

MATERIAL SAFETY DATA SHEET (MSDS)

This Material Safety Data Sheet (MSDS) has been written in accordance with the European Union Council Directive 98/24/EC of 7th April on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual directive within the meaning of Article 16(1) of the Directive 89/391/EEC).

Commission Directive 2001/58/EC of 27th July 2001 amending for the second time Directive 91/155/EEC defining and laying own the detailed arrangements for the system of information relating to dangerous preparations in implementation of Article 14 of the European Parliament Directive 1999/45/EC and relating to dangerous substances in Implementation of Article 27 of Council Directive 67/548/EEC (safety data sheets). (Text with EEA relevance). Appropriate risk and safety phrases are cited in this MSDS.

SECTION 1 - SUBSTANCE IDENTITY AND COMPANY INFORMATION

Product Name: ARC (assay ready cells), PRC (patch ready cells) and TRC (transporter ready cells) at Biosafety Level 1

Catalog #: AW210, AW220, AW230, AW240, AW250, AW260, AW270, AW280, AW290, AW300 RE011, RE012, RE013, RE014, RE015, RE016, RE111, RE112, RE113, RE114, RE115, RE116, RE201, RE202, RE301, RE302, RE303, RE304, RE305, RE306, RE307, RE421, RE422, RE423, RE500, RE501, RE501, RE502, RE503, RE504, RE505, RE508, RE509, RE510, RE511, RE525, RE530, RE535, RE544, RE551, RE552, RE553, RE554, RE561, RE562, RE565, RE570, RE573, RE582, RE586, RE587, RE590, RE596, RE671 RE703, RE705, RE706, RE750, RE751, RE752, RE753, RE754, RE771, RE772, RE781, RE782, RE784, RE785, RE786,

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SECTION 2 - HAZARDS IDENTIFICATION

Chemical Hazards:

Frozen cultures may contain 5 to 10% (v/v) dimethyl sulphoxide (DMSO).

DMSO may be harmful and toxic if in contact with skin or ingested, (H311). It also maybe irritating to eyes and respiratory system (H332). Thawed contents of vials should not come into contact with skin, eyes or digestive and respiratory epithelium and should be diluted upon use with culture media. Persons handling vials of frozen cells containing DMSO should wear a laboratory overall, protective glasses and insulated gloves (P282).

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Biological hazards:

Although a human or animal cell line may not be known to contain any agents capable of harm to healthy adult humans the possibility of a contaminant, adventitious virus can rarely be excluded. Therefore, it is recommended that all human and animal cell lines are handled as an ACDP Hazard Group 2 organism unless a higher ACDP Hazard Group is specified. The user is referred to the relevant references in the relevant certificate of analysis (CoA).

The genetic modifications of the genetically modified organisms in this product group do not increase the biosafety level. All transgenes are of **biosafety level 1**. Relevant information about genetic modifications are mentioned in the certificate of analysis (CoA).

Cryomedium used for the products contain fetal bovine serum. All sera used for the freezing process are from reliable suppliers. Animals used for collection of serum were veterinary inspected and acceptable for slaughter. Assay results a detailed, batch specific information are listed in the serum specification sheet.

Health Effects:

Eyes: Not known; Skin: Not known; Ingestion: Not known; Inhalation: Not known

Physical Hazards:

Where cell lines are shipped as frozen vials there is a small risk that the vial may be pressurized, due to the expansion of trapped liquid nitrogen and could explode on warming. Such a risk will be increased if the vial has been shipped to the customer in a liquid nitrogen container (dry-shipper). It is recommended that persons handling vials of frozen cells should wear a laboratory overall, protective glasses and protective laboratory gloves. This sheet does not constitute an assessment as required by the Control of Substances Hazardous to Health Regulations 1994. The information contained in this publication is given in good faith and is accurate to the best of our knowledge.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Various Animal Cell Cultures at Biosafety Level 1

Either frozen or growing cells shipped in liquid cell culture medium (a mixture of components that may include, but is not limited to: inorganic salts, vitamins, amino acids, carbohydrates and other nutrients dissolved in water). Frozen Cultures may also contain a 5%-10% solution of Dimethyl sulfoxide as a cryoprotectant.

This substance contains no ingredients at concentrations to be considered hazardous as defined by OSHA 29CFR 1910.1200 however this product should be handled according to good lab practices, with proper personal protective equipment, proper engineering controls and within the parameters of the purchaser's chemical hygiene plan.

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SECTION 4 - FIRST AID MEASURES

Report to your Safety Office and Seek Medical Attention as Soon as Possible

Ingestion: If person is unconscious seek emergency medical attention; never give anything by mouth to an unconscious person. If the person is conscious wash mouth out with copious amounts of water and call a physician. Do not induce vomiting unless directed to do so by a physician.

Inhalation: If person is unconscious seek emergency medical attention, if person is conscious remove to fresh air and call a physician.

Dermal exposure: Immediately wash skin with copious amounts of water followed by washing with soap and copious amounts of water. Remove all contaminated clothing.

Eye exposures: Flush eyes with copious amounts of water for at least 15 minutes with eyelids separated and call a physician.

Notes to Physician: Treat symptomatically and supportively.

SECTION 5 - FIRE FIGHTING MEASURES

General: Wear Self-Contained breathing apparatus in pressure demand, MSHA/NIOSH approved. During a fire, irritating and toxic gases may be generated by thermal decomposition.

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, Halon (where regulations permit), or appropriate foam.

