



Test Options

Mars Mineral maintains a laboratory and pilot scale testing facility for determining the pelletability of your material. Please, use this table as a guide to help you determine the test work that you would like to have performed.

Description	Research Study	Pilot Scale Development
Test Results	Success based upon generation of customer-defined pellets, as determined by analysis	Scale up data obtained and/or quantity pelletization
Required Quantity of Sample	5-10 Gallons; 15-25 Gallons for pin mixer pelletization	500 - 2200 lb (225 - 1000 kg)
Binders	Water and 2 binder additives; Additional binders will increase fee	Predetermined binder
Equipment	8D32L Pin Mixer	12D54L Pin Mixer
Sample Yield	Up to 500 lbs. (225 kg)	≥ 450 LB (200 kg) of pellets
Special Conditions	None	Milling, pre-treatment, mixing, special feeding, drying, screening, or post-treatment at extra charge
Price	\$2,000 per day	\$2,500 per day (one day minimum charge)

MARS MINERAL

128 Myoma Road
Mars, PA 16046

Phone:724-538-3000
Fax:724-538-5078
info@marsmineral.com
www.marsmineral.com

Division of Woodward, Inc.



Terms & Conditions



Description of Laboratory Fees

The quoted laboratory testing rates are for the use of our facility, equipment, laboratory technicians and supporting personnel. The Laboratory fees are charged either as a standard price (for Research Study), or at a daily rate (for Pilot Scale Development). The Pilot Scale Test is based upon a daily charge, plus additions for optional processing equipment or materials. The daily charge is a minimum fee. The number of days quoted for your project includes estimated time for set up of the pelletizing system, for clean up upon the test completion, special pre- or post-treatment of materials or pellets (milling, mixing, drying etc.) and for preparation of the test report.

Daily, Overtime and Weekend Rates

The normal daily rate is for an eight (8) hour day , 7:30 AM to 3:30 PM, Monday through Friday. Time exceeding the normal workday will be invoiced at overtime rates. No overtime will be performed without written authorization by the customer.

Extraneous Supplies

Any special supplies needed for a test, and to be supplied by Mars Mineral, must be authorized by the customer in writing and will be invoiced at our cost plus 15%. All unused supplies will be returned to the customer upon completion of the test.

Forms Required for Testing

Before any testing begins, Mars Mineral must have a verbal approval or a Purchase Order.

Acceptance of Materials

Written authorization from Mars Mineral must be obtained by the customer prior to shipment or Mars Mineral will not accept the shipment. Mars Mineral will not consider authorizing material shipment without prior receipt of a Material Safety Data sheet.

Failure of the customer to properly notify Mars Mineral in writing about the properties of the materials will indemnify and hold Mars Mineral harmless from and against any and all claims, suits or liability whatsoever arising from

or connected with any such injury, death or damage.

Material sent to Mars Mineral should be sent in 5-gallon buckets for small samples. Larger samples will be accepted in drums (not to exceed 500 pounds per drum) or in bulk bags with bottom spout (not to exceed 2,000 pounds). Packaging other than this needs to be cleared with Mars Mineral prior to shipment. Send materials to: Mars Mineral; 128 Myoma Road; Mars, PA 16046 USA, Attention Test Lab.

Return of Materials

Mars Mineral policy requires that all materials shipped to us for testing will be returned to the customer. There are no exceptions. The materials will include unused raw materials, product, off spec material and clean up. Arrangements for the return of the materials must be made prior to the test. All charges for the return of the material will be to the customers account and will be invoiced with the testing charges. International customers must provide valid UPS or FedEx account numbers or credit card information before authorization may be obtained to ship materials to Mars Mineral.

In the event that the testing is delayed or partially completed due to reasons beyond the control of Mars Mineral, the material will be held for a maximum of 30 days from the delay date. After 30 days the material will be returned to the customer by freight collect. If the customer refuses delivery of the material, it will be disposed of in accordance with the Material Safety Data Sheet and the customer will be billed for all related costs.

