






Section 1. Identification of the Substance/Mixture and the Company

Product Name	AEC Chromogen
Product Number	IACD
Intended Use	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.
Manufacturer	Teomics, LLC.
Address	Energy Research Park 5000 Gulf Freeway, Bldg 5 (114) Houston, Texas 77023
Phone Number	800-397-3010
e-mail	msds@teomics.com
Website	teomics.com

Section 2. Hazards Identification

Classification: Regulation (EC) No 1272/2008 (CLP)	 GHS02 Flammable liquid and vapor. 1, H224  GHS07 Harmful if inhaled. Eye irritation. Harmful to skin. 2, 4, H315, H319, H332  GHS08 May damage fertility or unborn child. 1A, 1B, H360  GHS06 Toxic if swallowed. 3, H301
Classification: Directive 1999/45/EC	

T

EN: Toxic
DA: Giftig
DE: Giftig
EL: Τοξικό
ES: Tóxico
FR: Toxique
IT: Tossico
NL: Vergiftig
PT: Tóxico
SV: Giftig

**Xi**

EN: Irritant
DA: Lokalirriterende
DE: Reizend
EL: Ερεθιστικό
ES: Irritante
FR: Irritant
IT: Irritante
NL: Irriterend
PT: Irritante
SV: Irriterande


Xn

EN: Harmful
DA: Sundhedsskadelig
DE: Gesundheitsschädlich
EL: Επιβλαβές
ES: Nocivo
FR: Nocif
IT: Nocivo
NL: Schadelijk
PT: Nocivo
SV: Hälsoskadlig

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EN: Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
DA: Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding, hudkontakt og indtagelse.
DE: Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen, Berührung mit der Haut und durch Verschlucken.
EL: Επιβλαβές: κίνδυνος σοβαρής βλάβης της υγείας ύστερα από παρα- τεταμένη έκθεση όταν εισπνέεται, σε επαφή με το δέρμα και σε περι- πτωση καταπόσεως.
ES: Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación, contacto con la piel e ingestión.
FR: Nocif: risque d'effets graves pour la sante en cas d'exposition prolongee par inhalation, par contact avec la peau et par ingestion.
IT: Nocivo: pericolo di gravi danni alla salute in caso di esposizione prolungata per inalazione, a contatto con la pelle e per ingestione.
NL: Schadelijk: gevaar voor ernstige schade aan de gezondheid bij langdurige blootstelling bij inademing, aanraking met de huid en opname door de mond.
PT: Nocivo: risco de efeitos graves para a saúde em caso de exposição prolongada por inalação, em contacto com a pele e por ingestão.
SV: Farligt: risk för allvarliga hälsoskador vid långvarig exponering genom inandning, hudkontakt och förtäring.

For full text of R- & S- phrases: see Section 15.

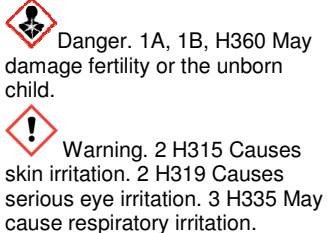
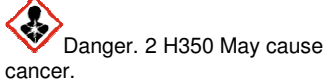
NFPA Scale: 0-4			
HMIS (U.S.A.) Scale: 0-4	HEALTH	2	
	FLAMMABILITY	2	
	PHYSICAL HAZARD	0	
	PERSONAL PROTECTION	C	
Other Hazards	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.		

Section 3. Composition and Information on Ingredients

Chemical Description: Mixture

*May contain additional non-hazardous proprietary ingredients.

*May contain additional active ingredients at concentrations <0.1%w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
DiMethyl Formamide	68-12-2	200-679-5		≥ 92
AEC	132-32-1	205-057-7		≤ 3

Section 4. First Aid Measures

Eye Contact: Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

Skin Contact: Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

Section 5. Fire Fighting Measures

Extinguishing Media	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
Unusual Fire and Explosion Hazards	Formation of toxic gases may happen.
General Information	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

Section 6. Accidental Release Measures

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus. Keep material away from heat, flame, ignition sources, and reactive materials. Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

Section 7. Handling and Storage

Precautions for safe handling.

Avoid contact with skin and eyes.

Wash thoroughly after handling.

Avoid breathing vapor.

Conditions for safe storage, including any incompatibilities.

Store in well ventilated area.

Keep container tightly closed.

Store at 2-8°C.

