



Safety Data Sheet

Product Name: Human IFN-gamma/Granzyme B Dual-Color ELISpot Kit

Reviewed on: 11 March 2014

1. Identification of Substance:

- **Other means of identification: Catalog Number: ELD5818**
Components: Microplate, Detection Antibody Concentrate A (contains Proclin 300), Detection Antibody Concentrate B (contains Proclin 300), Streptavidin-AP Concentrate A (contains Proclin 300 and 0.1% Sodium azide), Dilution Buffer 1 (contains Proclin 300), Dilution Buffer 2 (contains Proclin 300), Wash Buffer Concentrate (contains Proclin 300), BCIP/NBT Chromogen (contains BCIP/NBT), Positive Controls (contain < 0.1% Sodium azide), AEC Chromogen (contains AEC), AEC Chromogen Buffer (contains Methanol).
- **GHS product identifier:** Human IFN-gamma/Granzyme B Dual-Color ELISpot Kit
- **Application of the substance / the preparation:** For Research Use Only
- **Manufacturer/Supplier:**
R&D Systems Inc.
614 McKinley Place N.E.
Minneapolis, MN 55413
USA
1-800-343-7475
- **For product related questions call:** 1-800-343-7475. In Europe call: +44(0)1235-529449.
- **Emergency information:** In case of a chemical emergency, spill, leak, fire, or accident call **CHEMTREC** at 1-800-424-9300 (US or Canada). Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

2. Hazard Identification:

- **Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]**
AEC Chromogen: contains N,N-Dimethylformamide and 3-Amino-9-Ethylcarbazole
Flammable liquid – Category 3
Reproductive Toxicity – Category 1B
Acute Toxicity, Dermal – Category 4
Acute Toxicity, Inhalation – Category 4
Eye Irritation – Category 2A
Carcinogenic – Category 1B
- **Signal Word:** DANGER
- **Hazard statements:** H226: Flammable liquid and vapour. H319 Causes serious eye irritation. H312 Harmful in contact with skin. H332 Harmful if inhaled. H360 May damage the unborn child. H350: May cause cancer.
- **Precautionary statements:** P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233: Keep container tightly closed. P241: Use explosion-proof electrical/ventilating/lighting/equipment. P242: Use only non-sparking tools. P243: Take precautionary measure against static discharge. P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing fumes/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. P281 Use of personal protective equipment is required.
- **Response:**
IF SWALLOWED: Call a poison control center or doctor if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water. Call a poison control center if you feel unwell. Take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
IF EXPOSED OR CONCERNED: Get medical advice/attention.
IN CASE OF FIRE: Use alcohol foam, dry chemical or carbon dioxide.
- **Classification according to Directive 67/548/EEC:** May cause harm to the unborn child. Harmful by inhalation, and in contact with skin. Irritating to eyes.
- **Hazard Symbol:** T: Toxic, Repr.Cat.2: Reproductive toxins. Xi: Irritant. Xn: Harmful. Carc. Cat. 2.
- **R-Phrase:** R61 May cause harm to unborn child, R20/21 Harmful by inhalation and in contact with skin, R36: Irritating to eyes. R45: May cause cancer.





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- **S-Phrase:** S45 In case of accident or if you feel unwell, seek medical advice immediately. S53 Avoid exposure – obtain special instructions before use.
- **Other hazards:** Rapidly absorbed through skin.

3. Information on Ingredients:

Description: AEC Chromogen: contains N,N-Dimethylformamide (DMF) and 3-Amino-9-Ethylcarbazole (AEC)

Contains	CAS No.	EC-No.	Index-No.	Content
N,N-Dimethylformamide	68-12-2	200-679-5	616-001-00-X	>90%
3-Amino-9-Ethylcarbazole	132-32-1	205-057-7	612-280-00-7	<5%

4. First Aid Measures:

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly. Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Rinse mouth with water. Seek medical attention and appropriate follow-up.

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** For small fires, use media such as "alcohol" foam, dry chemical or carbon dioxide. For large fires, apply water from as far as possible. Use large quantities of water applied as a mist or spray. Solid streams of water may be ineffective. Cool affected containers with flooding quantities of water.
- **Hazards from the substance or mixture:** Carbon oxides, Nitrogen oxides(NOx)
- **Special precautions for fire-fighters:** Self contained breathing apparatus and full protective clothing must be worn in case of fire. Use water spray to cool unopened containers.

6. Accidental Release Measures:

- **Person-related safety precautions:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- **Measures for environmental protection:** Prevent further leakage or spillage if safe to do so. Do not let enter drains.
- **Measures for containment and cleaning:** Contain spillage, and then collect with non-combustible absorbent material (eg. sand, diatomaceous earth, vermiculite). Place in a container for disposal according to local regulations.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid exposure, obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapor and mist. Keep away from origins of ignition. No smoking. Take measures to prevent the build up of electrostatic charge.
- **Conditions for safe storage:** Store locked up. Store in a well ventilated place. Keep cool.

8. Exposure Controls and Personal Protection:

- **Component:**
 - N,N-Dimethylformamide:** UK EH40 WEL – Workplace Exposure Limits: Value: STEL, 20 ppm, 61 mg/m³. Value: TWA, 10 ppm, 30 mg/m³. Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.
 - 3-Amino-9-Ethylcarbazole:** Data not available.
- **Appropriate engineering controls:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.



