SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : Expand-O-Flash® Tab Caulking

Manufacturer or supplier's details
Company : Johns Manville
Address : P.O. Box 5108
          Denver, CO USA 80127
Telephone : +1-303-978-2000
Emergency telephone number : 24-Hour Number: 1-800-424-9300 (CHEMTREC)

Company : Johns Manville Canada Inc.
Address : 5301 42 Avenue
          Innisfail, AB Canada T4G 1A2
Telephone : +1-303-978-2000
Emergency telephone number : 24-Hour Number: 1-800-424-9300 (CHEMTREC)

Recommended use of the chemical and restrictions on use
Restrictions on use : For professional users only.
Prepared by : productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)
Respiratory sensitisation : Category 1
Skin sensitisation : Category 1
Germ cell mutagenicity : Category 1B
Carcinogenicity : Category 1A

GHS label elements
Hazard pictograms : 

Signal word : Danger
Hazard statements : H317 May cause an allergic skin reaction.
                  H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
                  H340 May cause genetic defects.
                  H350 May cause cancer.

Precautionary statements : Prevention:
SAFETY DATA SHEET
200000000578

Expand-O-Flash® Tab Caulking

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P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P281 Use personal protective equipment as required.
P285 In case of inadequate ventilation wear respiratory protection.

Response:
P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>limestone</td>
<td>1317-65-3</td>
<td>&gt;= 10 - &lt;= 30</td>
</tr>
<tr>
<td>solvent naphtha (petroleum), heavy arom.</td>
<td>64742-94-5</td>
<td>&gt;= 3 - &lt;= 7</td>
</tr>
<tr>
<td>carbon black</td>
<td>1333-86-4</td>
<td>&gt;= 1 - &lt;= 5</td>
</tr>
<tr>
<td>solvent naphtha (petroleum), light arom.</td>
<td>64742-95-6</td>
<td>&gt;= 0.5 - &lt;= 1.5</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>95-63-6</td>
<td>&gt;= 0.5 - &lt;= 1.5</td>
</tr>
<tr>
<td>4,4’-methylene diisocyanate</td>
<td>101-68-8</td>
<td>&gt;= 0.5 - &lt;= 1.5</td>
</tr>
<tr>
<td>isocyanic acid, polymethylene polyphenylene ester</td>
<td>9016-87-9</td>
<td>&gt;= 0.1 - &lt;= 1</td>
</tr>
<tr>
<td>1,3,5-trimethylbenzene</td>
<td>108-67-8</td>
<td>&gt;= 0.1 - &lt;= 1</td>
</tr>
<tr>
<td>quartz (SiO2)</td>
<td>14808-60-7</td>
<td>&gt;= 0.1 - &lt;= 1</td>
</tr>
<tr>
<td>methylenediisocyanate</td>
<td>26447-40-5</td>
<td>&gt;= 0.1 - &lt;= 1</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled
Call a physician or poison control centre immediately.
If not breathing, give artificial respiration.
Move to fresh air.
If breathing is difficult, give oxygen.

In case of skin contact
Take off contaminated clothing and shoes immediately.
Wash off with soap and water.
If skin irritation persists, call a physician.
Wash contaminated clothing before reuse.
Destroy contaminated shoes.

In case of eye contact
Remove contact lenses.
Immediately flush eye(s) with plenty of water.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed
Rinse mouth.
If swallowed, call a poison control centre or doctor immediately.

Most important symptoms and effects, both acute and delayed
Irritation

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2)
Dry chemical
Dry sand
Alcohol-resistant foam

Unsuitable extinguishing media
High volume water jet

Specific hazards during firefighting
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products
carbon oxides
hydrogen cyanide
isocyanates
nitrogen oxides

Specific extinguishing methods
Standard procedure for chemical fires.

Further information
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must
be disposed of in accordance with local regulations.

**Special protective equipment for firefighters**
Wear self-contained breathing apparatus for firefighting if necessary.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
- Evacuate personnel to safe areas.
- Use personal protective equipment.
- Ensure adequate ventilation.

