This page lists macro expressions available solely within the **Email marketing** application. To facilitate easy access, individual macro expressions are exposed via the following objects:

- Recipient
- Email
- EmailFeed

To add these expressions, click **Insert macro** (⟨#⟩) on the editor toolbar and select the appropriate option under the **Context specific objects** section.

> ⚠️ **Notes**
>
> - All expressions described below are *context macros*, which means they must be enclosed in *{% %}* parentheses when entered into text or other general fields.
> - For personalization of email widgets, we recommend using only the macros described below. Using other types of macros may significantly reduce the performance of the system.

Recipient

The *Recipient* entity exposes the following properties of individual recipients:

Property	Return type	Description
FirstName	string	Resolves into the *First name* property of the recipient, as specified in the associated contact information.
LastName	string	Resolves into the *Last name* property of the recipient, as specified in the associated contact information.
Email	string	Resolves into the *Email* property of the recipient, as specified in the associated contact information.
PersonaID	int	Resolves into the *PersonaID* property of the recipient, which identifies the persona assigned to the recipient.

> ⚠️ **Note**
>
> When processing macros for marketing emails, the system uses two separate resolving phases:
>
> - General macro expressions are resolved only once and the result is used for all email recipients
> - Macro expressions containing the *Recipient* entity are resolved separately for each email recipient
>
> If you need to use variables from general macros within macros containing the *Recipient* entity, add the **|(resolver) subscriber** parameter to the end of the expression that defines the variables. For example:
>
> ```
> {% defaultText = "Hello there!" |(resolver)subscriber %}
> {% Recipient.FirstName == String.Empty ? defaultText : "Hello, " + Recipient.
> FirstName + "!"; %}
> ```
>
> The *(resolver)subscriber* parameter added to the first macro ensures that the expression is resolved in the second phase along with the second *Recipient* macro.
>
> **Important**: Only use the *(resolver)subscriber* macro parameter for scenarios where variable sharing is necessary. The system resolves such expressions separately for each recipient, which may reduce performance when sending a large number of emails.

ℹ️

> ℹ If no recipients are available when previewing emails containing the *Recipient* macro, a fake contact with name **Anthony Stark** is used.

Email

The *Email* entity exposes properties of individual emails.

Note: The *Email* entity and all its macros are only available when editing email templates of the *Email* type and within the content of marketing email issues based on these templates.

Property	Return type	Description	Notes
Name	string	Resolves into the *Name* property of the given email.	
Subject	string	Resolves into the *Subject* property of the given email.	
Preheader	string	Resolves into the *Preheader* property of the given email.	The usage of this macro in [open conditions or loops](#) is not supported.
SenderName	string	Resolves into the *Sender name* property of the given email.	
SenderEmail	string	Resolves into the *Sender email address* property of the given email.	
ViewInBrowserUrl	string	Resolves into a URL that allows recipients to view the email in a browser.	

EmailFeed

The *EmailFeed* entity exposes the following properties of individual [email feeds](#):

Property	Return type	Description	Notes
Name	string	Resolves into the *Name* property of the email feed under which the macro resolves.	
SubscriptionConfirmationUrl	string	Resolves into a link to the subscription approval page, as defined by the *Approval page URL* property of the given newsletter.	Only available for *Double opt-in* templates.
UnsubscribeFromEmailFeedUrl	string	Resolves into a link to the unsubscription page, as defined by the Unsubscription page URL property of the given email feed.	
UnsubscribeFromAllEmailFeedsUrl	string	Resolves into a link to the unsubscription page, as defined by the Unsubscription page URL property of the given email feed.	

Furthermore, the following macro method can be used with the *EmailFeed* entity.

Method	Return type	Parameters	Description

| GetAbsoluteUrl | string | • EmailFeed email Feed
• string relativePath | Converts a relative path passed by the *relativePath* parameter into an absolute URL (using the **Base URL** configured for the email feed represented by the *EmailFeed* entity).

Example: *{% EmailFeed.GetAbsoluteUrl("/graphics/image.png") %}* |