Specific end use(s).

Not applicable.

Section 8. Exposure Controls / Personal Protection

Exposure Limits	Dimethylformamide: 10ppm, 30 mg/m ³ TWA; skin
Personal Protection	<p>Eye/Face protection. Safety glasses or goggles are required.</p> <p>Skin protection. Protective clothing is required.</p> <p>Hand protection. Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove.</p> <p>Respiratory protection. Avoid breathing vapor.</p> <p>Environmental exposure controls. Avoid releasing large quantities into the environment. No additional information.</p>
Engineering Controls	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Dark amber
Odor	Odorless to slightly fishy smell. (amine like)
Odor Threshold	Unknown
pH	7
Melting Point/ Freezing Point	Unknown
Initial Boiling Point	Unknown
Flash Point	58°C
Evaporation Rate	Unknown
Flammability (solid, gas)	Unknown

Upper/Lower Flammability Limits	Unknown
Vapor Pressure	≈ 4.9 mbar @ 20 °C
Vapor Density	2.5 (air =1)
Relative Density	0.95 g/cm ³ @ 20 °C
Solubility(ies)	Water and organic solvents.
Partition Coefficient: n-octanol/water	Unknown
Auto-Ignition Temperature	Unknown
Decomposition Temperature	Unknown
Viscosity	Unknown
Explosive Properties	Not explosive.
Oxidizing Properties	Unknown

Section 10. Stability and Reactivity

Reactivity	No relevant data available.
Chemical Stability	Stable under normal temperatures and pressures.
Possibility of Hazardous Reactions	No hazardous reactions known.
Conditions to Avoid	Fire, static electricity, direct sunlight. Ignition sources, excess heat.
Incompatible Materials	Strong oxidizers, strong acids, strong bases. Reducing agents, alkali metals, halogenated agents, nitrates, metal oxides, chloroformates.
Hazardous Decomposition Materials	Carbon monoxide, oxides of nitrogen, carbon dioxide.

Section 11. Toxicological Information

Information on Toxicological Effects.	<p>Acute Toxicity. No relevant data available.</p> <p>Skin Corrosion/Irritation. Irritating to skin and mucous membranes. Readily absorbed through skin.</p> <p>Serious Eye Damage/Irritation. Irritating to eye.</p> <p>Respiratory or skin sensitization. No relevant data available.</p> <p>Germ Cell Mutagenicity. No relevant data available.</p>
Carcinogenicity.	<p>International Agency for Research on Cancer (IARC). Dimethyl Formamide, classified group 3.</p> <p>National Toxicology Program (NTP). None of the components are listed.</p>

Section 12. Ecological Information



Toxicity	<p>Fish: No relevant studies identified.</p> <p>Crustacea: No relevant studies identified.</p> <p>Algae/Aquatic Plants: No relevant studies identified.</p> <p>Other Organisms: No relevant studies identified.</p>
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Persistence and Degradability.	No relevant studies identified.
Bioaccumulative Potential.	No relevant studies identified.
Mobility in Soil.	No relevant studies identified.
Additional Remarks	None.
Results of PBT and vPvB Assessment.	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.

Section 13. Disposal Considerations

Waste Disposal Methods.	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
Product/Packaging Disposal.	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
Other Disposal Recommendations.	No relevant data available.

Section 14. Transport Information

UN Number DOT, IATA,IMDG, ADR	UN2265
UN Proper Shipping Name DOT, IATA,IMDG, ADR	N,N-DiMethyl Formamide.
Transport Hazard Class(es)	<p>DOT</p>  <p>Class 3 Flammable liquids. Label 3</p> <p>IATA, IMDG, ADR</p>  <p>Class 3 Flammable liquids. Label 3</p>
Packing Group DOT, IATA,IMDG, ADR	III
Environmental Hazards	Marine Pollutant: No
Special Precautions for User	Not applicable.
ADR Hazard Identification Number (Kemler Code).	Not applicable.
IMDG Segregation Group	Not applicable.
Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code.	Not applicable.

Section 15. Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.

