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

1.1 Product identifier

Buehler Replicating Media, Comp. B

Article number 57-6004

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

1.2.1 Relevant uses

Base

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

BUEHLER, a division of Illinois Tool Works Inc.

41 Waukegan Road

Lake Bluff, IL 60044 / USA

Phone 847-295-6500

Homepage www.buehler.com

E-mail inside.sales@buehler.com

Address enquiries to

Technical information

inside.sales@buehler.com  Phone: +1 847-295-6500

Safety Data Sheet

sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body

US Chemtrec: +1 800 424-9300 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

No classification.

2.2 Label elements

The product does not require a hazard in accordance to OSHA Standard 29 CFR 1910.1200 (HCS 2012)

Hazard pictograms

none

Signal word

none

Hazard statements

none

Precautionary statements

none

2.3 Other hazards

Other hazards

No particular hazards known.
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>5 - &lt; 10</td>
<td>White mineral oil (petroleum)</td>
</tr>
<tr>
<td></td>
<td>CAS: 8042-47-5, EINECS/ELINCS: 232-455-8</td>
</tr>
<tr>
<td></td>
<td>GHS/CLP: Asp. Tox. 1: H304</td>
</tr>
<tr>
<td>1 - &lt; 3</td>
<td>Hydrocarbons, c4, 1,3-butadiene-free, polym., pentaisobutylene fraction, hydrogenated</td>
</tr>
<tr>
<td></td>
<td>CAS: 93685-79-1, EINECS/ELINCS: 297-627-7</td>
</tr>
<tr>
<td>1 - &lt; 3</td>
<td>Carbon black</td>
</tr>
<tr>
<td></td>
<td>GHS/CLP: Acute Tox. 5: H313 - Carc. 2: H351</td>
</tr>
</tbody>
</table>

Comment on component parts
Addition-vulcanising 2-component silicone.
The contained dangerous materials are not freely available with foreseeable use.
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
Take off contaminated clothing and wash before reuse.

Inhalation
Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

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
Do not induce vomiting.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed
No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing media
Alcohol-resistant foam.
foam, dry powder, water spray jet, carbon dioxide

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.
Silicon compounds
Chlorine compounds.
Nitrogen oxides (NOx).
Carbon monoxide (CO)
Carbon dioxide (CO2)
5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Use personal protective equipment.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).

Dispose of absorbed material in accordance with 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.

Take off contaminated clothing and wash before reuse.

Do not eat, drink or smoke when using this product.

Wash hands before breaks and after work.

Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.

Keep container tightly closed.

Keep in a cool place. Store in a dry place.

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 (US)

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS: 8042-47-5, EINECS/ELINCS: 232-455-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>White mineral oil (petroleum)</td>
<td>Long-term exposure: 5 mg/m³, oil mist TWA, ACGIH</td>
</tr>
<tr>
<td></td>
<td>Long-term exposure: 3.5 mg/m³, OSHA; ACGIH: 3 mg/m³ TWA</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Additional advice on system design
Ensure adequate ventilation on workstation. General limit for oil mist should be noted.

Eye protection
safety glasses (EN 166:2001)

Hand protection
0,4mm: butyl rubber, > 120 min (EN 374)
The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection
Protective clothing.

Respiratory protection
Not breathe vapor/spray.

Hand protection
Avoid contact with eyes and skin.

Thermal hazards
none

Delimitation and monitoring of the environmental exposition
Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form
viscous

Color
black

Odor
characteristic

Odor threshold
No information available.

pH-value
not applicable

pH-value [1%]
not applicable

Boiling point [°C]
No information available.

Flash point [°C]
> 93°C / > 200°F

Flammability [°C]
not applicable

Lower explosion limit
No information available.

Upper explosion limit
No information available.

Oxidizing properties
no

Vapor pressure/gas pressure [kPa]
No information available.

Density [g/ml]
No information available.

Bulk density [kg/m³]
not applicable

Solubility in water
insoluble

Partition coefficient [n-octanol/water]
No information available.

