dun & bradstreet

The Basics on Data Matching

WHAT IS MATCHING?

Matching, also known as Identity Resolution, is when you connect your organization's data to a trusted set of commercial reference data. This is done to help cleanse your records of faulty data (for example, a typo or wrong information) or to append additional information to a record.

WHAT ARE THE BENEFITS OF MATCHING?

By doing as much as possible to ensure that the right information is associated with the right business, an organization can strengthen confidence in its decision making. This can lead to more operational efficiencies, increased sales, reduced risk and other business use cases. Many organizations automate their matching process to maximize these benefits.

HOW MATCHING WORKS

You supply key information about your business data, for example, data about clients, prospects, suppliers, or records on other business partners. Then, Dun & Bradstreet uses proprietary scoring algorithms to identify businesses in the **Dun & Bradstreet Data Cloud** that most closely resemble the information provided until we locate the actual business.

Every business in the Data Cloud has been assigned a unique **D-U-N-S® Number.** Once we associate your record with the D-U-N-S Number we can append high-quality business-critical data to feed your decision making.
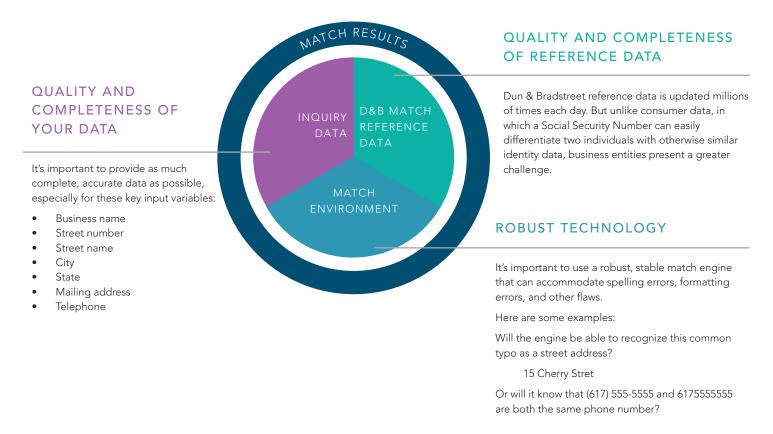
The Dun & Bradstreet Data Cloud offers the world's most comprehensive business data and analytical insights to power today's most crucial business needs. That's why 90% of the Fortune 500, and companies of all sizes around the world, rely on Dun & Bradstreet to help grow and protect their businesses. The Data Cloud includes our own proprietary data as well as data sourced from tens of thousands of public sources.

For more than over 50 years, we have tracked businesses by assigning a unique identifier (known as the **Dun & Bradstreet D-U-N-S® Number**) to each entity in the Data Cloud. The D-U-N-S Number is a proprietary, unique 9-digit identifier for businesses that allows us to track a business and its related data and connections throughout the full lifecycle of that business. A D-U-N-S Number is only assigned once — a number is never reused.

WHAT MAKES A GOOD MATCH?

There are three factors determine the success of match results.

QUALITY AND COMPLETENESS OF YOUR DATA

It's important to provide as much complete, accurate data as possible, especially for these key input variables:

- Business name
- Street number
- Street name
- City
- State
- Mailing address
- Telephone

MATCH RESULTS

- INQUIRY DATA
- D&B MATCH REFERENCE DATA
- MATCH ENVIRONMENT

QUALITY AND COMPLETENESS OF REFERENCE DATA

Dun & Bradstreet reference data is updated millions of times each day. But unlike consumer data, in which a Social Security Number can easily differentiate two individuals with otherwise similar identity data, business entities present a greater challenge.

ROBUST TECHNOLOGY

It's important to use a robust, stable match engine that can accommodate spelling errors, formatting errors, and other flaws.

Here are some examples:

Will the engine be able to recognize this common typo as a street address?

> 15 Cherry Stret

Or will it know that (617) 555-5555 and 6175555555 are both the same phone number?

TAKE A LOOK!

Does this look familiar? On the surface the three records on the left appear different, but matching to the Data Cloud we can determine that these all refer to the same business. Then we can append additional information.

Now everyone across the company, regardless of workflow, has a shared, consistent view of this customer record.

DETERMINES UNIQUENESS OF ANY GIVEN ENTITY BEFORE ASSIGNING D-U-N-S NUMBER

SOURCE 3
A.B.C.
123 Elm St.
Bethlehem, PA 18025
(SIC) 5411-02
Chuck Smith, President

D: OX20PH
$3,000 credit limit
$1,100 outstanding and 12 days past due

SOURCE 2
Alpha Plastics
P.O. Box 111
Bethlehem, PA 18055
Chuck Smith, President
610 882-7600

ID: A595660662
Product code A on 7/2013
Product code B on 9/2011

SOURCE 1
Charles Smith
123 Elm St.
Bethlehem, PA 18025
(SIC) 5541-99
215 882-7600

ID: 001200000000wXgAAI
SMB channel customer
Last touch point on 6/2013

IDENTITY RESOLUTION YIELDS SINGLE VIEW OF THE ENTITY

D&B D-U-N-S NUMBER: 12-345-6789	
Legal Name	ABC, Inc.
Tradestyle	Alpha Plastics
Address Postal	P.O. Box 111 Bethlehem, PA 18055
Address Physical	123 Elm St. Bethlehem, PA 18025
Phone	610 882-7600
SIC	5411-0202, 5541-9901
Primary Contact	Charles Smith, President

CONSOLIDATED PROFILE

D-U-N-S assigned
Names rationalized
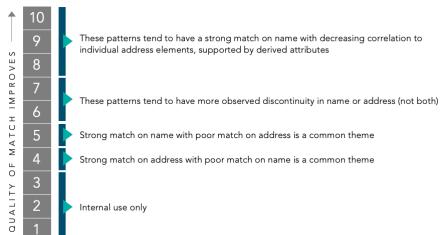Addresses categorized

GETTING TO KNOW YOUR MATCH RESULTS

When you undertake a match exercise, you have to determine whether the record returned is really the record you want. Dun & Bradstreet provides some information about the match to help you decide whether you want to accept it.

