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

1.1. Product identifier

Irgastab® Plus 5190

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

Relevant identified uses: stabilizer

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Regional Business Unit Dispersions and Resins Europe

Telephone: +49 621 60-90799
E-mail address: ed-psr@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Aquatic Chronic 2
2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:

Hazard Statement: H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):
P273 Avoid release to the environment.

Precautionary Statements (Response):
P391 Collect spillage.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

The product is under certain conditions capable of dust explosion.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Preparation based on: stabilizing agents

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008
3,9-Bis(2,4-di-tert-butylphenoxy)-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane

Content (W/W): >= 15 % - < 25 %  
CAS Number: 26741-53-7  
EC-Number: 247-952-5  
REACH registration number: 01-2119977073-34  

M-factor chronic: 1  
Aquatic Chronic 1  
H410

2,4-di-tert-Butylphenol

Content (W/W): >= 0.1 % - <= 0.2 %  
CAS Number: 96-76-4  
EC-Number: 202-532-0  
REACH registration number: 01-2119486980-25  

M-factor acute: 1  
M-factor chronic: 1  
H318, H315, H400, H410

Skin Corr./Irrit. 2  
Eye Dam./Irrit. 1  
Aquatic Acute 1  
Aquatic Chronic 1

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures
Remove contaminated clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:
Wash thoroughly with soap and water.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:
Rinse mouth and then drink plenty of water.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms: No significant reaction of the human body to the product known.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.
SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media
Suitable extinguishing media:
dry powder, foam

Unsuitable extinguishing media for safety reasons:
carbon dioxide

Additional information:
Avoid whirling up the material/product because of the danger of dust explosion.

5.2. Special hazards arising from the substance or mixture
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters
Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Use personal protective clothing.

6.2. Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up
For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Contain with dust binding material and dispose of.
Avoid raising dust.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling
Breathing must be protected when large quantities are decanted without local exhaust ventilation.
Protection against fire and explosion:
Avoid dust formation. Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities
Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Protect from temperatures above: 35 °C

7.3. Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

6683-19-8: Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)
9002-88-4: polyethylene

8.2. Exposure controls

Personal protective equipment
Respiratory protection:
Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:
Chemical resistant protective gloves (EN 374)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):
e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

General safety and hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended.
SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form:</td>
<td>pellets</td>
</tr>
<tr>
<td>Colour:</td>
<td>white to off-white</td>
</tr>
<tr>
<td>Odour:</td>
<td>product specific</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>not determined</td>
</tr>
<tr>
<td>pH value:</td>
<td>not determined</td>
</tr>
<tr>
<td>Melting temperature:</td>
<td>&gt; 60 °C</td>
</tr>
<tr>
<td>Boiling temperature:</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Study does not need to be conducted.</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>The product is a non-volatile solid.</td>
</tr>
<tr>
<td>Flammability:</td>
<td>not flammable</td>
</tr>
<tr>
<td>Lower explosion limit:</td>
<td>For solids not relevant for classification and labelling.</td>
</tr>
<tr>
<td>Upper explosion limit:</td>
<td>For solids not relevant for classification and labelling.</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Density:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative vapour density (air):</td>
<td>The product is a non-volatile solid.</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>not soluble</td>
</tr>
<tr>
<td>Solubility (qualitative) solvent(s):</td>
<td>organic solvents soluble</td>
</tr>
<tr>
<td>Solubility (quantitative) :</td>
<td>insoluble</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Kow):</td>
<td>Study does not need to be conducted.</td>
</tr>
<tr>
<td>Self ignition:</td>
<td>not self-igniting</td>
</tr>
<tr>
<td>Thermal decomposition:</td>
<td>not determined</td>
</tr>
<tr>
<td>Viscosity, dynamic:</td>
<td>Study does not need to be conducted.</td>
</tr>
<tr>
<td>Explosion hazard:</td>
<td>not explosive</td>
</tr>
</tbody>
</table>
Fire promoting properties: not fire-propagating

9.2. Other information

Self heating ability: It is not a substance capable of spontaneous heating.

Bulk density: 450 - 600 kg/m3
Hygroscopy: Non-hygroscopic
Grain size distribution: No data available.

SECTION 10: Stability and Reactivity

10.1. Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
The product may contain explosive fine dust or such dust may be produced by abrasion during transport or product transfer.

10.4. Conditions to avoid
Avoid dust formation. Avoid deposition of dust. Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge.

10.5. Incompatible materials
Substances to avoid:
strong oxidizing agents, strong bases, strong acids

10.6. Hazardous decomposition products
Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Experimental/calculated data:
ATE rat (oral): > 5,000 mg/kg
The product has not been tested. The statement has been derived from the properties of the individual components.
LC50 (by inhalation): 
not determined

LD50 (dermal): 
not determined

Irritation

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant
The product has not been tested. The statement has been derived from the properties of the individual components.

Serious eye damage/irritation rabbit: non-irritant
The product has not been tested. The statement has been derived from the properties of the individual components.

Respiratory/Skin sensitization

Assessment of sensitization:
Based on the ingredients, there is no suspicion of a skin-sensitizing potential.