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- **Individual protection measures:** Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
 - **Eye/face protection:** Wear approved safety goggles.
 - **Skin/hand protection:** Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - **Body protection:** Wear suitable protective clothing according to the concentration and amount of the substance at the workplace.
 - **Respiratory protection:** In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and Chemical Properties:

- **Appearance:** Liquid
- **Odor:** Not available
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** Not available.
- **Partition coefficient: noctanol/water:** Not available
- **Flash point:** 58°C
- **Water solubility:** Not available
- **Evaporation rate:** Not available
- **Flammability (solid, gas):** Not available
- **Upper/lower flammability or explosive limits:** Not available
- **Vapor density :** Not available
- **Vapor pressure:** Not available
- **Relative density:** Not available
- **Boiling point/Boiling range:** Not available
- **Auto igniting:** Not available
- **Decomposition temperature:** Not available
- **Viscosity:** Not available

10. Stability and Reactivity:

- **Reactivity:** No data available
- **Chemical Stability:** No data available
- **Possibility of hazardous reactions:** No data available
- **Conditions to avoid:** Heat, flames, sparks, contact with metals.
- **Incompatible materials:** Strong oxidizing agents.
- **Hazardous decomposition products:** When heated, toxic fumes will be emitted.

11. Toxicological Information:

- **Acute toxicity: N,N-Dimethylformamide:** no data available. **3-Amino-9-Ethylcarbazole:** rat – oral: LD50 = 144 mg/kg
- **Skin corrosion/irritation:** no data available
- **Serious eye damage/irritation:** no data available
- **Respiratory or skin sensitization:** no data available
- **Germ cell mutagenicity:** Genotoxicity in vitro – mouse – lymphocyte, Mutation in mammalian somatic cells.
- **Carcinogenicity:** Not classified to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification at levels less than 0.1%.
- **Reproductive toxicity:** May cause congenital malformation in the fetus. Presumed human reproductive toxicant.
- **Specific target organ toxicity (STOT) -single exposure:** No data available
- **Specific target organ toxicity (STOT) -repeated exposure:** No data available
- **Aspiration hazard:** No data available
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - **Inhalation:** Toxic if inhaled. May cause respiratory tract irritation.
 - **Ingestion:** May be harmful if swallowed.
 - **Skin contact:** May be harmful if absorbed through skin. May cause skin irritation.
 - **Eye contact:** Causes serious eye irritation.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:** No data available.



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12. Ecological Information:

- **Ecotoxicity:** No data available.
- **Biodegradability:** No data available.
- **Bioaccumulative potential:** No data available.
- **Mobility in soil:** No data available.
- **Other adverse effects:** No data available.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated packaging:** Dispose in the same manner as unused product.

14. Transport Information:

ADR/RID ADN/ADNR IMDG IATA/DOT

ADR/DOT/:	UN Number:	UN1992
RID	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (N,N-Dimethylformamide and 3-Amino-9-Ethylcarbazole)
	Hazard class:	3(6.1)
	Packing group:	III
IATA:	UN Number:	UN1992
	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (N,N-Dimethylformamide and 3-Amino-9-Ethylcarbazole)
	Hazard class:	3(6.1)
	Packing group:	III
IMDG:	UN Number:	UN1992
	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (N,N-Dimethylformamide and 3-Amino-9-Ethylcarbazole)
	Hazard class:	3(6.1)
	Packing group:	III
	Marine Pollutant:	No

15. Regulations:

US Federal and State Regulations

CERCLA/SARA 302: None of the components are listed.

CERCLA/SARA 304: None of the components are listed.

SARA 313: N,N-Dimethylformamide is listed. 3-Amino-9-Ethylcarbazole is not listed.

TSCA (Toxic Substances Control Act): N,N-Dimethylformamide and 3-Amino-9-Ethylcarbazole are listed.

California Proposition 65: None of the components are listed on California's listing of known or potential carcinogens.

16. Other Information:

- **R-Phrase:** R61 May cause harm to unborn child, R20/21 Harmful by inhalation and in contact with skin, R36: Irritating to eyes. R45: May cause cancer.
- **S-Phrase:** S45 In case of accident or if you feel unwell, seek medical advice immediately. S53 Avoid exposure – obtain special instructions before use.
- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



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2. Hazards Identification:

- Classification: Regulation (EC) No 1272/2008 [EU-GHS/CLP]: Methanol

Acute Toxicity, Oral 3
Acute Toxicity, Inhalation 3
Acute Toxicity, Dermal 3
STOT, Single Exposure, 2



- Signal Word: DANGER

- Hazard Statements:** H301: Toxic if swallowed. H311: Toxic in contact with skin. H331: Toxic if inhaled. H371: May cause damage to organs.
- Precautionary Statements:** P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P260: Do not breath dust/fume/gas/mist/ vapours/spray. P271: Use only outdoors or in a well-ventilated area.
- Responses:**
 - IF SWALLOWED: Immediately call a Poison Control Center or physician. See specific treatment in this MSDS. Rinse mouth.
 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. See specific treatment in this MSDS. Remove/take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. See specific treatment in this MSDS.
 - IF EXPOSED OR CONCERNED: Call a POISON CENTER or doctor/physician.
- Classification according to EU Directives 67/548/EEC or 1999/45/EC: Xn: Harmful.
- R-phrases:** R20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R68/20/21/22: Harmful: possible risk of irreversible effect through inhalation, in contact with skin and if swallowed.
- S-phrases:** S36/37: Wear suitable protective clothing and gloves. S16: Keep away from sources of ignition-No smoking. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible). S51: Use only in well-ventilated areas. S1/2: Keep locked up and out of reach of children. S7: Keep container tightly closed.
- Special Hazards:** none.