Test Scheduling/Completion

All tests will be scheduled according to the arrival date of materials, required forms, and laboratory fee down payment. This schedule is tentative and is subject to change. Mars Mineral will notify the customer of the scheduled test date and will make every effort to hold the date selected.

Terms of Payment

The following payment terms will apply to all testing:

- 50% required with the purchase order and completed forms for testing.
- 50% required upon completion of the test and prior to the submittal of the test report and shipping of samples.



Agglomeration Questionnaire

This questionnaire is to be completed and returned to Mars Mineral prior to testing of your materials. Please, fill in as much as possible to help us understand how we may help you achieve your pelletization objectives.

Contact Information

Company _____

Contact _____

Title _____ Email _____

How did you first learn about Mars Mineral? _____

Billing Information

Contact / Email (if different) _____

Address _____

City _____ State / Province _____ Zip / Postal Code _____

Country _____ Phone _____ Fax _____

Purchase Order No. _____

Shipping Information

Preferred Shipping Method _____

All materials sent for testing must be returned.

Shipping Address (if different from billing address above)

Attention: _____

Address _____

City _____ State/Province _____ Zip/Postal Code _____

Country _____ Phone _____ Fax _____

MARS MINERAL

128 Myoma Road
Mars, PA 16046

Phone: 724-538-3000
Fax: 724-538-5078
info@marsmineral.com
www.marsmineral.com

Division of Woodward, Inc.



Agglomeration Questionnaire

International Customers must provide valid United Parcel Service (UPS) or Federal Express shipping account number or Visa, MasterCard, Discover or American Express information, before authorization may be obtained to ship materials to Mars Mineral. Please, include credit card provider, account number, expiration date and name as it appears on the card.

UPS Account No. _____

FedEx Account No. _____

Credit Card Provider _____

Credit Card Number _____

Credit Card Expiration _____ / _____

Card Security Code (3 or 4 digit code on the front or back of card) _____

Name (as it appears on card) _____

Fill in the billing address below (if different from the billing address already provided)

Address _____

City _____ State / Province _____ Zip / Postal Code _____

Material Information

Do you require a Nondisclosure Agreement (NDA), before you may discuss your project with Mars Mineral? _____

Common name of the material _____

Is the material a mixture? _____ If the material is a mixture, what are the specific components, and what are their percentages? _____

Have you included Material Safety Data Sheet(s) (MSDS)? _____

Is the material hazardous? _____ If so, please, explain _____



Agglomeration Questionnaire

What is the source of the material? _____

Aerated Bulk Density _____ lb/ft³ Moisture Content _____ %

Does contact with water have a detrimental effect on your material? _____ If so, please,
explain _____

Are there any common environmental conditions that are detrimental to your material, such as
exposure to given temperatures, etc.? _____ If so, please, explain _____

Sieve Analysis of the material (percent retained): 10 mesh _____ 45 mesh _____

80 mesh _____ 120 mesh _____ 200 mesh _____ 325 mesh _____ Pan _____

Please, give an example of particle consistency, such as flour, sand, fibers, lumps, etc.

Test Objectives

Type of test required, from Test Options, above _____

Do you require scale up data? _____

Do you require more than a liter of sample pellets? _____ If yes, what quantity of finished
sample pellets do you require? _____

Target Pellets

Pellet diameter or mesh size _____ Moisture Content _____ %

Please, note any other qualities that are required of the finished pellets, such as compression or
drop strength, attrition loss resistance, etc. _____



Agglomeration Questionnaire

What is the general end use of your pellets? For example, will the pellets be recycled, or packaged for a customer, or processed for disposal? _____

Water is the typical binder of choice, at least to establish a base for gauging the effect of other binding agents. Several binders are available for evaluation? Do you have a particular binder preference or knowledge of a binder or additive that may add value to your pellet? _____

Do you have any knowledge of any binders or common additives that could be detrimental to your pelletized product? _____

What is your design production capacity in tons per hour? _____

Agreement with Terms and Conditions

By signing this form, I agree to the above Terms and Conditions.

Signature _____

Date _____