



SAFETY DATA SHEET

Issue Date 26-Sept-2014

Revision Date

Version 1

1. IDENTIFICATION

Product Identifier

Product Name ORTHO-JET CRYSTAL POWDER

Other means of identification

SDS# 022

Product Code 0220, 0230, 0250, 0270, 0280, 0223, 0234, 0256

Recommended use of the chemical and restrictions on use

Recommended Use Fabrication of orthodontic appliances

Details of the supplier of the safety data sheet

Supplier Address

Lang Dental Mfg. Co., Inc.
175 Messner Dr.
Wheeling, IL 60090
USA

Emergency telephone number

Company Phone Number 847-215-6622

Emergency Telephone (INFOTRAC) 352-323-3500 (International)
800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122); however, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product and should be retained for employees and other users of this product.

Physical State Powder **Appearance** Fine white **Odor** Faint odor in bulk

Hazards not otherwise classified (HNOC) Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight - % | Trade Secret |
|-------------------|-----------|------------|--------------|
| Polymer | 9011-14-7 | > 85 | * |
| Diethyl phthalate | 84-66-2 | < 15 | * |

*Specific chemical weight has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Inhalation Remove to fresh air. Get medical attention if discomfort persists.

| | |
|---------------------|---|
| Eye contact | Rinse immediately with plenty of water, including under the eyelids, for at least 15 minutes. If irritation persists, get medical advice / attention. |
| Ingestion | Do NOT induce vomiting. Drink plenty of water or milk immediately. If vomiting, continue to offer water or milk. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately and provide an estimate of when and how much material was ingested. |
| Skin Contact | Wash with soap and water. If irritation persists, call a physician. Take off contaminated clothing and wash before reuse. |

Most important symptoms and effects, both acute and delayed

Symptoms Skin contact may aggravate an existing dermatitis. Direct contact with eyes may cause temporary irritation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable: Water, carbon dioxide (CO₂), dry chemical

Unsuitable: Avoid extinguishing methods which may generate dust clouds.

Specific hazards arising from the chemical

For bulk size: Polymer dust is combustible. The explosive limits of the polymer particles suspended in air are approximately those of coal dust.

Protective equipment and precautions for firefighters

Self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Remove any contaminated clothing and wash thoroughly before reuse.

Methods and material for containment and clean-up

Method for containment Prevent further leakage or spillage if safe to do so.

Method for clean-up Sweep up to avoid slipping hazard. Keep airborne particulates at a minimum when cleaning up spills. Clean up in accordance with all applicable regulations. Wash all affected areas with plenty of warm water and soap.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use only in well-ventilated areas. Avoid contact with skin, eyes or clothing. Avoid breathing dust or fume. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

| | |
|-------------------------------|--|
| Storage Conditions | Keep containers tightly closed to prevent water absorption and contamination. Store in a dry, cool and well-ventilated place away from direct sunlight or other sources of light or intense heat. Preferable storage temperature not to exceed 35°C. |
| Packaging materials | Keep in original container. |
| Incompatible materials | Strong oxidizing agents |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------------------|--------------------------|------------------------------------|--------------------------|
| Diethyl phthalate 84-66-2 | TWA: 5 mg/m ³ | TWA: 5 mg/m ³ (vacated) | TWA: 5 mg/m ³ |

Appropriate engineering controls Apply technical measures to comply with the occupational exposure limits. When working with large quantities of product, provide adequate ventilation (e.g. local exhaust ventilation, fans). Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes. Use good local exhaust at processing equipment, including buffers, sanders, grinders and polishers.

Individual protection measures, such as personal protective equipment

Eye / face protection Depending on the use of this product, safety glasses or goggles may be worn. If necessary, refer to US OSHA 29 CFR SS1910.133, Canadian standards or the European Standard EN 166. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

Skin and body protection If anticipated that prolonged and repeated skin contact will occur during use of this product, wear gloves for routine industrial use. If necessary, refer to US OSHA 29 CFR SS1910.138 or the appropriate standards of Canada or the EC member states.

