MS&T Keramos Student Competitions

There shall be two Keramos sponsored competitions (Ceramic Mug Drop and Ceramic Disc Golf) and each competition shall have 3 divisions (In-Person Competition, Open Competition, and Aesthetic).

Ceramic Mug Drop

PURPOSE: The purpose of the Ceramic Mug Drop contest is to promote spirited and collegial competition among students by demonstrating their prowess in manufacturing a ceramic mug possessing high strength, mechanical reliability, and aesthetics. The contest is organized by Keramos.

IN-PERSON RULES:

1. All student members of Material Advantage are eligible to participate; entrants DO NOT have to be members of Keramos. All work on the mugs must be performed by students; Faculty members and non-students may only advise.
2. One submission per student per category is allowed.
3. Mugs must be made entirely from ceramic or glass materials, and may not contain any metal, plastic, paint, organics, or non-ceramic materials.
4. No commercially made parts may be incorporated in mugs, to include rods or pre-woven fiber mats. Raw materials such as powders, liquid precursors, chemicals, and fibers are permissible to purchase and use to fabricate a mug; however, any woven textile fiber architecture created to reinforce the mug must have been fabricated by the students and not purchased.
5. All mugs must have a serviceable handle(s) which permits gripping and retaining a mug filled with at least 350 ml of liquid.
6. Dimensions of the mugs must not be greater than 25 centimeters in height, nor greater than 20 centimeters in diameter with the handle(s).
7. Mugs must be able to contain at least 350 ml and not more than 650 ml of liquid and be useable for drinking purposes. Mugs must not decompose when they contain a liquid.
8. Mugs can be enameled or glazed but cannot be painted or coated after final firing.
9. Mugs must be a single monolithic piece and the final mug (including all coatings, layers, etc.) must be fired or formed at a temperature of 1000 °C or higher. No parts may be glued or tied on after firing.
10. No acutely toxic materials, e.g., arsenic, are to be incorporated into the mugs. Contestants are expected to follow standard safety practices in place at their university.
11. The year of the contest must be inscribed or glazed into the surface of the mug. No paint or marker, etc.
12. Design and creation cannot occur before the preceding competition. This means that as soon as one competition ends, next year's submissions can begin.

AESTHETIC

1. Occurs in-person concurrent with the ceramic mug drop.

OPEN COMPETITION:

1. The Open Mug category has been created for those competitors who do not have access to university labs and must therefore fabricate their mugs at home. Entries in the Open category require disclosure of how the mug was fabricated (processing, material choice, and firing cycle), and no commercial grade equipment can be used.

2. Follow the same guidelines as the in-person competition.

JUDGING:

1. The judges of the contest will consist of at least two members of the Keramos National Board of Directors.
2. Each mug can be judged in the categories of drop strength and artistic merit (aesthetics.) The strongest mug will be named winner of the Mug Drop Contest and the most aesthetically pleasing/creative mug will be recorded as the "Best Looking" mug. Mugs competing for aesthetics can choose not to be dropped with no consequences.
3. The drop test for evaluating strength will be performed as follows:
    a. Each mug will be dead dropped from a starting point of 30 centimeters from the ground.
    b. Those mugs which do not fail during the drop test are eligible for the next drop height.
    c. The mug will be dropped from successively higher heights (15 centimeters greater each time) until it is broken.
    d. "Broken" shall be defined as not being able to hold 350 ml of liquid without leaking, or loss of last handle.
    e. An entrant may "pass" (choose not to have their mug dropped) at any height; however, all surviving mugs must be evaluated at the 30 cm, 105 cm, and 210 cm levels.
    f. The winner shall be determined by the highest survived drop height.