3. Information on Ingredients:

- Description: Methanol

Contains	CAS No.	EC-No.	Index-No.	Content
Methanol	67-56-1	-		3 - 10%

4. First Aid Measures:

- After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- After skin contact:** Wash off with soap and plenty of water. Take victim immediately to a hospital. Consult a physician.
- After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this MSDS.
- After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.
- Most important symptoms and effects, both acute and delayed:** Unknown
- Indication of any immediate medical attention and special treatment needed:** No data available



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5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Dry chemical, carbon dioxide, water spray or alcohol-resistant foam.
- **Special hazards arising from the substance or mixture:** Emits toxic fumes under fire conditions. Carbon oxides.
- **Protective equipment:** Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- **Further information:** Use water spray to cool unopened containers.

6. Accidental Release Measures:

- **Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate all personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- **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 and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition – No Smoking. Take measures to prevent the buildup of electrostatic charge.
- **Conditions for safe storage, including incompatibilities:** Store locked up. Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

8. Exposure Controls and Personal Protection:

- **Control parameters:**
 - Component:** Methanol: UK EH40 WEL Workplace Exposure Limits: STEL 250 ppm, 333 mg/m³. TWA 200 ppm, 266 mg/m³.
NIOSH REL: STEL 250 ppm, 325 mg/m³. TWA 200 ppm, 260 mg/m³.
- **Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.
 - Personal Protective Equipment:**
 - Eye and Face Protection:** Tightly fitting safety goggles. Face shield (8-inch minimum).
 - Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - Body Protection:** Complete suit protection against chemicals, flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
 - Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use full-face respirator.

9. Physical and Chemical Properties:

- | | |
|---|--|
| ▪ Appearance: Colorless Liquid | Upper/lower flammability or explosive limits: Not available |
| ▪ Odor: Pungent odor | Vapor density : Not available |
| ▪ Odor threshold: Not available | Vapor pressure: Not available |
| ▪ pH: Not available | Relative density: Not available |
| ▪ Melting point/freezing point: Not available. | Boiling point/Boiling range: Not available |
| ▪ Partition coefficient: noctanol/water: Not available | Auto igniting: Not available |
| ▪ Flash point: Not available | Decomposition temperature: Not available |
| ▪ Water solubility: Soluble | Viscosity: Not available |
| ▪ Evaporation rate: Not available | |
| ▪ Flammability (solid, gas): Not available | |



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10. Stability and Reactivity:

- **Reactivity:** Strong oxidizers, alkalis and acids, phenols, urea, strong oxidizers.
- **Chemical Stability:** Contains the following stabilizer: Methanol (>3 - <10%).
- **Possibility of hazardous reactions:** no data available.
- **Conditions to avoid:** Heat, flames.
- **Incompatible materials:** Strong oxidizers, alkalis and acids, phenols, urea, strong oxidizers.
- **Hazardous decomposition products:** no data available.

11. Toxicological Information:

- **Acute toxicity:**
Methanol: rat oral – LD50 = 6200 mg/kg; mouse oral – LD50 = 400 mg/kg
- **Skin corrosion/irritation:**
Methanol: rabbit dermal – 16 g/kg.
- **Serious eye damage/irritation:** no data available.
- **Respiratory or skin sensitization:** no data available
- **Germ cell mutagenicity:** no data available.
- **Carcinogenicity:** no data available.
- **Reproductive toxicity:** no data available.
- **Specific target organ toxicity (STOT) -single exposure:** acute intoxication causes CNS depression as observed by narcosis, in coordination, lethargy, drowsiness and prostration. A latent period follows the initial intoxication in which formic acid accumulates in the body causing metabolic acidosis.
- **Specific target organ toxicity (STOT) -repeated exposure:** no data available.
- **Aspiration hazard:** No data available
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - Inhalation:** Causes conjunctivitis, headache, giddiness, insomnia, gastric disturbances, and bilateral blindness.
 - Ingestion:** Causes acute intoxication followed by a latent period of metabolic acidosis and severe abdominal, leg and back pain, followed by blindness.
 - Skin contact:** Methanol – no data available.
 - Eye contact:** Causes serious eye irritation which can lead to blindness.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:** Acute intoxication is manifested by signs of narcosis. This is followed by formic acid accumulation in the body causing metabolic acidosis. Severe abdominal pain and severe abdominal, leg and back pain, followed by blindness.

12. Ecological Information:

- **Ecotoxicity:** low acute toxicity to aquatic organisms. LD50 > 100 mg/L
- **Biodegradability:** Reacts with nitrogen dioxide in polluted atmospheres to product methyl nitrite. It is a volatile organic substance.
- **Bioaccumulative potential:** no data available.
- **Mobility in soil:** no data available.
- **Other adverse effects:** As a volatile organic compound, it can contribute to the formation of photochemical smog in the presences of other volatile organic compounds.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated packaging:** Dispose in the same manner as unused product.



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14. Transport Information:

ADR/RID ADN/ADNR IMDG IATA/DOT

ADR/DOT/ UN Number: UN 1230
RID Proper Shipping Name: Methanol
Hazard class: 3 (6.1)
Packing group: II

IATA: UN Number: UN 1230
Proper Shipping Name: Methanol
Hazard class: 3 (6.1)
Packing group: II

IMDG: UN Number: UN 1230
Proper Shipping Name: Methanol
Hazard class: 3 (6.1)
Packing group: II
Marine Pollutant: No

15. Regulations:

US Federal and State Regulations

TSCA (Toxic Substances Control Act): Methanol is listed.

