

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	IntelliPlex ALK Rearrangement Kit
Manufacturer/Supplier:	PlexBio Co., Ltd. 6F-1, No. 351 Yangguang Street, Neihu District, Taipei 114 Taiwan, R.O.C. Tel: (02) 2627-5878 Fax: (02) 2627-5979

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Kit Contents	Known Hazardous Components	CAS#	Concentration
ALK KIT RT-PCR Buffer	2-Mercaptoethanol	60-24-2	0.15%
ALK KIT RT-PCR Primer	Not Hazardous	-	-
ALK KIT RT-PCR Enzyme Mix	Not Hazardous	-	-
ALK KIT π Code MicroDisc	Sodium azide	26628-22-8	0.05%
ALK KIT POS Control	Not Hazardous	-	-
ALK KIT NEG Control	Not Hazardous	-	-
ALK KIT SA-PE	Sodium azide	26628-22-8	0.05%
ALK KIT Hy Buffer	Sodium azide	26628-22-8	0.05%
ALK KIT 10X Wash Buffer	Sodium azide	26628-22-8	0.09%
ALK KIT ddH2O	Not Hazardous	-	-

SECTION 3: HAZARD IDENTIFICATION

Hazardous Components : Sodium azide

Emergency Overview:

OSHA Hazards: Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption
Target Organs: Heart, Central nervous system, Brain.
GHS Classification: Acute toxicity, Dermal (Category 1)
 Acute toxicity, Oral (Category 2)
 Acute aquatic toxicity (Category 1)

GHS Label elements :

Pictogram:



Signal word:

Danger

Hazard statement(s):

H300 Fatal if swallowed or in contact with skin.
H373 May cause damage to organs (Brain) through prolonged or repeated exposure if swallowed
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P262 Do not get in eyes, on skin, or on clothing.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/

P302 + P352 + P310 physician. Rinse mouth.
 IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER or doctor/ physician.

P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Acute Health Effects:

Eye Contact: May cause eye irritation.
Skin Contact: May be fatal if absorbed through skin. May cause skin irritation.
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: May be harmful if swallowed.

Potential Chronic Health Effects:

Carcinogenic Effects: Not available.
Mutagenic Effects: Not available.
Reproduction Toxicity: Not available.
Sensitization: Not available.

NFPA Code: (Health: 4) (Flammability: 1) (Reactivity: 3)

Hazardous Components : 2-Mercaptoethanol

Emergency Overview:

OSHA Hazards: Not applicable
Target Organs: Heart, Central nervous system, Brain.
GHS Classification: Acute toxicity, Dermal (Category 2)
 Acute toxicity, Oral (Category 3)
 Acute inhalation toxicity (Category 3)

GHS Label elements :

Pictogram:



Signal word: Danger

Hazard statement(s):

H301 + H331 Toxic if swallowed or if inhaled
H310 Fatal in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs (Brain) through prolonged or repeated exposure if swallowed
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P280 Wear protective gloves/ protective clothing.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
P302 + P352 + P310 IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 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.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Potential Acute Health Effects:

- Eye Contact:** May cause eye irritation.
- Skin Contact:** May be fatal if absorbed through skin. May cause skin irritation.
- Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
- Ingestion:** May be harmful if swallowed.

Potential Chronic Health Effects:

- Carcinogenic Effects:** Not available.
- Mutagenic Effects:** Not available.
- Reproduction Toxicity:** Not available.
- Sensitization:** Not available.

NFPA Code: (Health: 4) (Flammability: 2) (Reactivity: 11)

SECTION 4: FIRST AID MEASURES

- General information:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
- Eye Contact:** Flush eyes with water as a precaution.
- Skin Contact:** Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
- Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician
- Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE AND EXPLOSION DATA

- Conditions of flammability:** Not flammable or combustible.
- Suitable extinguishing media:** Dry powder.
- Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus for firefighting if necessary.
- Hazardous combustion products:** Hazardous decomposition products formed under fire conditions.
- Sodium oxides, Carbon oxides, Sulphur oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas. Avoid breathing dust.
- Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- Methods for Cleaning Up:** Take up mechanically and collect in suitable container for disposal.

