

# Product Data Sheet

Date of Issue: 7 Oct 2021

## 1. Product Information

- Product Name : Flamma® 675 Sulfo-NHS ester
- Catalog Number : PWSN1515
- Packing Unit : 1 mg / 5 mg / 25 mg
- Appearance : Blue Solid
- Storage Conditions : Protect from Light at -20 °C

## 2. Additional Information

- Fluorophore Label : Flamma® 675
- Reactive Group : Sulfo-NHS ester
- Reactive Toward : Primary amine on proteins and ligands, amine-modified oligonucleotides
- Molecular Formula :  $C_{47}H_{51}N_3O_{19}S_5$
- Molecular Weight : 1122.24 g/mol
- Excitation  $_{Max}$  :  $675 \pm 3$  nm
- Emission  $_{Max}$  :  $691 \pm 4$  nm
- Extinction Coefficient :  $\geq 172,000$  /cm·M

## 3. Description

Flamma® Fluors 675 Sulfo-NHS ester is a reactive form of near infrared (NIR) fluorescent dye induced from benzindocyanine structure and used to generate a stable fluorescence signal in bioimaging. The maxima of Ex/Em values are at 675/691 nm, similar to that of Alexa 680, Cy5.5, IRDye 680LT and Dylight 680. Flamma 675 might be excited using 633 nm laser line and the emission occurs at biological tissue permeable NIR region. Flamma 675 dye can be conjugated to low-abundance biomolecules in fixed cells with great sensitivity, and NIR emission allows in vitro imaging in biological studies. Sulfo-NHS esters have higher water solubility than NHS esters, thus they do not need organic co-solvent and readily react with amine-modified oligonucleotides or amino groups of proteins, i.e. the  $\epsilon$ -amino groups of lysine or the amine terminus of nucleotides to form a stable amide bond between dye and the biomolecule. We offer Flamma Fluors 675 Sulfo-NHS ester for labeling of antibodies, peptides, proteins, ligands, and amplification substrates optimized for in vitro imaging.