SARA 313: Methanol is listed.

SARA 311/312 Hazards: Acute Health Hazard.

CERCLA Reportable Quantity: 5,000 pounds.

California Proposition 65: Methanol is not listed on California's listing of known or potential carcinogens.

16. Other Information:

- R-phrases:** R20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R68/20/21/22: Harmful: possible risk of irreversible effect through inhalation, in contact with skin and if swallowed.
- S-phrases:** S36/37: Wear suitable protective clothing and gloves. S16: Keep away from sources of ignition-No smoking. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible). S51: Use only in well-ventilated areas. S1/2: Keep locked up and out of reach of children. S7: Keep container tightly closed.
- Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

2. Hazards Identification:

Classification: Regulation (EC) No 1272/2008 [EU-GHS/CLP]: BCIP/NBT Chromogen

Acute Toxicity, Oral 3
Acute Toxicity, Inhalation 3
Acute Toxicity, Dermal 3
STOT, Single Exposure, 2
Flammable Liquid, 2
Eye Irritation, 2A
Signal Word: DANGER





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- **Hazard Statements:** H301: Toxic if swallowed. H311: Toxic in contact with skin. H331: Toxic if inhaled. H371: May cause damage to organs. H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation.
- **Precautionary Statements:** P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P260: Do not breathe dust/fume/gas/mist/ vapours/spray. P271: Use only outdoors or in a well-ventilated area. P210: Keep away from heat/sparks/ open flames/hot surfaces. No smoking. P233: Keep container tightly closed. P241: Use explosion-proof electrical equipment. P242: Use only non-sparking tools. P243: Take precautionary measure against static discharge.

Responses:

- IF SWALLOWED: Immediately call a Poison Control Center or physician. See specific treatment in this MSDS. Rinse mouth.
- IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. See specific treatment in this MSDS. Remove/take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Rinse skin with water/shower.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. See specific treatment in this MSDS.
- IF EXPOSED OR CONCERNED: Call a POISON CENTER or doctor/physician.
- IN CASE OF FIRE: Use alcohol resistant foam, carbon dioxide, or dry chemical to extinguish.

- **Classification according to EU Directives 67/548/EEC or 1999/45/EC:** Xn: Harmful. Xi: Irritant. F: Highly Flammable.
- **R-phrases:** R20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R68/20/21/22: Harmful: possible risk of irreversible effect through inhalation, in contact with skin and if swallowed. R11: Highly flammable. R66: Repeated exposure may cause skin dryness or cracking. R67: Vapours may cause drowsiness and dizziness.
- **S-phrases:** S36/37: Wear suitable protective clothing and gloves. S16: Keep away from sources of ignition-No smoking. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible). S51: Use only in well-ventilated areas. S1/2: Keep locked up and out of reach of children. S7: Keep container tightly closed. S9: Keep container in a well ventilated place. S16: Keep away from sources of ignition – No smoking. S24/25: Avoid contact with skin and eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **Special Hazards:** none.

3. Information on Ingredients:

- **Description:** Methanol Solution

Contains	CAS No.	EC-No.	Index-No.	Content
Methanol	67-56-1	200-369-6	603-001-00-X	3 - 10%
Acetone	67-64-1	200-662-2	606-001-00-8	3 – 10%
Isopropyl Alcohol	67-63-0	200-661-7	603-117-00-0	3 – 10%

4. First Aid Measures:

- **After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **After skin contact:** Wash off with soap and plenty of water. Take victim immediately to a hospital. Consult a physician.
- **After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this MSDS.
- **After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.
- **Most important symptoms and effects, both acute and delayed:** Unknown
- **Indication of any immediate medical attention and special treatment needed:** No data available



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5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Do not extinguish fire unless flow can be stopped. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible.
- **Special hazards arising from the substance or mixture:** Emits toxic fumes under fire conditions. Carbon oxides.
- **Protective equipment:** Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- **Further information:** Use water spray to cool unopened containers.

6. Accidental Release Measures:

- **Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate all personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- **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 and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition – No Smoking. Take measures to prevent the buildup of electrostatic charge.
- **Conditions for safe storage, including incompatibilities:** Store locked up. Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

8. Exposure Controls and Personal Protection:

- **Control parameters:**
 - Component:** Methanol: UK EH40 WEL Workplace Exposure Limits: STEL 250 ppm, 333 mg/m³. TWA 200 ppm, 266 mg/m³.
NIOSH REL: STEL 250 ppm, 325 mg/m³. TWA 200 ppm, 260 mg/m³.
 - Acetone: UK EH40 WEL Workplace Exposure Limits: STEL 1,500 ppm, TWA 750 ppm.
NIOSH REL: STEL 250 ppm, 590 mg/m³. TWA 21,000 ppm, 2,400 mg/m³.
 - Isopropyl Alcohol UK EH40 WEL Workplace Exposure Limits: STEL 1225 ppm, TWA 980 ppm.
NIOSH REL: STEL 500 ppm, 1,225 mg/m³. TWA 400 ppm, 980 mg/m³.
- **Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.
 - Personal Protective Equipment:**
 - Eye and Face Protection:** Tightly fitting safety goggles. Face shield (8-inch minimum).
 - Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - Body Protection:** Complete suit protection against chemicals, flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
 - Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use full-face respirator.

