



## Tall Oil Fatty Acid (TOFA)

### Overview

Ingevity's bio-based tall oil fatty acid (TOFA) is a mostly unsaturated fatty acid. It is a fatty acid source widely used in many industries. The utility of tall oil fatty acid can be found in the long carbon chain (C18) acid function of the carboxyl group (-COOH) or unsaturation of the double bonds. Ingevity has three manufacturing locations in North America to produce multiple grades of TOFA based on color and other properties.

### Uses and applications

Tall oil fatty acid, CAS# 61790-12-3, is a yellowish liquid chemical compound that is a product of crude tall oil distillation. They are used in alkyd and wood coatings, lubricants, industrial cleaners, anionic flotation reagents, oilfield additives, corrosion inhibitors, metalworking fluids, and surfactants.

### Physical/chemical properties

Physical state:	Liquid.
Color:	Yellow.
Odor:	Bland.
Flash point:	199°C (closed cup).
Explosive properties:	Non-explosive.

### Health effects

The information contained in the table below may be useful to someone handling the concentrated substance such as a manufacturer or transporter. Consumers are not likely to come in contact with the concentrated substance. The data, while verifiable, are not intended to be comprehensive nor replace the data found in the safety data sheet (SDS).

Effect Assessment	Result
Acute toxicity	Virtually nontoxic.
Eye irritation	Slight or no irritation.
Skin sensitization	Not classified as skin sensitizer.

### Environmental effects

The information contained in the table below is intended to provide brief and general information of this product's environmental impact. Products are not classified as persistent, bioaccumulative and toxic (PBT).

Effect Assessment	Result
Aquatic toxicity	No effects were observed at the highest loading rate tested in any of the acute toxicity studies for fish, Daphnia or algae.



Degradability	Readily biodegradable.
Bioaccumulation potential	Low bioaccumulation potential.

### Exposure and risk management recommendations

Tall oil fatty acid is not considered hazardous by the OSHA Hazard Communication Standard. When dealing with this product, it is still recommended to always wear appropriate chemical resistant gloves to protect your hands and skin and always wear eye protection such as chemical goggles. Do not eat, drink, or smoke where chemicals are handled, processed or stored. Wash hands and skin following contact. If this product gets into your eyes, rinse eyes thoroughly for at least 15 minutes with tap water and seek medical attention.

Tall oil fatty acid is readily biodegradable and has low bioaccumulation potential to the environment. The aquatic toxicity study shows it is not harmful to aquatic organisms. Therefore, all identified uses are safe for the environment based on the scientific facts summarized above and when carried out in compliance with recommended risk management measures and applicable regulations.

### Conclusion

Under conditions of normal use by qualified personnel, Ingevity's tall oil fatty acid products are not expected to pose a significant risk to human health or the environment.