

## Product Information

## BREAK-THRU® EM V 20

## PRODUCT DESCRIPTION

BREAK-THRU® EM V 20 is one of our vegetable based non-ionic emulsifiers with excellent ecological, toxicological and dermatological behavior. This surfactant also reduces the surface tension of oils (e.g. sunflower or rapeseed oil) without any foam. It creates emulsion spontaneity in ECs and EWs. During screening of various emulsifiers in pyrethroid EC formulations it demonstrated superior performance. In herbicide field trials this product showed higher biological efficacy than methylated rapeseed oil, even at lower dose rate. No phytotoxicity was exhibited in wheat and maize field trials.

## Typical Properties

Property	Unit	Value
Appearance		clear liquid
Color		max. 30
Hess-Ives		
Hydrophilic-lipophilic Balance (HLB) Value		8.4

The data represents typical values (no product specification)

## TYPICAL APPLICATIONS

BREAK-THRU® EM V 20 is mainly used for the formulation and emulsification of environmentally friendly fluids based on vegetable (e. g. rape seed oil) and synthetic ester oils (e.g. trimethylol propane trioleate), as well as combinations of these oils with mineral oils.

## Product Composition

Product Composition	Unit	Value
Water Content, max.	wt%	1

The data represents typical values (no product specification)

## BENEFITS &amp; ADVANTAGES

BREAK-THRU® EM V 20 has excellent emulsifying properties and ensures the spontaneous formation of finely dispersed, stable oil-in-water emulsions (o/w). This allows in

general a reduction of the total emulsifier content which is necessary for the fluid emulsification.

Since BREAK-THRU® EM V 20 is an emulsifier based on raw materials derived from vegetable oils, it exhibits benign properties and hence does not carry a risk phrase

- BREAK-THRU® EM V 20 has good toxicological and ecological properties (water hazard classification = 1)
- BREAK-THRU® EM V 20 does not require any hazardous classification in accordance with EG directives/German regulations on dangerous substances
- BREAK-THRU® EM V 20 has good dermatological properties (no skin irritation)

## PACKAGING

4 x 200 kg drums (full pallet)

1 000 kg container

## SHELF LIFE

In original closed containers BREAK-THRU® EM V 20 can be stored at temperatures below 40°C for at least 1 year.

## HAZARDOUS SUBSTANCE

Information concerning

- Classification and labelling according to regulations for transport and for dangerous substances
- Protective measures for storage and handling
- Measures in case of accidents and fire
- Toxicity and ecological effects

is given in our material safety data sheets.

## REGISTRATION LISTING SUMMARY

Per 40 CFR 180.960, BREAK-THRU® EM V 20 is exempt from the requirement of a tolerance under FFDCA section 408, if such use is in accordance with good agricultural or manufacturing practices.

The relevant components of BREAK-THRU® EM V 20 are listed/registered or exempt in the following chemical inventories:

#### Registration Listings

Registry	Status
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Canada (DSL)	Yes
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China (IECSC)	Yes
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European Union (EINECS/ELINCS)	Yes
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Japan (ENCS)	Yes
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#### Registration Listings

Registry	Status
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Korea (KECL)	Yes
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Philippines (PICCS)	Yes
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United States of America (TSCA)	Yes
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#### Disclaimer

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