

## SAFETY DATA SHEET

Creation Date 11-Oct-2010

Revision Date 18-Jan-2018

Revision Number 5

### 1. Identification

**Product Name** Paraformaldehyde

**Cat No. :** O4042500; T353500; NC1519741; XXPARASPEX10KG;  
XXPARAFORM10KG; NC1535346

**CAS-No** 30525-89-4  
**Synonyms** Formaldehyde polymer; Polyoxymethylene; Polyformaldehyde

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

##### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |            |
|--|------------|
| Flammable solids                                 | Category 2 |
| Acute oral toxicity                              | Category 4 |
| Acute Inhalation Toxicity - Dusts and Mists      | Category 4 |
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 1 |
| Skin Sensitization                               | Category 1 |
| Carcinogenicity                                  | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |
| Combustible dust                                 | Yes        |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Flammable solid  
May form combustible dust concentrations in air  
Harmful if swallowed  
Causes skin irritation  
May cause an allergic skin reaction  
Causes serious eye damage  
Harmful if inhaled  
May cause respiratory irritation  
Suspected of causing cancer



### Precautionary Statements

#### Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment

#### Response

IF exposed or concerned: Get medical attention/advice

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

#### Skin

IF ON SKIN: Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse  
If skin irritation or rash occurs: Get medical advice/attention

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a POISON CENTER or doctor/physician

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

None identified

## 3. Composition/Information on Ingredients

| Component        | CAS-No     | Weight % |
|------------------|------------|----------|
| Paraformaldehyde | 30525-89-4 | >90      |

#### 4. First-aid measures

|  |  |
|--|--|
| <b>General Advice</b>                      | If symptoms persist, call a physician.   |
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.  |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.   |
| <b>Inhalation</b>                          | Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.   |
| <b>Ingestion</b>                           | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.  |
| <b>Most important symptoms and effects</b> | Breathing difficulties. May cause allergic skin reaction. Causes eye burns. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

#### 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | 71 °C / 159.8 °F  |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | 300 °C / 572 °F   |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | 73%   |
| <b>Lower</b>                            | 7.0%  |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

#### Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Fine dust dispersed in air may ignite.

#### Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>)

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

**Health**  
3

**Flammability**  
2

**Instability**  
1

**Physical hazards**  
N/A

#### 6. Accidental release measures

|                             |  |
|-----------------------------|--|
| <b>Personal Precautions</b> | Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges. |
|-----------------------------|--|

**Environmental Precautions** Should not be released into the environment. See Section 12 for additional ecological information.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal. Remove all sources of ignition.

## 7. Handling and storage

**Handling** Wear personal protective equipment. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles.

**Skin and body protection** Long sleeved clothing.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|   |                             |
|---|-----------------------------|
| <b>Physical State</b>                         | Solid                       |
| <b>Appearance</b>                             | White                       |
| <b>Odor</b>                                   | pungent                     |
| <b>Odor Threshold</b>                         | No information available    |
| <b>pH</b>                                     | 3.5-5.0 10% susp            |
| <b>Melting Point/Range</b>                    | 120 - 170 °C / 248 - 338 °F |
| <b>Boiling Point/Range</b>                    | No information available    |
| <b>Flash Point</b>                            | 71 °C / 159.8 °F            |
| <b>Evaporation Rate</b>                       | Not applicable              |
| <b>Flammability (solid,gas)</b>               | No information available    |
| <b>Flammability or explosive limits</b>       |                             |
| <b>Upper</b>                                  | 73%                         |
| <b>Lower</b>                                  | 7.0%                        |
| <b>Vapor Pressure</b>                         | 1.2 mmHg @ 25 °C            |
| <b>Vapor Density</b>                          | Not applicable              |
| <b>Specific Gravity</b>                       | 1.46                        |
| <b>Solubility</b>                             | No information available    |
| <b>Partition coefficient; n-octanol/water</b> | No data available           |

|                           |                                  |
|---------------------------|----------------------------------|
| Autoignition Temperature  | 300 °C / 572 °F                  |
| Decomposition Temperature | No information available         |
| Viscosity                 | Not applicable                   |
| Molecular Formula         | (CH <sub>2</sub> O) <sub>n</sub> |

## 10. Stability and reactivity

|                                  |   |
|----------------------------------|---|
| Reactive Hazard                  | Yes   |
| Stability                        | Stable under normal conditions.   |
| Conditions to Avoid              | Incompatible products. Excess heat. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition. |
| Incompatible Materials           | Strong oxidizing agents   |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )   |
| Hazardous Polymerization         | Hazardous polymerization does not occur.  |
| Hazardous Reactions              | None under normal processing.   |

## 11. Toxicological information

### Acute Toxicity

#### Product Information

##### Oral LD50

Category 4. ATE = 300 - 2000 mg/kg.

##### Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

##### Mist LC50

Category 4. ATE = 1 - 5 mg/l.

#### Component Information

| Component        | LD50 Oral                | LD50 Dermal | LC50 Inhalation                           |
|------------------|--------------------------|-------------|---|
| Paraformaldehyde | LD50 = 800 mg/kg ( Rat ) | Not listed  | LC50 = 1070 mg/m <sup>3</sup> ( Rat ) 4 h |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                 |  |
|-----------------|--|
| Irritation      | Irritating to eyes, respiratory system and skin  |
| Sensitization   | No information available   |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component        | CAS-No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|------------------|------------|------------|------------|------------|------------|------------|
| Paraformaldehyde | 30525-89-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching,

swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** Carcinogenic effects have been reported in experimental animals. The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

**Ecotoxicity**

Do not empty into drains.

| Component        | Freshwater Algae | Freshwater Fish | Microtox   | Water Flea         |
|------------------|------------------|-----------------|------------|--------------------|
| Paraformaldehyde | Not listed       | >10 mg/L 96h    | Not listed | EC50 = 42 mg/L 24h |

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

UN-No UN2213  
 Proper Shipping Name PARAFORMALDEHYDE  
 Hazard Class 4.1  
 Packing Group III

**TDG**

UN-No UN2213  
 Proper Shipping Name PARAFORMALDEHYDE  
 Hazard Class 4.1  
 Packing Group III

**IATA**

UN-No UN2213  
 Proper Shipping Name PARAFORMALDEHYDE  
 Hazard Class 4.1  
 Packing Group III

**IMDG/IMO**

UN-No UN2213  
 Proper Shipping Name PARAFORMALDEHYDE  
 Hazard Class 4.1  
 Packing Group III

## 15. Regulatory information

**International Inventories**

| Component        | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|------------------|------|-----|------|--------|--------|-----|-------|------|------|-------|------|
| Paraformaldehyde | X    | X   | -    | -      | -      |     | X     | X    | X    | X     | X    |

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated

polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

**CWA (Clean Water Act)**

| Component        | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Paraformaldehyde | X                          | 1000 lb                     | -                      | -                         |

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicable

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component        | Hazardous Substances RQs | CERCLA EHS RQs |
|------------------|--------------------------|----------------|
| Paraformaldehyde | 1000 lb                  | -              |

California Proposition 65 This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

| Component        | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|------------------|---------------|------------|--------------|----------|--------------|
| Paraformaldehyde | X             | X          | X            | -        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade Moderate risk, Grade 2

**16. Other information**

Prepared By Regulatory Affairs  
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Creation Date 11-Oct-2010

**Revision Date** 18-Jan-2018  
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**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

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

**End of SDS**