**Environmental precautions**
- Prevent product from entering drains.
- Prevent further leakage or spillage if safe to do so.
- If the product contaminates rivers and lakes or drains inform respective authorities.

**Methods and materials for containment and cleaning up**
- Keep in suitable, closed containers for disposal.

### SECTION 7. HANDLING AND STORAGE

**Advice on protection against fire and explosion**
- Use only in area provided with appropriate exhaust ventilation.

**Advice on safe handling**
- Avoid formation of respirable particles.
- Do not breathe vapours/dust.
- Avoid exposure - obtain special instructions before use.
- Avoid contact with skin and eyes.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Dispose of rinse water in accordance with local and national regulations.
- Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

**Conditions for safe storage**
- Keep container tightly closed in a dry and well-ventilated place.
- Observe label precautions.

**Materials to avoid**
- Keep away from oxidizing agents and strongly acid or alkaline materials.

**Further information on storage stability**
- Stable at normal ambient temperature and pressure.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**
<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>limestone</td>
<td>1317-65-3</td>
<td>TWA (total dust)</td>
<td>15 mg/m³</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable fraction)</td>
<td>5 mg/m³</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>5 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
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<tr>
<td>solvent naphtha (petroleum), heavy arom.</td>
<td>64742-94-5</td>
<td>TWA</td>
<td>200 mg/m³ (total hydrocarbon vapor)</td>
<td>ACGIH</td>
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<tr>
<td>carbon black</td>
<td>1333-86-4</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³ (PAHs)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (inhalable fraction)</td>
<td>3 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>95-63-6</td>
<td>TWA</td>
<td>25 ppm 125 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>25 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>4,4’-methylenediphenyl diisocyanate</td>
<td>101-68-8</td>
<td>TWA</td>
<td>0.005 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.005 ppm 0.05 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>0.02 ppm 0.2 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>0.02 ppm 0.2 mg/m³</td>
<td>OSHA</td>
</tr>
<tr>
<td>1,3,5-trimethylbenzene</td>
<td>108-67-8</td>
<td>TWA</td>
<td>25 ppm 125 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>25 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>25 ppm 125 mg/m³</td>
<td>OSHA</td>
</tr>
<tr>
<td>crystalline silica</td>
<td>14808-60-7</td>
<td>TWA (Respirable fraction)</td>
<td>0.025 mg/m³</td>
<td>ACGIH</td>
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<td></td>
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<td>TWA (respirable)</td>
<td>10 mg/m³ / %SiO₂+2</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>250 mppcf / %SiO₂+5</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable dust)</td>
<td>0.05 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable dust)</td>
<td>0.05 mg/m³</td>
<td>OSHA</td>
</tr>
</tbody>
</table>
Personal protective equipment

Respiratory protection: If used and stored as directed, no special protective equipment is necessary. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material: Protective gloves

Remarks: Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection: Tightly fitting safety goggles

Face-shield

Skin and body protection: If used and stored as directed, no special protective equipment is necessary.

Protective measures: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.
Written instructions for handling must be available at the work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: paste

Colour: black

Odour: mild

Odour Threshold: No data available

pH: No data available
Safety Data Sheet

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Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: No data available
Evaporation rate: < 1
Flammability (solid, gas): not auto-flammable
Upper explosion limit: No data available
Lower explosion limit: No data available
Vapour pressure: No data available
Relative vapour density: Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density: 1.1344
Solubility(ies)
Water solubility: insoluble
Solubility in other solvents: No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: No data available
Thermal decomposition: No data available
Viscosity, dynamic: No data available
Viscosity, kinematic: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Stable
Chemical stability: No decomposition if stored and applied as directed.
Possibility of hazardous reactions: No decomposition if stored and applied as directed.
Conditions to avoid: Heat
Incompatible materials: Alcohols
Amines
Strong acids
Strong bases
Oxidizing agents
Water
Moisture
Hazardous decomposition products: In case of fire hazardous decomposition products may be produced such as:
carbon oxides
Hydrogen cyanide (hydrocyanic acid)
nitrogen oxides
Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate: > 10 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute toxicity