Respiratory protection No special respiratory protection is required under typical circumstances of use or handling. If necessary, use only respiratory protection authorized per US OSHA requirement in 29 CFR SS 1910.134, or applicable US state regulations, or the appropriate standards of Canada, its provinces, EC member states or Australia. VENTILATION: Local exhaust at processing equipment.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|-----------------------|--------|-----------------------|--------------------|
| Physical state | Powder | Odor | Faint odor in bulk |
| Appearance | Fine | Odor threshold | Not determined |
| Color | White | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks / Method</u> |
|--------------------------------|----------------|-------------------------|
| pH | Not determined | |
| Melting point / freezing point | Not determined | |
| Boiling point / boiling range | Not applicable | |
| Flash point | 304°C / 580°F | |
| Evaporation rate | Not applicable | |
| Flammability (solid, gas) | Non-flammable | |
| Flammability limits in air | | |
| Upper flammability limit | Not applicable | |
| Lower flammability limit | Not applicable | |
| Vapor pressure | Not applicable | |

| | |
|------------------------------|--------------------|
| Vapor density | Not applicable |
| Specific gravity | Not determined |
| Water solubility | Insoluble in water |
| Solubility in other solvents | Not determined |
| Partition coefficient | Not determined |
| Autoignition temperature | Not determined |
| Decomposition temperature | Not determined |
| Kinematic viscosity | Not determined |
| Dynamic viscosity | Not determined |
| Explosive properties | Not determined |
| Oxidizing properties | Not determined |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity | Not reactive under normal conditions |
| Chemical stability | Stable under recommended storage conditions |
| Possibility of hazardous reactions | None under normal processing |
| Hazardous polymerization | Does not occur. |
| Conditions to avoid | Heating above 240°C / 464°F |
| Incompatible materials | Strong oxidizing agents |
| Hazardous decomposition products | Methacrylate monomer, oxides of carbon when burned |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposures

| | |
|----------------------------|---|
| Product information | This product has not been tested on animals to obtain toxicology data. |
| Inhalation | Not expected to be an inhalation hazard under normal conditions of intended use |
| Eye contact | Avoid contact with eyes. |
| Skin contact | Avoid contact with skin. |
| Ingestion | Do not taste or swallow. |

Component information

| Chemical Name | ORAL LD50 | DERMAL LD50 | INHALATION LC50 |
|---------------------------|------------------|---------------------|-----------------|
| Diethyl phthalate 84-66-2 | 8600 mg/kg (rat) | > 11200 mg/kg (rat) | - |

Information on physical, chemical and toxicological effects

Symptoms Skin contact may aggravate an existing dermatitis. Direct contact with eyes may cause temporary irritation.

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

Carcinogenicity Not classifiable as a human carcinogen (IARC group 3)

Numerical measures of toxicity – Product Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

There is no specific data available for this product; however, very large releases may be harmful or fatal to overexposed aquatic life.

| Chemical Name | Algae / aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|------------------------------|---|--|----------------------------|---|
| Diethyl phthalate 84-66-2 | 23: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50; 23: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 static; 21: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50; 21: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50 static; 42-255: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50; 2.11-4.29: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static | 17: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through; 16.8: 96 h <i>Pimephales promelas</i> mg/L LC50 static; 22: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through; 16.7: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static; 12: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through | - | 36-74: 48 h <i>Daphnia magna</i> mg/L EC50; 86: 48 h <i>Daphnia magna</i> mg/L EC50 static |

Persistence and degradability Not determined

Bioaccumulation Not determined

Mobility Not determined

| Chemical Name | Partition coefficient |
|------------------------------|-----------------------|
| Diethyl Phthalate 84-66-2 | 2.35 |

Other adverse effects Not determined

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging For bulk only: Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards due to residual material associated with empty containers. Dispose of all empty containers properly in accordance with federal, state and local regulations.

| Chemical Name | RCRA | RCRA-Basis for listing | RCRA-D Series Wastes | RCRA-U Series Wastes |
|------------------------------|------|-----------------------------------|----------------------|----------------------|
| Diethyl Phthalate 84-66-2 | U088 | Included in waste stream: F039 | - | U088 |

14. TRANSPORTATION INFORMATION

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA
DSL

For use in FDA regulated products only
Listed

United States Toxic Substances Control Act, Section 8(b) Inventory
Canadian Domestic Substances List

US Federal Regulations

SARA 311/312 Hazard Categories

| Chemical Name | CWA-Reportable Quantities | CWA-Toxic Pollutants | CWA-Priority Pollutants | CWA-Hazardous Substances |
|------------------------------|---------------------------|----------------------|-------------------------|--------------------------|
| Diethyl Phthalate 84-66-2 | - | X | X | - |

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) Final |
|------------------------------|--------------------------|----------------|--------------------------------|
| Diethyl Phthalate 84-66-2 | 1000 lb. | - | 1000 lb. / 454 kg |

US State Regulations

US State Right-to-know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|------------------------------|------------|---------------|--------------|
| Diethyl Phthalate 84-66-2 | X | X | X |

16. OTHER INFORMATION

| HMIS | Health Hazards | Flammability | Physical Hazards |
|------|----------------|--------------|------------------|
| | 1 | 1 | 0 |

Issue Date 26-Sept-2014

Revision Date

Revision Note

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. It 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 Safety Data Sheet