9. Physical and Chemical Properties:

- **Appearance:** Liquid
- **Odor:** Pungent odor
- **Odor threshold:** Not available
- **pH:** Not available
- **Upper/lower flammability or explosive limits:** Not available
- **Vapor density :** Not available
- **Vapor pressure:** Not available
- **Relative density:** Not available



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- **Melting point/freezing point:** Not available.
- **Partition coefficient: noctanol/water:** Not available
- **Flash point:** Not available
- **Water solubility:** Soluble
- **Evaporation rate:** Not available
- **Flammability (solid, gas):** Not available

- **Boiling point/Boiling range:** Not available
- **Auto igniting:** Not available
- **Decomposition temperature:** Not available
- **Viscosity:** Not available

10. Stability and Reactivity:

- **Reactivity:** Strong oxidizers, alkalis and acids, phenols, urea, acetaldehyde, chlorine, ethylene oxide, isocyanates.
- **Chemical Stability:** Contains the following stabilizer: Methanol (>3 - <10%).
- **Possibility of hazardous reactions:** no data available.
- **Conditions to avoid:** Heat, flames, sources of ignition.
- **Incompatible materials:** Strong oxidizers, alkalis and acids, phenols, urea, acetaldehyde, chlorine, ethylene oxide, isocyanates.
- **Hazardous decomposition products:** no data available.

11. Toxicological Information:

- **Acute toxicity:**
 - Methanol: rat oral – LD50 = 6200 mg/kg; mouse oral – LD50 = 400 mg/kg.
 - Acetone: rat oral – LD50 = 9,800 mg/kg; mouse oral – LD50 = 3,000 mg/kg.
 - Isopropyl Alcohol – rat oral – LD50 = 4,420 mg/kg; mouse oral – LD50 = 4,800 mg/kg.
- **Skin corrosion/irritation:**
 - Methanol: rabbit dermal – LD50 = 16,000 mg/kg.
 - Acetone: rabbit dermal - LD50 = 20 mg/kg
 - Isopropyl Alcohol: rabbit dermal 500 mg/24 hr (mild).
- **Serious eye damage/irritation:**
 - Methanol: no data available.
 - Acetone: rabbit eye – irritation after 24 hr.
 - Isopropyl Alcohol: rabbit eye 0.1 mL of 70% solution (severe eye irritation).
- **Respiratory or skin sensitization:**
 - Methanol: no data available
 - Acetone:
 - Isopropyl Alcohol: Causes respiratory irritation at 400 ppm. High concentrations are toxic.
- **Germ cell mutagenicity:** no data available.
- **Carcinogenicity:** no data available.
- **Reproductive toxicity:** no data available.
- **Specific target organ toxicity (STOT) -single exposure:**
 - Methanol: acute intoxication causes CNS depression as observed by narcosis, in coordination, lethargy, drowsiness and prostration. A latent period follows the initial intoxication in which formic acid accumulates in the body causing metabolic acidosis.
 - Acetone: pulmonary congestion, seizures, edema.
 - Isopropyl Alcohol: High concentrations cause nausea, headache, lightheadedness, drowsiness, ataxia and deep narcosis.
- **Specific target organ toxicity (STOT) -repeated exposure:** no data available.
- **Aspiration hazard:** No data available
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - Inhalation:** Causes conjunctivitis, headache, giddiness, insomnia, gastric disturbances, bilateral blindness, nausea, headache, lightheadedness, drowsiness, ataxia and deep narcosis.
 - Ingestion:** Causes acute intoxication followed by a latent period of metabolic acidosis and severe abdominal, leg and back pain, followed by blindness.
 - Skin contact:** Irritation and redness.
 - Eye contact:** Causes serious eye irritation which can lead to blindness.



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- **Delayed and immediate effects and also chronic effects from short and long term exposure:** Acute intoxication is manifested by signs of narcosis. This is followed by formic acid accumulation in the body causing metabolic acidosis. Severe abdominal pain and severe abdominal, leg and back pain, followed by blindness.

12. Ecological Information:

- **Ecotoxicity:**
 - Methanol: low acute toxicity to aquatic organisms. LD50 > 100 mg/L.
 - Acetone: *Oncorhynchus mykiss* (rainbow trout) LD50 = 5,540 mg/L/96 hr.
 - Isopropyl Alcohol: no data available.
- **Biodegradability:** Reacts with nitrogen dioxide in polluted atmospheres to product methyl nitrite. It is a volatile organic substance.
- **Bioaccumulative potential:** no data available.
- **Mobility in soil:** no data available.
- **Other adverse effects:** As a volatile organic compound, it can contribute to the formation of photochemical smog in the presences of other volatile organic compounds.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated packaging:** Dispose in the same manner as unused product.

14. Transport Information:

ADR/RID ADN/ADNR IMDG IATA/DOT

ADR/DOT/:	UN Number:	UN 1992
RID	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (Methanol, Acetone, Isopropyl Alcohol)
	Hazard class:	3 (6.1)
	Packing group:	II
IATA:	UN Number:	UN 1992
	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (Methanol, Acetone, Isopropyl Alcohol)
	Hazard class:	3 (6.1)
	Packing group:	II
IMDG:	UN Number:	UN 1992
	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (Methanol, Acetone, Isopropyl Alcohol)
	Hazard class:	3 (6.1)
	Packing group:	II
	Marine Pollutant:	No

15. Regulations:

US Federal and State Regulations

TSCA (Toxic Substances Control Act): Methanol is listed. Acetone is listed. Isopropyl alcohol is listed.