Components:
limestone:
Acute oral toxicity: LD0 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 420

Acute inhalation toxicity: LC50 (Rat, male and female): > 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402

Acute toxicity
carbon black:
Acute oral toxicity: LD50 (Rat, male and female): > 10,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity: LC50 (Rat): > 5.0 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: Method: Expert judgement
Assessment: The substance or mixture has no acute dermal toxicity

**Acute toxicity**

**solvent naphtha (petroleum), light arom.:**

**Acute oral toxicity**

- LD50 (Rat, male and female): > 5,000 mg/kg
  
  Method: OECD Test Guideline 401
  
  Remarks: No mortality was observed.
  
  Information given is based on data obtained from similar substances.

**Acute inhalation toxicity**

- LC50 (Rat, male and female): > 5,610 mg/l
  
  Exposure time: 4 h
  
  Test atmosphere: vapour
  
  Method: OECD Test Guideline 403
  
  Remarks: No mortality was observed.
  
  Information given is based on data obtained from similar substances.

**Acute dermal toxicity**

- LD50 (Rabbit, male and female): > 2,000 mg/kg
  
  Method: OECD Test Guideline 402
  
  Remarks: No mortality was observed.
  
  Information given is based on data obtained from similar substances.

**Acute toxicity**

**1,2,4-trimethylbenzene:**

**Acute oral toxicity**

- LD50 (Rat, male): 6,000 mg/kg
  
  Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)

**Acute inhalation toxicity**

- LC50 (Rat, male and female): 10.2 mg/l
  
  Exposure time: 4 h
  
  Test atmosphere: vapour
  
  Remarks: No mortality was observed.
  
  Information given is based on data obtained from similar substances.

**Acute dermal toxicity**

- LD50 (Rat, male and female): 3,440 mg/kg
  
  Remarks: No mortality was observed.
  
  Information given is based on data obtained from similar substances.

**Acute toxicity**

**4,4′-methyleneediphenyl diisocyanate:**

**Acute oral toxicity**

- LD50 (Rat, male and female): > 2,000 mg/kg

**Acute inhalation toxicity**

- LC50 (Rat): 2.24 mg/l
  
  Exposure time: 1 h
  
  Test atmosphere: dust/mist
  
  Assessment: The component/mixture is moderately toxic after short term inhalation.

**Acute dermal toxicity**

- LD50 (Rabbit, male and female): > 9,400 mg/kg
  
  Method: OECD Test Guideline 402
Acute toxicity

isocyanic acid, polymethylene polyphenylene ester:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Acute inhalation toxicity: Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity: LD50 (Rabbit, male and female): > 9,400 mg/kg
Method: OECD Test Guideline 402

Acute toxicity
quartz (SiO2):
Acute oral toxicity: LD50 (Rat): > 22,500 mg/kg
Acute inhalation toxicity: Assessment: The substance or mixture has no acute inhalation toxicity.
Acute dermal toxicity: Assessment: The substance or mixture has no acute dermal toxicity.

Acute toxicity
methylenediphenyl diisocyanate:
Acute oral toxicity: LD50 (Rat, male and female): > 2,000 mg/kg
Acute inhalation toxicity: Remarks: Harmful by inhalation.
Acute dermal toxicity: LD50 Dermal (Rat, male): > 9,400 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Components:
solvent naphtha (petroleum), light arom.: Result: Skin irritation

Skin corrosion/irritation
1,2,4-trimethylbenzene: Result: Skin irritation

Skin corrosion/irritation
4,4'-methylenediphenyl diisocyanate:
Species: Rabbit
Method: Draize Test
Result: Mild skin irritant