Autoignition Temperature: N/A

Explosion limits: N/A

Flash Point: Not Available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use Personal Protective Equipment: Including Chemical Splash Goggles, Chemical Resistant Gloves, and appropriate clothing to prevent skin exposure. In addition, a Respiratory protection program that complies with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Methods for Cleaning Up

Patient/Victim: Wash with soap and water. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Do not take clothing home.

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Equipment/Environment: Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towel and apply 1% sodium hypochlorite, starting at perimeter and working towards the center; allow sufficient contact time before cleanup (30 min).

Note: The use of additional personal protection equipment may be necessary while using cleaning solutions.

SECTION 7 - HANDLING AND STORAGE

Handle and store according to instructions on certificate of analysis (CoA) and label.

Special Requirements:

Follow established laboratory procedures when handling material.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: The use and storage of this material requires user to maintain and make available appropriate eyewash and safety shower facilities. Use fume hood or other appropriate ventilation method to keep airborne concentrations as low as possible.

Personal Protective Equipment: Including Safety Glasses or goggles, Chemical Resistant Gloves, and appropriate clothing to prevent skin exposure. In addition, a Respiratory protection program that complies with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Exposure Limits: No exposure limits for this material have been established by ACGIH, NIOSH, or OSHA. There are no vacated OSHA PEL for this material.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: frozen or freeze dried

No Information is available for PH, Vapor Pressure, Vapor Density, Evaporation Rate, Viscosity, Boiling Point, Freezing/Melting Point, Decomposition Temperature, Solubility, Specific Gravity/Density, or Molecular Weight.

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SECTION 10 -	STABILITY AND REACTIVITY
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Chemical Stability: Stable

Conditions to Avoid: No information available.

Hazardous Decomposition Products: No information available.

Hazardous Polymerization: Will not occur.

SECTION 11 -	TOXICOLOGICAL INFORMATION
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Toxicity Data: Data not available

Effects of Long Term or Repeated Exposure: Data not available

Chronic Exposure–Teratogen: Data not available

Chronic Exposure–Mutagen: Data not available

Chronic Exposure–Reproductive Hazard: Data not available

No Information was found in relation to: RTECS, LD50/LC50, Carcinogenicity, Epidemiology, Teratogenicity, Reproductive effects, Mutagenicity, or Neurotoxicology.

Note: The toxicological properties of this substance have not been fully investigated.

SECTION 12 -	ECOLOGICAL INFORMATION
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No ecological information available.

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SECTION 13 - DISPOSAL CONSIDERATIONS

Follow established procedures for Containment (Biosafety) Level 2. Methods for disposal for thawed content.

Spillage:

wear a laboratory coat, safety glasses and protective laboratory gloves. Place paper towels or other absorbent material over the spillage. Pour disinfectant over spillage to saturate and leave for 30 minutes prior to cleaning and disposal. The most appropriate disinfectant is 10% v/v Sodium hypochlorite (10,000 parts per million available chlorine). This should not be used in combination with other disinfectants. See your local risk assessment or contact the manufacturer of the disinfectant for additional information.

Waste disposal:

Decontaminate prior to disposal by autoclaving (121°C, 20 min., 1bar) and dispose of decontaminated liquid waste down a designated sink with running water. Solid waste should be placed in a sealed bag and labelled and destroyed by incineration. Follow all national, regional and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Additional information arising from the Carriage of Dangerous Goods by Road & Air (Classification, Packaging and Labelling) Regulations:

UN no: 1845- Dry Ice. Dry ice not deemed dangerous by road transport only air.

Packing group; 3 –lowest grade of packaging.

Most cell lines are not classified as dangerous goods as they are considered non-infectious to humans or animals and are not genetically modified; therefore, they are not subject to IATA or European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) regulation for dangerous goods.

When the following categories apply acCELLerate will ensure the outer packaging indicates the appropriate packaging requirements:

Biological Substance Category B UN3373 – packed in compliance with IATA packing instruction 650.

Genetically Modified Organisms (GMOs) UN3245 – packed in compliance with IATA packing instruction 959.

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SECTION 15 -

REGULATORY INFORMATION

acCELLerate confirms that all necessary licenses (import, holding, transfer and export) required for the consignment of this material are in place.

This organism/material may be covered by German or International legislation.

SECTION 16 -

OTHER INFORMATION

THE INFORMATION PRESENTED IN THIS DOCUMENT IS BELIEVED TO BE CORRECT BASED UPON DATA AVAILABLE TO ATCC. USERS SHOULD MAKE AN INDEPENDENT DECISION REGARDING THE ACCURACY OF THIS INFORMATION BASED ON THEIR NEEDS AND DATA AVAILABLE TO THEM. ALL SUBSTANCES AND MIXTURES MAY PRESENT UNKNOWN HAZARDS AND ALL NECESSARY SAFETY PRECAUTIONS SHOULD BE TAKEN. ATCC ASSUMES NO LIABILITY RESULTING FROM USING OR COMING IN CONTACT WITH THIS SUBSTANCE.

In the event of an accident involving exposure of a person to the material contained in the samples, contact acCELLerate during normal German working hours. Refer to section 1 for full contact details.

The above information is correct to the best of our knowledge. All materials and mixtures may present unknown hazards and should be used with caution.

The user should make independent assessments and decisions regarding the completeness of the information based on all sources available.

acCELLerate shall not be held liable for any damage resulting from handling or contact with the above product.

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