mg/l (IUCLID).</td>
<td></td>
</tr>
<tr>
<td>LC0, (96h), Brachidanio rerio: &gt; 82,8 mg/l (IUCLID).</td>
<td></td>
</tr>
</tbody>
</table>

### 12.2 Persistence and degradability

#### Behaviour in environment compartments
No information available.

#### Behaviour in sewage plant
No information available.

#### Biological degradability
No information available.

### 12.3 Bioaccumulative potential
No information available.
12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.

Waste no. (recommended) 080501*

Contaminated packaging

Contaminated packing should be disposed of as product waste.

Waste no. (recommended) 150110*

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"
14.3 Transport hazard class(es)
Transport by land according to ADR/RID  not applicable
Inland navigation (ADN)  not applicable
Marine transport in accordance with IMDG  not applicable
Air transport in accordance with IATA  not applicable

14.4 Packing group
Transport by land according to ADR/RID  not applicable
Inland navigation (ADN)  not applicable
Marine transport in accordance with IMDG  not applicable
Air transport in accordance with IATA  not applicable

14.5 Environmental hazards
Transport by land according to ADR/RID  no
Inland navigation (ADN)  no
Marine transport in accordance with IMDG  no
Air transport in accordance with IATA  no

14.6 Special precautions for user
Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
not applicable
SECTION 15: Regulatory information

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


NATIONAL REGULATIONS (DE): Gefahrstoffverordnung - GefStoffV 2011; Wasch- und Reinigungsmittelgesetz - WRMG; Wasserhaushaltsgesetz - WHG; TRG 300; TRGS: 200, 615, 900, 905, Bekanntmachung 220 (TRGS220).

- Water hazard class 1 (self-classification)
- Decree for case of interference, observe limits no
- Class. according to TA-Luft 5.2.5.
- Storage class (TRGS 510) Storage class 10 (VCI)
- Observe employment restrictions for people Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (1999/13/CE) 0%
- Other regulations TRGS 510: Storage of hazardous substances in non-stationary containers
  TRGS 430: Isocyanate - Exposure and supervision.

15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Hazard statements

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H330 Fatal if inhaled.
H302 Harmful if swallowed.
H412 Harmful to aquatic life with long lasting effects.
H335 May cause respiratory irritation.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure
Acute Tox. 4: H332 Harmful if inhaled. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
STOT SE 3: H335 May cause respiratory irritation. (Calculation method)

Modified position
none