Experimental/calculated data:
Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)
The product has not been tested. The statement has been derived from the properties of the individual components.

Germ cell mutagenicity

Assessment of mutagenicity:
Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity

Assessment of carcinogenicity:
Based on the ingredients there is no suspicion of a carcinogenic effect in humans.

Reproductive toxicity

Assessment of reproduction toxicity:
Based on the ingredients, there is no suspicion of a toxic effect on reproduction.

Developmental toxicity

Assessment of teratogenicity:
Based on the ingredients, there is no suspicion of a teratogenic effect.

Specific target organ toxicity (single exposure)
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
No data available.

Aspiration hazard
not applicable

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:
Toxic to aquatic life with long lasting effects.
The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish:
LC50 (96 h) > 100 mg/l, Fish
The product has not been tested. The statement has been derived from the properties of the individual components.

Aquatic invertebrates:
LC50 (48 h), daphnia
not determined

Aquatic plants:
EC50 (72 h), algae
not determined

Microorganisms/Effect on activated sludge:
EC50 (0.5 h), bacteria
not determined

Chronic toxicity to fish:
No data available.

Chronic toxicity to aquatic invertebrates:
No data available.

Assessment of terrestrial toxicity:
12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
Poorly biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
No data available.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Volatility: No data available.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. Additional information

Add. remarks environm. fate & pathway:
Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.
SECTION 14: Transport Information

**Land transport**

ADR

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN3077</th>
</tr>
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<tbody>
<tr>
<td>UN proper shipping name:</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains 3,9-BIS(2,4-DI-TERT-BUTYLPHENOXY)-2,4,8,10-TETRAOXA-3,9-DIPHOSPHASPIRO[5.5]UNDECANE)</td>
</tr>
<tr>
<td>Transport hazard class(es):</td>
<td>9, EHSM</td>
</tr>
<tr>
<td>Packing group:</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>yes</td>
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<tr>
<td>Special precautions for user:</td>
<td>None known</td>
</tr>
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</table>

RID

<table>
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<th>UN number</th>
<th>UN3077</th>
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<tr>
<td>UN proper shipping name:</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains 3,9-BIS(2,4-DI-TERT-BUTYLPHENOXY)-2,4,8,10-TETRAOXA-3,9-DIPHOSPHASPIRO[5.5]UNDECANE)</td>
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<td>Transport hazard class(es):</td>
<td>9, EHSM</td>
</tr>
<tr>
<td>Packing group:</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>yes</td>
</tr>
<tr>
<td>Special precautions for user:</td>
<td>None known</td>
</tr>
</tbody>
</table>

**Inland waterway transport**

ADN

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN3077</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name:</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains 3,9-BIS(2,4-DI-TERT-BUTYLPHENOXY)-2,4,8,10-TETRAOXA-3,9-DIPHOSPHASPIRO[5.5]UNDECANE)</td>
</tr>
<tr>
<td>Transport hazard class(es):</td>
<td>9, EHSM</td>
</tr>
<tr>
<td>Packing group:</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>yes</td>
</tr>
<tr>
<td>Special precautions for user:</td>
<td>None known</td>
</tr>
</tbody>
</table>

Transport in inland waterway vessel

Not evaluated

**Sea transport**
IMDG

| UN number: | UN 3077 |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains 3,9-BIS(2,4-DI-TERT-BUTYLPHENOXY)-2,4,8,10-TETRAOXA-3,9-DIPHOSPHASPIRO[5.5]UNDECANE) |
| Transport hazard class(es): | 9, EHSM |
| Packing group: | III |
| Environmental hazards: | yes |
| Marine pollutant: | YES |
| Special precautions for user: | None known |

Air transport

IATA/ICAO

| UN number: | UN 3077 |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains 3,9-BIS(2,4-DI-TERT-BUTYLPHENOXY)-2,4,8,10-TETRAOXA-3,9-DIPHOSPHASPIRO[5.5]UNDECANE) |
| Transport hazard class(es): | 9, EHSM |
| Packing group: | III |
| Environmental hazards: | yes |
| Special precautions for user: | None known |

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Not evaluated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipment approved</td>
<td>Not evaluated</td>
</tr>
<tr>
<td>Pollution name</td>
<td>Not evaluated</td>
</tr>
<tr>
<td>Pollution category</td>
<td>Not evaluated</td>
</tr>
<tr>
<td>Ship Type</td>
<td>Not evaluated</td>
</tr>
</tbody>
</table>

SECTION 15: Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

Chemical Safety Assessment not yet performed due to registration timelines

SECTION 16: Other Information

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Aquatic Chronic: Hazardous to the aquatic environment - chronic
Skin Corr./Irrit.: Skin corrosion/irritation
Eye Dam./Irrit.: Serious eye damage/eye irritation
Aquatic Acute: Hazardous to the aquatic environment - acute
H411: Toxic to aquatic life with long lasting effects.
H410: Very toxic to aquatic life with long lasting effects.
H318: Causes serious eye damage.
H315: Causes skin irritation.
H400: Very toxic to aquatic life.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.