CONFIDENCE CODE™

How good do we feel about the match?

We assign a score, the **confidence code**, that lets you know how we feel about this match. If your use case is risk averse, you're looking for a higher score. For sales and marketing where the use case may have less risk, a lower score is often acceptable.

QUALITY OF MATCH IMPROVES →

10	
9	These patterns tend to have a strong match on name with decreasing correlation to individual address elements, supported by derived attributes
8	
7	These patterns tend to have more observed discontinuity in name or address (not both)
6	
5	Strong match on name with poor match on address is a common theme
4	Strong match on address with poor match on name is a common theme
3	
2	Internal use only
1	

MATCH GRADE STRING™

Why do we feel that way?

Want even more detail? We've got it! The confidence code is based on multiple pieces of data in the record. So we assign a **match grade string** which indicates how closely the Dun & Bradstreet reference data resembles the corresponding element in your inquiry data.

The **match grade pattern** is mapped to a **confidence code.** The higher the number (1-10) the more confidence we have in the match.

Business Name	Street Name		State	Telephone		Density*		Industry
A	A	A	B	A	Z	B	F	A	Z	B
	Street #	City		Mailing Address		Zip Code		Uniqueness**

A qualitative evaluation is assigned for components and create a MatchGrade Pattern (MGP)

MatchGrade provides an assessment between components of inquiry & reference info:

A	Should be considered same:	ABC Glamor Consulting vs ABC Glamour Consulting
B	Some similarity:	ABC Glamor Consulting vs ABC Glamour
F	Should be considered not same:	ABC Glamor Consulting vs Armonk Utility Co
Z	Missing information to conclude:	One ore both are blank or not used

A A A B A Z B F A Z B → 9

A F A A A Z Z A B A B → 8

A F F F A Z Z F F Z A → 4

MATCH DATA PROFILE™

What data, including alternative data, did we use for the match?

Keeping data fresh and up-to-date can be hard. Let's say that you have a former executive's name in the 'company name' field. (Perhaps the company wasn't named yet when your sales team created the record.) We may still be able to use this information to match the record to the correct business. The **Match Data Profile (MDP)** code lets you know how we used your information to arrive at the match.

MATCHED TO	NAME MDP
Business Name	00
Registered Name	01
Tradestyle	02
CEO Name	03
Additional Executive	04
Former Business Name	05
Former CEO	07
Short Name	09
Registered Acronym	10

Customer Inquiry Data | D&B's Match Reference File

INPUT NAME	BUSINESS NAME	NAME MDP
ABC Enterprise, Inc.	ABC, Inc.	00
ABC Companies, Inc.	ABC, Inc.	01
Alpha Plastics	ABC, Inc.	02
Charles Smith	ABC, Inc.	03
Mary Worth	ABC, Inc.	04
ABCINC	ABC, Inc.	10

Names are just the start; MDP Codes are available for other input fields, too!

WHAT IF YOU DON'T GET THE RESULTS YOU WANT?

UNDERSTAND THE CAUSE

Match rate to refers to the percentage of input records that meet your acceptance criteria (e.g., based on confidence code). If that match rate is lower than desired, we look to understand why and what we can do to improve it. Although many business leaders expect a 100% match rate, that's not always going to be the case. Some projects can only hope for a match rate around 60% based on the quality of the input data, while others can achieve 95% or more.

Here are some of the issues that factor into the match rate score.

- Record completeness – The more information you provide on a record, the better the chances the match engine will return the right match. Missing fields can lead to lower confidence, so even if the right record is to be had, the confidence may not meet our quality threshold, and the match is rejected.
- Data quality – There's an old saying, "What you put into the pot comes out in the ladle." The quality of the data you put in is key to good match performance. Look for common errors and error patterns – for example, words such as "NULL" or "DO NOT USE", "c/o" instead of the address, phone numbers or postal codes that don't have the requisite number of characters, numeric when alpha characters are expected, or vice-versa, etc.)
- Field mapping – Ensure the input file has the correct data in each field. Don't accidentally put phone number in a zip code field. Yes, neatness counts!
- Other causes – Unverified businesses as well as entities not eligible for D-U-N-S Numbers will not result in a match (e.g. ATM locations are not assigned a D-U-N-S Number whereas a bank location is assigned one)

IMPROVING MATCH RESULTS

Before considering ways to improve match performance, it helps to recast the match rate in terms of business impact. Instead of thinking about how many records matched or didn't, we think about the magnitude of the relationship, for example, dollars spent, credit limit, etc. We often find that more important account records tend to get more attention which results in higher match rates.

If we determine that match rates must still be improved, we can try using some other approaches:

- If available, we test alternative fields that may have better fill rates.
- Consider multi-pass match. This is where we set up logic whereby if a record fails to match on the first pass, we attempt to match with a different set of input data (e.g., alternative location, officer names, URL, TaxID, etc.)
- Broaden the acceptance criteria (i.e. lower the match threshold) by leveraging our advanced match meta data.

NEXT STEPS

Dun & Bradstreet's Data Advisory Services team has extensive experience optimizing match rates and are happy to assist with this process. Please don't hesitate to engage us. Your client director can make the referral to our team of experts.

Ask for your complimentary D&B IQ Report.

Get a better understanding of your data and discover its potential to drive growth for your team.

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