SARA 313: Methanol is listed. Acetone is listed. Isopropyl alcohol is not listed.

SARA 311/312 Hazards: Methanol: Acute Health Hazard. Acetone: Acute Health Hazard. Isopropyl alcohol: Acute Health Hazard.

CERCLA Reportable Quantity: Methanol: 5,000 pounds. Acetone: 5,000 pounds. Isopropyl alcohol is not listed.

California Proposition 65: Methanol, Acetone and Isopropyl alcohol are not listed on California's listing of known or potential carcinogens.



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16. Other Information:

- **R-phrases:** R20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R68/20/21/22: Harmful: possible risk of irreversible effect through inhalation, in contact with skin and if swallowed. R11: Highly flammable. R66: Repeated exposure may cause skin dryness or cracking. R67: Vapours may cause drowsiness and dizziness.
- **S-phrases:** S36/37: Wear suitable protective clothing and gloves. S16: Keep away from sources of ignition-No smoking. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible). S51: Use only in well-ventilated areas. S1/2: Keep locked up and out of reach of children. S7: Keep container tightly closed. S9: Keep container in a well ventilated place. S16: Keep away from sources of ignition – No smoking. S24/25: Avoid contact with skin and eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

2. Hazard Identification:

- **Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]**
Some components indicated above contain Proclin 300: Skin Sens. 1; H317 – May cause an allergic skin reaction.
 - **Signal Word:** WARNING
 - **Precautionary statements:**
P261: Avoid breathing mist.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: get medical attention. Wash contaminated clothing before reuse.
- 
- **Classification according to Directive 67/548/EEC:** The product is classified as a skin sensitizer according to Directive 1999/45/EC and its amendments.
 - **Hazard Symbol / R-Phrase / S-Phrase:** R43: May cause sensitization by skin contact.
 - **Other hazards:** none

3. Information on Ingredients:

Description: Proclin 300

Contains	CAS No.	EC-No.	Index-No.	Content
Modified Alkyl Carboxylate	-	-	-	<0.01%
Mixture of 5-Chloro-2-Methyl-4-Isothiazolin-3-One (26172-55-4) and 2-Methyl-4-Isothiazolin-3-One (2682-20-4)	55965-84-9	-	613-167-00-5	<0.01%
Modified Glycol	-	-	-	≤1.6%

4. First Aid Measures:

- **IF IN EYES:** Rinse thoroughly with water for at least 15 minutes and immediately consult a physician.
- **IF ON SKIN (or hair):** Immediately take off contaminated clothing or shoes. Wash with plenty of soap and water. Consult a physician.
- **IF INHALED:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.



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- IF SWALLOWED: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician.

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **Special precautions for fire-fighters:** Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental Release Measures:

- **Person-related safety precautions:** Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
- **Measures for environmental protection:** Keep away from drains.
- **Measures for containment and cleaning:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use normal measures for preventive fire protection.
- **Conditions for safe storage:** Store in a cool, dry place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure Controls and Personal Protection:

- **Control parameters:** Contains no substances with occupational exposure limit values.
- **Individual protection measures:** Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
 - **Eye/face protection:** Wear approved safety goggles.
 - **Skin/hand protection:** Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - **Body protection:** Wear suitable protective clothing as protection against splashing or contamination.
 - **Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
 - **Respiratory protection:** In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and Chemical Properties:

- | | |
|---|--|
| ▪ Appearance: Clear Liquid | Upper/lower flammability or explosive limits: Not available |
| ▪ Odor: Not available | Vapor density : Not available |
| ▪ Odor threshold: Not available | Vapor pressure: Not available |
| ▪ pH: Not available | Relative density: 1.03 g/cm ³ |
| ▪ Melting point/freezing point: -40° C | Solubility in/Miscibility with Water: Soluble |
| ▪ Boiling point/Boiling range: 189° C | Partition coefficient: noctanol/water: Not available |
| ▪ Flash point: 118° C – closed cup | Auto igniting: Not available |
| ▪ Evaporation rate: Not available | Decomposition temperature: Not available |
| ▪ Flammability (solid, gas): Not available | Viscosity: Not available |

10. Stability and Reactivity:

- **Chemical Stability:** Stable under recommended storage conditions.
- **Conditions to avoid:** Strong oxidizing agents, reducing agents, Amines, Mercaptans



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- **Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions – Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas.

11. Toxicological Information:

- **Acute toxicity:** LD50 Oral – rat – 862 mg/kg
LD50 Dermal – rabbit- 2800 mg/kg
- **Skin corrosion/irritation:** Can cause severe burns. Skin – rabbit – Corrosive
- **Serious eye damage/irritation:** Rabbit – Corrosive to eyes
- **Respiratory or skin sensitization:** May cause allergic skin reaction.
- **Germ cell mutagenicity:** No data available
- **Carcinogenicity:** No data available
- **Reproductive toxicity:** No data available
- **Specific target organ toxicity (STOT) -single exposure:** No data available
- **Specific target organ toxicity (STOT) -repeated exposure:** No data available
- **Aspiration hazard:** Can cause severe burns.
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - **Inhalation:** Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
 - **Ingestion:** Harmful if swallowed. Causes burns.
 - **Skin contact:** Harmful if absorbed through skin. Causes burns.
 - **Eye contact:** Causes eye burns.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:**
 - **Short term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Not available.
 - **Long term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Allergic contact dermatitis.
- **Effects of chronic exposure:** Proclin 300 at levels greater than or equal to 0.1% is not identified as probable, possible or a confirmed human carcinogen by IARC.
- **Numerical measures of toxicity:** Not available
- **Other Information:** NA

12. Ecological Information:

- **Ecotoxicity:** No data available
- **Biodegradability:** No data available.
- **Bioaccumulative potential:** No data available.
- **Mobility in soil:** No data available.
- **Other adverse effects:** Toxic to aquatic organisms.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilled material to soil, waterways, drains and sewers.

