



## SAFETY DATA SHEET

### xGen® Hybridization Buffer Enhancer

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

#### 1. Identification

Product identifier

Product name xGen® Hybridization Buffer Enhancer

CAS number 75-12-7

Recommended use of the chemical and restrictions on use

Application For research and development purposes only.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Manufacturer Integrated DNA Technologies  
1710 Commercial Park  
Coralville Iowa, 52241  
custcare@idtdna.com

Emergency telephone number

Emergency telephone ChemTrec 800-424-9300

#### 2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Carc. 2 - H351 Repr. 1B - H360D

Environmental hazards Not Classified

Label elements

Pictogram



Signal word Danger

Hazard statements H351 Suspected of causing cancer.  
H360D May damage the unborn child.

Precautionary statements P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P308+P313 If exposed or concerned: Get medical advice/ attention.  
P405 Store locked up.  
P501 Dispose of contents/ container in accordance with national regulations.

Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

#### 3. Composition/information on ingredients

## xGen® Hybridization Buffer Enhancer

### Substances

Product name	xGen® Hybridization Buffer Enhancer
CAS number	75-12-7
Composition comments	The exact percentage is withheld as a trade secret in accordance with 29 CFR 1910.1200.

## 4. First-aid measures

### Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
Ingestion	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
Skin Contact	Rinse with water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.
Most important symptoms and effects, both acute and delayed	
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Ingestion	Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Skin contact	Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.
Indication of immediate medical attention and special treatment needed	
Notes for the doctor	Treat symptomatically.

## 5. Fire-fighting measures

### Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

### Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up.
------------------	--

Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.
-------------------------------	---

### Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

## xGen® Hybridization Buffer Enhancer

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions**                      Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material.

#### Environmental precautions

**Environmental precautions**              Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

#### Methods and material for containment and cleaning up

**Methods for cleaning up**                      Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. **Small Spillages:** Collect spillage. **Large Spillages:** Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

**Reference to other sections**                For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions**                              Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Suspected of causing cancer. May damage the unborn child. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene**      Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

#### Conditions for safe storage, including any incompatibilities

**Storage precautions**                              Store away from incompatible materials (see Section 10). Store locked up. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

**Storage class**                                        Chemical storage.

#### Specific end uses(s)

**Specific end use(s)**                                The identified uses for this product are detailed in Section 1.

### 8. Exposure Controls/personal protection

#### Control parameters

#### Occupational exposure limits

**Long-term exposure limit (8-hour TWA):** ACGIH 10 ppm 18 mg/m<sup>3</sup>  
Sk

ACGIH = American Conference of Governmental Industrial Hygienists.  
Sk = Danger of cutaneous absorption.

#### Exposure controls

#### Protective equipment



## xGen® Hybridization Buffer Enhancer

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
Hand protection	Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Colorless to pale yellow.
Odor	Ammonia.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	Not available.
Flash point	175°C/347°F
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Other flammability	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Bulk density	Not available.
Solubility(ies)	Not available.
Partition coefficient	Not available.

## xGen® Hybridization Buffer Enhancer

Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not available.
Oxidizing properties	Not available.
Other information	None.

### 10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### 11. Toxicological information

Information on toxicological effects	
Acute toxicity - oral	
Acute toxicity oral (LD <sub>50</sub> mg/kg)	5,325.0
Species	Rat
Notes (oral LD <sub>50</sub> )	Based on available data the classification criteria are not met.
Acute toxicity - dermal	
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	17,000.0
Species	Rabbit
Notes (dermal LD <sub>50</sub> )	Based on available data the classification criteria are not met.
Acute toxicity - inhalation	
Acute toxicity inhalation (LC <sub>50</sub> vapours mg/l)	21.0
Species	Rat
Notes (inhalation LC <sub>50</sub> )	Based on available data the classification criteria are not met.
ATE inhalation (vapours mg/l)	21.0
Skin corrosion/irritation	
Animal data	Based on available data the classification criteria are not met.
Serious eye damage/irritation	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
Respiratory sensitization	

## xGen® Hybridization Buffer Enhancer

Respiratory sensitization	Based on available data the classification criteria are not met.
Skin sensitization	
Skin sensitization	Based on available data the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Suspected of causing cancer.
IARC carcinogenicity	None of the ingredients are listed or exempt.
Reproductive toxicity	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	May damage the unborn child.
Specific target organ toxicity - single exposure	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
Target organs	Blood
Aspiration hazard	
Aspiration hazard	Based on available data the classification criteria are not met.
General information	Avoid contact during pregnancy/while nursing. May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin Contact	No specific symptoms known.
Eye contact	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

## 12. Ecological Information

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
Toxicity	Based on available data the classification criteria are not met.
Persistence and degradability	
Persistence and degradability	The degradability of the product is not known.
Bioaccumulative potential	
Bio-Accumulative Potential	No data available on bioaccumulation.
Partition coefficient	Not available.
Mobility in soil	
Mobility	No data available.
Other adverse effects	

## xGen® Hybridization Buffer Enhancer

Other adverse effects                      None known.

### 13. Disposal considerations

Waste treatment methods

General information                      The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods                              Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### 14. Transport information

General    The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

UN No. (DOT)                                      Not applicable.

UN proper shipping name

Proper shipping name (DOT)                      Not applicable.

Transport hazard class(es)

DOT transport labels

No transport warning sign required.

Packing group

DOT packing group                                      Not applicable.

Special precautions for user

DOT reportable quantity                              Not applicable.

DOT TIH Zone

Not applicable.

### 15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

SARA 313 Emission Reporting

None of the ingredients are listed or exempt.

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

## xGen® Hybridization Buffer Enhancer

### FDA - Precursor Chemical

None of the ingredients are listed or exempt.

### SARA (311/312) Hazard Categories

None of the ingredients are listed or exempt.

### OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

### US State Regulations

#### California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed or exempt.

#### California Air Toxics "Hot Spots" (A-I)

None of the ingredients are listed or exempt.

#### California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

#### California Directors List of Hazardous Substances

None of the ingredients are listed or exempt.

#### Massachusetts "Right To Know" List

None of the ingredients are listed or exempt.

#### Rhode Island "Right To Know" List

None of the ingredients are listed or exempt.

#### Minnesota "Right To Know" List

None of the ingredients are listed or exempt.

#### New Jersey "Right To Know" List

None of the ingredients are listed or exempt.

#### Pennsylvania "Right To Know" List

None of the ingredients are listed or exempt.

### Inventories

#### US - TSCA

None of the ingredients are listed or exempt.

#### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

## 16. Other information

Classification abbreviations and acronyms	Carc. = Carcinogenicity Repr. = Reproductive toxicity
Training advice	Only trained personnel should use this material.
Revision comments	Contact legal for statement
Revision date	12/13/2017
Revision	4
SDS No.	4540
Hazard statements in full	H351 Suspected of causing cancer. H360D May damage the unborn child.
NFPA - health hazard	Temporary incapacitation, injury. (2)



## xGen® Hybridization Buffer Enhancer

NFPA - flammability hazard

Burns only if pre-heated. (1)