Viscosity
No information available.

Relative vapor density determined in air
No information available.

Evaporation speed
No information available.

Melting point [°C]
No information available.

Autoignition temperature [°C]
not self-igniting

Decomposition temperature [°C]
No information available.

9.2 Other information
none

SECTION 10: Stability and reactivity

10.1 Reactivity
No dangerous reactions known if used as directed.

10.2 Chemical stability
Stable under normal ambient conditions (ambient temperature).
10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No dangerous reactions known if used as directed. Formations of Formaldehyde during the thermal decomposition.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Acute Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>White mineral oil (petroleum), CAS: 8042-47-5</td>
<td>LD₅₀, oral, Rat: &gt; 5000 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>LD₅₀, dermal, Rabbit: &gt; 2000 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>LC₅₀, inhalative, Rat: &gt; 5000 mg/m³.</td>
</tr>
<tr>
<td>Hydrocarbons, c₄, 1,3-butadiene-free, polym., pentaisobutylene fraction, hydrogenated, CAS: 93685-79-1</td>
<td>LD₅₀, dermal: &gt; 2000 mg/kg (Lit.).</td>
</tr>
<tr>
<td></td>
<td>LD₅₀, oral: &gt; 5000 mg/kg (Lit.).</td>
</tr>
<tr>
<td>Carbon black, CAS: 1333-86-4</td>
<td>LD₅₀, dermal, Rabbit: &gt; 3000 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>LD₅₀, oral, Rat: &gt; 8000 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>Serious eye damage/irritation: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Skin corrosion/irritation: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Respiratory or skin sensitisation: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Specific target organ toxicity — single exposure: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Specific target organ toxicity — repeated exposure: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Mutagenicity: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Reproduction toxicity: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Carcinogenicity: Toxicological data of complete product are not available. Based on the information available, the classification criteria have not been fulfilled. Carbon black (CAS 1333-86-4) - IARC classified extract of steam and air as possibly carcinogenic (Group 2B) based on rat inhalation studies (IARC). Carbon black (CAS 1333-86-4) - Not listed as a carcinogen by NTP, ACGIH, OSHA or the European Union. The contained dangerous materials are not freely available with foreseeable use.</td>
</tr>
<tr>
<td></td>
<td>Aspiration hazard: Based on the information available, the classification criteria have not been fulfilled.</td>
</tr>
<tr>
<td></td>
<td>General remarks: none</td>
</tr>
</tbody>
</table>
SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50, (96h), Danio rerio: &gt; 1000 mg/l.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black, CAS: 1333-86-4</td>
<td>EC50, (72h), Desmodesmus subspicatus: &gt; 10000 mg/l (OECD 201).</td>
</tr>
<tr>
<td></td>
<td>EC50, (24h), Daphnia magna: &gt; 5600 mg/l (OECD 202).</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

- **Behaviour in environment compartments**: No information available.
- **Behaviour in sewage plant**: Can be separated out mechanically in purification plants.
- **Biological degradability**: No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

The product is insoluble in water.

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

Ecological data of complete product are not available.
Do not discharge product unmonitored into the environment or into the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities [RCRA Hazard Class (40CFR 261)].

- **Product**: Coordinate disposal with the authorities if necessary.
- **Contaminated packaging**: Contaminated packing should be disposed of as product waste.
SECTION 14: Transport

14.1 UN number

<table>
<thead>
<tr>
<th>DOT Road Shipment Information (49 CFR)</th>
<th>not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine transport in accordance with IMDG</td>
<td>not applicable</td>
</tr>
<tr>
<td>Air transport in accordance with IATA</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

14.2 UN proper shipping name

<table>
<thead>
<tr>
<th>DOT Road Shipment Information (49 CFR)</th>
<th>NO DANGEROUS GOODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine transport in accordance with IMDG</td>
<td>NOT CLASSIFIED AS &quot;DANGEROUS GOODS&quot;</td>
</tr>
<tr>
<td>Air transport in accordance with IATA</td>
<td>NOT CLASSIFIED AS &quot;DANGEROUS GOODS&quot;</td>
</tr>
</tbody>
</table>