14. Transport Information:

- **UN Number:** None
- **DOT regulations: Hazard class:** None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
- **Transport/Additional information:** Not dangerous according to the above specifications.



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15. Regulations:

- **US Federal and State Regulations**
 - TSCA (Toxic Substances Control Act): On TSCA Inventory
 - SARA 313 Components: Not listed
 - SARA 311/312 Hazards: Acute Health Hazard
 - CERCLA Reportable Quantity: Not listed
 - California Proposition 65: Not listed.

16. Other Information:

- **Hazard Symbol / R-Phrase / S-Phrase:** R43 May cause sensitization by skin contact.
- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

2. Hazards Identification:

- **Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]: Sodium Azide (0.1%)**
 - Aquatic Chronic 3
- **Hazard Symbol:** none
- **Signal Word:** none
- **Hazard Statement(s):** H412 Harmful to aquatic life with long lasting effects.
- **Precautionary Statement(s):** P273: Avoid release to the environment.
- **Response:**
 - **Special Hazards:** N/A
 - **Routes of exposure:** Inhalation; ingestion or skin.
IF EXPOSED OR CONCERNED: Get medical advice/attention.
- **Classification according to Directive 67/548/EEC:** Xn: Harmful.
- **R-phrases:** R22: Harmful if swallowed. R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **S-phrases:** S61 Avoid release to the environment. Refer to special instructions/safety data sheet.
- **Other Hazards:** none

3. Information on Ingredients:

Contains	EINECS	CAS No.	Content %
Sodium Azide	247-852-1	26628-22-8	0.1%

4. First Aid Measures:

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly. Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Rinse mouth with water. Immediately seek medical attention and appropriate follow-up.



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5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Any means suitable for extinguishing the surrounding area.
- **Specific hazards arising from the chemical:** Dangerous decomposition is not anticipated.
- **Protective equipment:** Wear appropriate protective clothing and a self-contained breathing apparatus if necessary.

6. Accidental Release Measures:

- **Person-related safety precautions:** Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
- **Measures for environmental protection:** Prevent further spillage or leakage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Measures for containment and cleaning:** Absorb liquid components with inert liquid-binding material. Pick up mechanically. Dispose contaminated material as waste according to item 13.

7. Handling and Storage:

- **Precautions for safe handling:** Store in a well ventilated place. Keep container tightly closed.
- **Information about protection against explosions and fires:** Normal measures for preventive fire protection.
- **Conditions for safe storage:** Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

8. Exposure Controls and Personal Protection:

- **Components:** Sodium Azide
UK. EH40 WEL- Workplace Exposure Limits: Value: STEL 0.3 mg/m³ (15 min.). TWA 0.1 mg/m³; UK.
- **Appropriate engineering controls:** Follow usual standard laboratory practices. The following personal protection is recommended:
 - Respiratory Protection:** Respiratory Protection not required. For nuisance exposures use respirators and components approved under appropriate government standards.
 - Hand Protection:** Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
 - Eye Protection:** Use equipment for eye protection tested and approved under appropriate government standards.
 - Skin and Body Protection:** Use impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
 - Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

9. Physical and Chemical Properties:

- **Appearance:** Lyophilized white powder or clear liquid.
- **Odor:** Little to none
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** Not available.
- **Boiling point/Boiling range:** Not available.
- **Flash point:** Not available.
- **Evaporation rate:** Undetermined.
- **Flammability:** Not available.
- **Upper/lower flammability or explosive limits:** Not available.
- **Vapor pressure/density:** Not available.
- **Relative Density:** Not available.
- **Solubility in/Miscibility with Water:** Not available.
- **Partition coefficient: noctanol/water:** Not available
- **Auto igniting:** Product is not self igniting.
- **Decomposition temperature:** Not available.
- **Viscosity:** Not available.

10. Stability and Reactivity:

- **Reactivity:** Sodium Azide can form explosive compounds with heavy metals which, with repeated contact with lead and copper commonly found in plumbing drains may result in the buildup of shock sensitive compounds.
- **Chemical Stability:** Stable under normal ambient and storage and handling temperatures.
- **Thermal:** decomposition/conditions to be avoided: No decomposition if used according to specifications.
- **Incompatible materials to be avoided:** Metals and metallic compounds.



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- **Hazardous decomposition products:** Hazardous decompositions formed under fire conditions. No dangerous decomposition products known.