Specific Toxic Chemical Listings; Section 313	Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Extremely Hazardous Substances; Section 355	None of the components in this mixture are listed.
Toxic Substances Control Act; TSCA	All of the components in this mixture are listed.
California Proposition 65	None of the components in this mixture are listed.
Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by Teomics, LLC.
R phrases	<p>R48/20/21/22 EN: Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. DA: Farlig: alvorlig sundhedsfare ved længere tids påvirkning ved indånding, hudkontakt og indtagelse. DE: Gesundheitsschädlich: Gefahr ernster Gesundheitsschäden bei längerer Exposition durch Einatmen, Berührung mit der Haut und durch Verschlucken. EL: Επιβλαβές: κίνδυνος σοβαρής βλάβης της υγείας ύστερα από παρα- τεταμένη έκθεση όταν εισπνέεται, σε επαφή με το δέρμα και σε περί- πτωση καταπόσεως. ES: Nocivo: riesgo de efectos graves para la salud en caso de exposición prolongada por inhalación, contacto con la piel e ingestión. FR: Nocif: risque d'effets graves pour la sante en cas d'exposition prolongee par inhalation, par contact avec la peau et par ingestion. IT: Nocivo: pericolo di gravi danni alla salute in caso di esposizione prolungata per inalazione, a contatto con la pelle e per ingestione. NL: Schadelijk: gevaar voor ernstige schade aan de gezondheid bij langdurige blootstelling bij inademing, aanraking met de huid en opname door de mond. PT: Nocivo: risco de efeitos graves para a saúde em caso de exposição prolongada por inalação, em contacto com a pele e por ingestão. SV: Farligt: risk för allvarliga hälsoskador vid långvarig exponering genom inandning, hudkontakt och förtäring.</p> <p>R36/37/38 EN: Irritating to eyes, respiratory system and skin. DA: Irriterer øjnene, åndedrætsorganerne og huden. DE: Reizt die Augen, Atmungsorgane und die Haut. EL: Ερεθίζει τα μάτια, το αναπνευστικό σύστημα και το δέρμα. ES: Irrita los ojos, la piel y las vías respiratorias. FR: Irritant pour les yeux, les voies respiratoires et la peau. IT: Irritante per gli occhi, le vie respiratorie e la pelle. NL: Irriterend voor de ogen, de ademhalingswegen en de huid. PT: Irritante para os olhos, vias respiratórias e pele. SV: Irriterar ögonen, andningsorganen och huden.</p> <p>R63 EN: Possible risk of harm to the unborn child. DA: Mulighed for skade på barnet under graviditeten. DE: Kann das Kind im Mutterleib möglicherweise schädigen. EL: Πιθανός κίνδυνος δυσμενών επιδράσεων στο έμβρυο κατά τη διάρ- κεια της κύησης. ES: Posible riesgo durante el embarazo de efectos adversos para el feto. FR: Risque possible pendant la grossesse d'effets nefastes pour l'enfant. IT: Possibile rischio di danni ai bambini non ancora nati. NL: Mogelijk gevaar voor beschadiging van het ongeboren kind. PT: Possíveis riscos durante a gravidez com efeitos adversos na descendência. SV: Möjlig risk för fosterskador.</p>

S phrases	<p>S36/37/39 EN: Wear suitable protective clothing, gloves and eye/face protection. DA: Brug særligt arbejdstøj, egnede beskyttelseshandsker og -briller/ansigtsskærm. DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen. EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου ES: Úsense indumentaria y guantes adecuados y protección para los ojos/la cara. FR: Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux/du visage. IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia. NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht. PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados. SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.</p> <p>S45 EN: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). DA: Ved ulykkestilfælde eller ved ildebefindende er omgående lægebehandling nødvendig; vis etiketten, hvis det er muligt. DE: Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen). EL: Σε περίπτωση ατυχήματος ή αν αισθανθείτε αδιαθεσία ζητήστε αμέσως ιατρική συμβουλή (δείξτε την ετικέτα αν είναι δυνατό). ES: En caso de accidente o malestar, acúdase inmediatamente al médico (si es posible, muéstresele la etiqueta). FR: En cas d'accident ou de malaise, consulter immédiatement un medecin (si possible lui montrer l'etiquette). IT: In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta). NL: Bij een ongeval of indien men zich onwel voelt, onmiddellijk een arts raadplegen (indien mogelijk hem dit etiket tonen). PT: Em caso de acidente ou de indisposição, consultar imediatamente o médico (se possível mostrar-lhe o rótulo). SV: Vid olycksfall, illamående eller annan påverkan, kontakta omedelbart läkare. Visa om möjligt etiketten.</p>
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Section 16. Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Teomics, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.