SECTION 7: HANDLING AND STORAGE

- Precautions:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
- Storage:** Keep container tightly closed in a dry and well-ventilated place.
Never allow product to get in contact with water during storage. Do not store near acids.
Heat sensitive.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls:	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection:	Follow usual standard laboratory practices. Use appropriate chemical resistant gloves, appropriate safety glasses and wear protective work clothing.
Exposure Limits:	Not available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Hazardous Components : Sodium azide			
Physical State and Appearance:	White crystalline	Vapor Pressure:	0,01 hPa at 20 °C
Odor:	Not available.	Vapor Density:	Not available.
Taste:	Not available.	Volatility:	Not available.
pH:	10 at 65 g/l at 25 °C	Odor Threshold:	Not available.
Boiling Point:	Not available.	Water/Oil Dist. Coeff.:	Not available.
Melting Point:	275 °C	Ionicity (in Water):	Not available.
Critical Temperature:	Not available.	Dispersion Properties:	Not available.
Specific Gravity:	Not available.	Solubility:	65 g/l at 20 °C
Hazardous Components : 2-Mercaptoethanol			
Physical State and Appearance:	Colorless yellow liquid	Vapor Pressure:	0,76 hPa at 20 °C
Odor:	Stench.	Vapor Density:	2,70 - (Air = 1.0).
Taste:	Not available.	Volatility:	Not available.
pH:	4,5 - 6 at 500 g/l at 20 °C	Odor Threshold:	Not available.
Boiling Point:	157 °C - lit..	Water/Oil Dist. Coeff.:	Not available.
Melting Point:	< -49,99 °C	Ionicity (in Water):	Not available.
Critical Temperature:	Not available.	Dispersion Properties:	Not available.
Specific Gravity:	Not available.	Solubility:	soluble

SECTION 10: STABILITY AND REACTIVITY DATA

Stability:	The product is stable under recommended shipping and storage conditions.
Reactivity:	The product is stable under recommended shipping and storage conditions.
Conditions to Avoid:	Excess heat and moisture.
Materials to Avoid:	Strong acids/alkalis, strong oxidizing/reducing agents.
Hazardous Decomposition Products:	Not available.
Polymerization:	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Hazardous Components : Sodium azide	
Acute toxicity:	Not available.
Potential Acute Health Effects:	
Eye Contact:	May cause eye irritation.
Skin Contact:	May cause skin irritation.
Inhalation:	May cause irritation of respiratory tract.
Ingestion:	May be harmful if swallowed.

Potential Chronic Health Effects:

Carcinogenic Effects: Not available.
Mutagenic Effects: Not available.
Reproduction Toxicity: Not available.
Sensitization: Not available.

Additional Information: RTECS: VY8050000

Hazardous Components : 2-Mercaptoethanol

Acute toxicity: LD50 Oral - Rat - 98 - 162 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - 4 h - 2 mg/l
LC50 Inhalation - Rat - 4 h - 625 ppm
LD50 Dermal - Rabbit - 112 mg/kg

Potential Acute Health Effects:

Eye Contact: May cause eye irritation.
Skin Contact: May cause skin irritation.
Inhalation: May cause irritation of respiratory tract.
Ingestion: May be harmful if swallowed.

Potential Chronic Health Effects:

Carcinogenic Effects: Not available.
Mutagenic Effects: Not available.
Reproduction Toxicity: Not available.
Sensitization: Not available.

Additional Information: RTECS: KL5600000

SECTION 12: ECOLOGICAL INFORMATION

Hazardous Components : Sodium azide

Toxicity: Toxicity to fish mortality LC50 - Pimephales promelas (fathead minnow) - 5,46 mg/l - 96 h
Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata - 0,35 mg/l - 96 h

Persistence and degradability: Not available.

Bioaccumulative potential: Not available.

Mobility in soil: Not available.

PBT and vPvB assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects: Very toxic to aquatic life with long lasting effects.

Hazardous Components : 2-Mercaptoethanol

Toxicity: Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 46 - 100 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia (water flea) - 0,89 mg/l - 48 h
Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - 12 mg/l - 72 h
Toxicity to bacteria LC50 - Bacteria - 125 mg/l - 17 h

Persistence and degradability: Biodegradability Result: < 30.0 % - Not readily biodegradable.
Result: 6 % - Not readily biodegradable.



Bioaccumulative potential:	aerobic - Exposure time 28 d
Mobility in soil:	Result: < 10 % - Not readily biodegradable.
PBT and vPvB assessment:	Biochemical Oxygen Demand (BOD): 105 mg/g Chemical Oxygen Demand (COD): 1,894 mg/g Does not accumulate in organisms.
Other adverse effects:	Not available. This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Very toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

Product:	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging:	Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Hazardous Components : Sodium azide			
DOT (US) / IMDG:			
Proper shipping name: SODIUM AZIDE	UN number: 1687	Class: 6.1	Packing group: II
IATA:			
Proper shipping name: Sodium azide	UN number: 1687	Class: 6.1	Packing group: II
Hazardous Components : 2-Mercaptoethanol			
DOT (US) / IMDG:			
Proper shipping name: THIOGLYCOL	UN number: 2966	Class: 6.1	Packing group: II
IATA:			
Proper shipping name: thioglycol	UN number: 2966	Class: 6.1	Packing group: II

SECTION 15: OTHER REGULATORY INFORMATION

SARA 302 Components / SARA 313 Components	
Sodium azide	CAS-No. 26628-22-8
SARA 311/312 Hazards	
Acute Health Hazard, Chronic Health Hazard, Fire Hazard	

SECTION 16: OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate and complete. However, we can neither guarantee nor assume any liability whatsoever for the accuracy or completeness of the information contained in this MSDS. Final determination of suitability of any material is the sole responsibility of the user, as health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. All materials and mixtures may present unknown hazards and should be used with caution. No warranty is made, either express or implied.