11. Toxicological Information:

- **Acute toxicity:** Oral LD50 Oral: 27 mg/kg (mouse and rat); Inhalation LD50: 32 mg/m3 (mouse) and 37 mg/m3 (rat); Skin LD50: 20 mg/kg (rabbit) and 50 mg/kg (rat)
- **Skin corrosion / irritation:** May be harmful if absorbed through the skin. May cause skin irritation.
- **Serious eye damage / irritation:** May cause eye irritation.
- **Respiratory or skin sensitization:** No sensitizing effects known.
- **Germ cell mutagenicity:** No effect known.
- **Carcinogenicity:** No effect known.
- **Reproductive toxicity:** No toxic effect known.
- **STOT-single exposure:** Data not available
- **STOT-repeated exposure:** Data not available.
- **Aspiration hazard:** May be harmful if inhaled. May cause respiratory tract irritation.
- **Additional Information:** RTECS: Not available

12. Ecological Information:

- **Ecotoxicity:** Harmful to aquatic life. LC50, 96 Hrs, Fish *Lepomis macrochirus* - 0.68 mg/L; EC50, 48 Hrs, *Daphnia pulex* - 4.2 mg/L
- **Persistence and degradability:** No data available
- **Bioaccumulative potential:** No data available
- **Mobility in soil:** Sodium azide is soluble in water.
- **Other adverse effects:** Sodium azide is toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilt material to soil, waterways, drains and sewers.

14. Transport Information:

- **UN Number:** None
- **DOT regulations:** Hazard class: None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
- **Transport/Additional information:** Not dangerous according to the above specifications.

15. Regulations:

- **US Federal and State Regulations**
 - TSCA (Toxic Substances Control Act):** Sodium Azide is listed.
 - SARA 313:** Sodium Azide is listed.
 - SARA 311/312 Hazards:** Acute Health Hazard
 - CERCLA Reportable Quantity:** 1000 lbs.
 - California Proposition 65:** Sodium Azide is not listed on California's listing of known or potential carcinogens.



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16. Other Information:

- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

2. Hazards Identification:

- **Classification: Sodium Azide <0.1%.** Not hazardous at this concentration. The classification was made according to the latest edition of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
- **Special Hazards:** N/A
- **Routes of exposure:** Inhalation; ingestion or skin.
IF EXPOSED OR CONCERNED: Get medical advice/attention.

3. Information on Ingredients:

Contains	EINECS	CAS No.	Content %	Classification
Sodium Azide	247-852-1	26628-22-8	<0.1%	Not hazardous at this concentration

4. First Aid Measures:

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly. Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Rinse mouth with water. Seek medical attention and appropriate follow-up.

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** The product is non-flammable.
- **Protective equipment:** No special measures required.

6. Accidental Release Measures:

- **Person-related safety precautions:** Use standard laboratory practices including proper personal protective equipment.
- **Measures for environmental protection:** N/A.
- **Measures for containment and cleaning:**
 - Absorb liquid components with liquid-binding material.
 - Pick up mechanically.
 - Dispose contaminated material as waste according to item 13.
- **Additional information:** No dangerous substances are released.

7. Handling and Storage:

- **Precautions for safe handling:** No special measures required. No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage:** Store according to product specifications.

8. Exposure Controls and Personal Protection:

- **Control parameters:** None known.
- **Appropriate engineering controls:** Follow usual standard laboratory practices. The following personal protection is recommended:
 - Gloves made of latex, nitrile rubber, e.g.



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- Safety glasses
- Protective work clothing.

9. Physical and Chemical Properties:

- **Appearance:** Lyophilized white powder or clear liquid.
- **Odor:** Little to none
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** Not available.
- **Boiling point/Boiling range:** Not available.
- **Flash point:** Not available.
- **Evaporation rate:** Undetermined.
- **Flammability:** Not available.
- **Upper/lower flammability or explosive limits:** Not available.
- **Vapor pressure/density:** Not available.
- **Relative Density:** Not available.
- **Solubility in/Miscibility with Water:** Not available.
- **Partition coefficient: noctanol/water:** Not available
- **Auto igniting:** Product is not self igniting.
- **Decomposition temperature:** Not available.
- **Viscosity:** Not available.

10. Stability and Reactivity:

- **Reactivity:** This product contains low concentrations of Sodium Azide <0.1% (w/w). Sodium Azide can form explosive compounds with heavy metals which, with repeated contact with lead and copper commonly found in plumbing drains may result in the buildup of shock sensitive compounds.
- **Chemical Stability:** Stable under normal ambient and storage and handling temperatures.
- **Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials to be avoided:** Metals and metallic compounds.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11. Toxicological Information:

- **Acute toxicity:** No toxic effect known.
- **Skin irritant effect:** No irritant effect known.
- **Eye irritant effect:** No irritant effect known.
- **Sensitization:** No sensitizing effects known.
- **Mutagenicity:** No effect known.
- **Carcinogenicity:** No effect known.
- **Reproductive toxicity:** No toxic effect known.
- **Additional toxicological information:** When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12. Ecological Information:

- **Ecotoxicity:** Undetermined.
- **Biodegradability:** Undetermined.
- **Mobility:** Undetermined.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilt material to soil, waterways, drains and sewers.

14. Transport Information:

- **UN Number:** None
- **DOT regulations:** ·Hazard class: None



Safety Data Sheet

Product Name: Human IFN-gamma/Granzyme B Dual-Color ELISpot Kit

Reviewed on: 11 March 2014

- Land transport ADR/RID (cross-border): Not regulated.
- Maritime transport IMDG: Not regulated.
- Marine pollutant: No
- Air transport ICAO-TI and IATA-DGR: Not regulated.
- Transport/Additional information: Not dangerous according to the above specifications.

15. Regulations:

- US Federal and State Regulations
 - TSCA (Toxic Substances Control Act): Sodium Azide is listed.
 - SARA 313: Sodium Azide is listed.
 - SARA 311/312 Hazards: Acute Health Hazard
 - CERCLA Reportable Quantity: 1000 lbs.
 - California Proposition 65: Sodium Azide is not listed on California's listing of known or potential carcinogens.

16. Other Information:

- Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.