14.3 Transport hazard class(es)

<table>
<thead>
<tr>
<th>DOT Road Shipment Information (49 CFR)</th>
<th>not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine transport in accordance with IMDG</td>
<td>not applicable</td>
</tr>
<tr>
<td>Air transport in accordance with IATA</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

14.4 Packing group

<table>
<thead>
<tr>
<th>DOT Road Shipment Information (49 CFR)</th>
<th>not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine transport in accordance with IMDG</td>
<td>not applicable</td>
</tr>
<tr>
<td>Air transport in accordance with IATA</td>
<td>not applicable</td>
</tr>
</tbody>
</table>
14.5 Environmental hazards

- DOT Road Shipment Information (49 CFR)
  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

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- SARA, 302</td>
<td>No information available.</td>
</tr>
<tr>
<td>- SARA, 311</td>
<td>This product is not classified as hazardous under SARA 311.</td>
</tr>
<tr>
<td>- SARA, 313</td>
<td>This product is not classified as hazardous under SARA 313.</td>
</tr>
<tr>
<td>- CA Proposition 65</td>
<td>Some chemical substances Carbon black in this material are named in California-P65 list.</td>
</tr>
<tr>
<td>- TSCA</td>
<td>All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.</td>
</tr>
<tr>
<td>- FDA</td>
<td>No information available.</td>
</tr>
<tr>
<td>American Conference of Governmental Industrial Hygienists - ACGIH</td>
<td>Carbon black: A4 - Not classifiable as a human carcinogen.</td>
</tr>
<tr>
<td>International Agency for Research on Cancer IARC</td>
<td>Carbon black: Group 2B carcinogen.</td>
</tr>
<tr>
<td>National Toxicology Program - NTP</td>
<td>This product is not named NTP - National Toxicology Program.</td>
</tr>
<tr>
<td>HAP-VOC</td>
<td>This product does not contain HAP's ore VOC.</td>
</tr>
<tr>
<td>Other Right to Know Laws</td>
<td></td>
</tr>
</tbody>
</table>

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements

(SECTION 03)

H351 Suspected of causing cancer.
H313 May be harmful in contact with skin.
H304 May be fatal if swallowed and enters airways.
16.2 Ratings

**HMIS Ratings**

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

- **0** - Minimal Hazard
- **1** - Slight Hazard
- **X** - Personal protection rating to be supplied by user depending on use conditions

**NFPA Ratings**

<table>
<thead>
<tr>
<th>TOP</th>
<th>LEFT</th>
<th>RIGHT</th>
<th>BOTTOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

- **TOP, FLAMMABILITY**: 1 - Slight Hazard
- **LEFT, HEALTH**: 0 - Minimal Hazard
- **RIGHT, REACTIVITY**: 0 - Minimal Hazard
- **BOTTOM, SPECIAL NOTICE**: -

16.3 Abbreviations and acronyms:

- ACGIH = American Conference of Governmental Industrial Hygienists;
- 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;
- CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;
- CFR = Code of Federal Regulations;
- CPR = Controlled Products Regulations;
- DMEL = Derived Minimum Effect Level;
- DNEL = Derived No Effect Level;
- DOT = Department of Transportation;
- EC50 = Median effective concentration;
- EPA = Environmental Protection Agency;
- 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;
- IARC = International Agency of Research on Cancer;
- IATA = International Air Transport Association;
- TSCA = Toxic Substance Control Act;
- HMIS = Hazardous Materials Identification System;
- NFPA = National Fire Protection Association;
- NIOSH = National Institute for Occupational Safety and Health;
- OSHA = Occupational Safety and Health Administration;
- LC50 = Lethal concentration, 50%;
- LD50 = Median lethal dose, 50%;
- 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;
- SARA = Superfund Amendments and Reauthorization Act;
- 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;

16.4 Other information

Modified position: none