1. Identification

Product identifier: Insulgel 70CC FRNS - Part B

Other means of identification:
SKU#: IE406H, IE420H

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer:
- Company name: ITW Performance Polymers
- Address: 130 Commerce Drive, Montgomeryville, PA 18936
- Telephone: Customer Service 215-855-8450
- Website: www.itwperformancepolymers.com
- E-mail: Not available.
- Contact person: EHS Department
- Emergency phone number: CHEMTREC 800-424-9300
  International 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Acute toxicity, oral: Category 4
- Acute toxicity, dermal: Category 4
- Skin corrosion/irritation: Category 1
- Serious eye damage/eye irritation: Category 1
- Sensitization, skin: Category 1
- Reproductive toxicity: Category 2

Environmental hazards:
- Hazardous to the aquatic environment, acute hazard: Category 1
- Hazardous to the aquatic environment, long-term hazard: Category 1

OSHA defined hazards: Not classified.

Label elements:

Signal word: Danger

Hazard statement:
Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary statement:
Prevention: Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response
If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.

Storage
Disposal
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
None known.

Supplemental information
99.19% of the mixture consists of component(s) of unknown acute inhalation toxicity. 57.51% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 2.65% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Chemical name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-(2-aminoethyl)piperazine</td>
<td>140-31-8</td>
<td>10 - 30</td>
</tr>
<tr>
<td></td>
<td>nonyl phenol</td>
<td>84852-15-3</td>
<td>10 - 30</td>
</tr>
<tr>
<td></td>
<td>POLY(OXYPROPYLENE)DIAMINE</td>
<td>9046-10-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td></td>
<td>TETRAETHYLENEPENTAMINE</td>
<td>112-57-2</td>
<td>10 - 30</td>
</tr>
<tr>
<td></td>
<td>Triethylolamine</td>
<td>102-71-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td></td>
<td>Piperazine</td>
<td>110-85-0</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. Chemical burns must be treated by a physician. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs.

Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information
IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media
Alcohol resistant foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piperazine (CAS 110-85-0)</td>
<td>TWA</td>
<td>0.03 ppm</td>
<td>Inhalable fraction and vapor.</td>
</tr>
<tr>
<td>Triethylolamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. Workplace Environmental Exposure Level (WEEL) Guides</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TETRAETHYLENEPENTAMINE (CAS 112-57-2)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Aerosol.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
<td>Aerosol.</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US WEEL Guides: Skin designation

TETRAETHYLENEPENTAMINE (CAS 112-57-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection Wear appropriate chemical resistant gloves.

Hand protection
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection
Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance
Liquid.

Physical state
Liquid.

Form
Liquid.

Color
Colourless to light yellow.

Odor
Ammoniacal.

Odor threshold
Not available.

pH
Not available.

Melting point/freezing point
Not available.

Initial boiling point and boiling range
432 °F (222.22 °C) estimated

Flash point
> 201.0 °F (> 93.9 °C)

Evaporation rate
Not available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits
Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure
< 0.5 mm Hg

Vapor density
Not available.

Relative density
Not available.

Solubility(ies)
Solubility (water)
Not available.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
610 °F (321.11 °C) estimated

Decomposition temperature
Not available.

Viscosity
Not available.

Other information
Density
0.98 g/cm3

Explosive properties
Not explosive.

Flammability class
Combustible IIIB estimated

Oxidizing properties
Not oxidizing.

Specific gravity
0.98

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

**Inhalation**: May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

**Skin contact**: Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

**Eye contact**: Causes serious eye damage.

**Ingestion**: Causes digestive tract burns. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics:

- Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

**Acute toxicity**: Harmful in contact with skin. Harmful if swallowed.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>nonyl phenol (CAS 84852-15-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 Rabbit</td>
<td></td>
<td>2140 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td>1600 mg/kg</td>
</tr>
<tr>
<td>Piperazine (CAS 110-85-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>2050 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TETRAETHYLENEPENTAMINE (CAS 112-57-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>0.66 g/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>2.1 g/kg</td>
</tr>
<tr>
<td>Triethylolamine (CAS 102-71-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 20000 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>8 g/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**: Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**: Causes serious eye damage.

**Respiratory or skin sensitization**

| ACGIH sensitization                          |                |
| PIPERAZINE AND SALTS, INHALABLE FRACTION AND Dermal sensitization VAPOR, AS PIPERAZINE (CAS 110-85-0) | Respiratory sensitization |

**Respiratory sensitization**: Not a respiratory sensitizer.

**Skin sensitization**: May cause an allergic skin reaction.

**Germ cell mutagenicity**: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity
Triethylolamine (CAS 102-71-6) Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects May be harmful if absorbed through skin. Prolonged inhalation may be harmful.

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential
Partition coefficient n-octanol / water (log Kow)

nonyl phenol 5.71
Piperazine -1.17
TETRAETHYLENEPENTAMINE 1.503
Triethylolamine -1

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN3066
UN proper shipping name Paint
Transport hazard class(es)

Class 8
Subsidiary risk -
Label(s) 8
Packing group III
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions B52, IB3, T4, TP1, TP29
Packaging exceptions 154
Packaging non bulk 173
Packaging bulk 241

IATA
UN number UN3066
UN proper shipping name Paint
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 8L

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.

Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG
UN number UN3066
UN proper shipping name Paint, MARINE POLLUTANT
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant Yes
EmS F-A, S-B

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.
Not established.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

DOT

IATA; IMDG
General information
IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations
This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
nonyl phenol (CAS 84852-15-3) 1.0 % One-Time Export Notification only.

TSCA Chemical Action Plans, Chemicals of Concern
nonyl phenol (CAS 84852-15-3) Nonylphenol (NP) and Nonylphenol Ethoxylates (NPEs) Action Plan

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration
nonyl phenol (CAS 84852-15-3) % 1.0

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
nonyl phenol (CAS 84852-15-3) Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

Classified hazard categories
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Reproductive toxicity

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>nonyl phenol</td>
<td>84852-15-3</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.
### International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*"Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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**16. Other information, including date of preparation or last revision**

- **Issue date**: 05-15-2018
- **Version #**: 01
- **HMIS® ratings**:
  - Health: 3*
  - Flammability: 1
  - Physical hazard: 1
  - Personal protection: B
- **NFPA ratings**:
  - Health: 3
  - Flammability: 1
  - Instability: 1

**Disclaimer**

ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. 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 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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

**Revision information**

- Accidental release measures: Personal precautions, protective equipment and emergency procedures
- Accidental release measures: Methods and materials for containment and cleaning up
- Handling and storage: Precautions for safe handling
- Handling and storage: Conditions for safe storage, including any incompatibilities
- Physical & Chemical Properties: Multiple Properties
- Stability and reactivity: Conditions to avoid
- Toxicological information: Inhalation
- Ecological information: Persistence / degradability
- Ecological information: Other adverse effects
- Transport information: General information
- Regulatory information: California Proposition 65
- Other information, including date of preparation or last revision: References
- Other information, including date of preparation or last revision: Disclaimer