Species: Human
Result: irritating

Skin corrosion/irritation
isocyanic acid, polymethylene polyphenylene ester:
Species: Rabbit
Result: Skin irritation
Skin corrosion/irritation
methylenediphenyl diisocyanate:
Assessment: Irritating to skin.
Result: Skin irritation

Serious eye damage/eye irritation

Components:
1,2,4-trimethylbenzene:
Result: irritating

Serious eye damage/eye irritation
4,4’-methylenediphenyl diisocyanate:
Species: Rabbit
Result: Moderate eye irritation
Method: Draize Test
Species: Human
Result: irritatig

Serious eye damage/eye irritation
isocyanic acid, polymethylenepolyphenylene ester:
Species: Rabbit
Result: Eye irritation

Serious eye damage/eye irritation
methylenediphenyl diisocyanate:
Result: Eye irritation
Assessment: Irritating to eyes.

Respiratory or skin sensitisation

Product:
Remarks: May cause sensitisation of susceptible persons by skin contact or by inhalation of aerosol or dust.

Respiratory or skin sensitisation

Components:
4,4’-methylenediphenyl diisocyanate:
Exposure routes: Dermal
Species: Mouse
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 429
Result: positive

Exposure routes: Inhalation
Species: Guinea pig
Assessment: May cause sensitisation by inhalation.
Result: positive
Respiratory or skin sensitisation
isocyanic acid, polymethylenepolyphenylene ester:
Exposure routes: Dermal
Species: Mouse
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 429
Result: positive

Exposure routes: Inhalation
Species: Guinea pig
Assessment: May cause sensitisation by inhalation.
Result: positive

Respiratory or skin sensitisation
methylene diphenyl diisocyanate:
Result: May cause sensitisation by skin contact.
Result: May cause sensitisation by inhalation.

Carcinogenicity

Components:
methylene diphenyl diisocyanate:
Carcinogenicity - Assessment: Limited evidence of a carcinogenic effect.

IARC
Group 1: Carcinogenic to humans
- crystalline silica 14808-60-7

Group 2B: Possibly carcinogenic to humans
- carbon black 1333-86-4

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA (29 CFR 1910 Subpart Z, Toxic and Hazardous Substances).

NTP
Known to be human carcinogen
- crystalline silica 14808-60-7

STOT - single exposure

Components:
solvent naphtha (petroleum), light arom.:
Exposure routes: inhalation (vapour)
Target Organs: Central nervous system
Assessment: May cause drowsiness or dizziness.

STOT - single exposure
1,2,4-trimethylbenzene:
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

**STOT - single exposure**

4,4'-methylenediphenyl diisocyanate:
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

**STOT - single exposure**

isocyanic acid, polymethylenepolyphenylene ester:
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

**STOT - single exposure**

methylene diphenyl diisocyanate:
Exposure routes: inhalation (dust/mist/fume)
Assessment: May cause respiratory irritation.

**STOT - repeated exposure**

Components:
4,4'-methylenediphenyl diisocyanate:
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause damage to organs through prolonged or repeated exposure.

**STOT - repeated exposure**

isocyanic acid, polymethylenepolyphenylene ester:
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: Causes damage to organs through prolonged or repeated exposure.

**STOT - repeated exposure**

methylene diphenyl diisocyanate:
Assessment: May cause damage to organs through prolonged or repeated exposure.

**Aspiration toxicity**

Components:

solvent naphtha (petroleum), light arom.:
May be fatal if swallowed and enters airways.

1,2,4-trimethylbenzene:
May be fatal if swallowed and enters airways.

**Further information**

**Product:**
Remarks: No data available
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

solvent naphtha (petroleum), light arom.:

Toxicity to fish:
- LL50 (Onchorhynchus mykiss (rainbow trout)): 10 mg/l
  - End point: mortality
  - Exposure time: 96 h
  - Test Type: semi-static test
  - Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
- EL50 (Daphnia magna (Water flea)): 4.5 mg/l
  - End point: Immobilization
  - Exposure time: 48 h
  - Test Type: static test
  - Method: OECD Test Guideline 202

Toxicity to algae:
- NOELR (Pseudokirchneriella subcapitata (algae)): 0.5 mg/l
  - Exposure time: 72 h
  - Test Type: static test
  - Method: OECD Test Guideline 201

- EL50 (Pseudokirchneriella subcapitata (algae)): 3.1 mg/l
  - End point: see user defined free text
  - Exposure time: 72 h
  - Test Type: static test
  - Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- NOELR (Daphnia magna (Water flea)): 2.6 mg/l
  - Exposure time: 21 d
  - Test Type: semi-static test
  - Method: OECD Test Guideline 211

1,2,4-trimethylbenzene:

Toxicity to fish:
- LC50 (Pimephales promelas (fathead minnow)): 7.72 mg/l
  - End point: mortality
  - Exposure time: 96 h
  - Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates:
- LC50 (Daphnia magna (Water flea)): 3.6 mg/l
  - Exposure time: 48 h
  - Test Type: static test
  - Method: OECD Test Guideline 202

Toxicity to algae:
- EC50 (green algae): 2.356 mg/l
  - Exposure time: 96 h
  - Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to fish (Chronic toxicity):
- Chronic Toxicity Value: 0.396 mg/l
  - End point: mortality
  - Exposure time: 30 d
  - Remarks: The value is given based on a SAR/AAR approach
Expand-O-Flash® Tab Caulking

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Toxicity Value (Daphnia sp. (water flea)):</td>
<td>0.367 mg/l</td>
<td>16 d</td>
<td>The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.</td>
</tr>
</tbody>
</table>

quartz (SiO2):

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 (Cyprinus carpio (Carp)):</td>
<td>&gt; 10,000 mg/l</td>
<td>72 h</td>
</tr>
</tbody>
</table>

Persistence and degradability

**Components:**

- solvent naphtha (petroleum), light arom.: Biodegradability: Result: Inherently biodegradable.

- 1,2,4-trimethylbenzene: Biodegradability: Result: Biodegradable

Bioaccumulative potential

**Components:**

- 1,2,4-trimethylbenzene: Partition coefficient: n-octanol/water: log Pow: 3.63

- 4,4’-methylenediphenyl diisocyanate: Partition coefficient: n-octanol/water: log Pow: 4.51 (20 °C) pH: 7

Mobility in soil

No data available

Other adverse effects

**Product:**

Additional ecological information: Very toxic to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

- Waste from residues: Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.
SECTION 14. TRANSPORT INFORMATION

International transport regulations

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

SECTION 15. REGULATORY INFORMATION

TSCA list
TSCA - 5(a) Significant New Use Rule List of Chemicals: No substances are subject to a Significant New Use Rule.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D): No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-methylene diisocyanate</td>
<td>101-68-8</td>
<td>5000</td>
<td>*</td>
</tr>
<tr>
<td>naphthalene</td>
<td>91-20-3</td>
<td>100</td>
<td>*</td>
</tr>
<tr>
<td>xylene</td>
<td>1330-20-7</td>
<td>100</td>
<td>*</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>100-41-4</td>
<td>1000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-methylene diisocyanate</td>
<td>101-68-8</td>
<td>0.5 - 1.5%</td>
<td></td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards: Respiratory or skin sensitisation
Germ cell mutagenicity
Carcinogenicity

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

4,4’-methylene diisocyanate 101-68-8 0.5 - 1.5 %
The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

4,4'-methylene diphenyl diisocyanate  101-68-8
diisocyanate

California Prop. 65

**WARNING:** This product can expose you to chemicals including cumene, which is/are known to the State of California to cause cancer, and diisodecyl phthalate, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

TSCA : On the inventory, or in compliance with the inventory

DSL : On the inventory, or in compliance with the inventory

**SECTION 16. OTHER INFORMATION**

**Further information**

Revision Date : 05/12/2020

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.