Fatty acids, C16-18 and C18-unsatd., Me esters

This Product Safety Summary is intended to provide a general overview of the chemical substance in the context of ICCA Global Product Strategy. The information in the Summary is basic information and is not intended to provide emergency response, medical or treatment information.

1. Chemical Identity

Names: Fatty acids, C16-18 and C18-unsatd., Me esters

CAS number(s): 67762-38-3

EC Number: 267-015-4

Molecular formula: UVCB substance (substances of Unknown or Variable composition, Complex reaction products or Biological materials), no univocal molecular formula available

Use and Applications.

2. Use and Applications

Fatty acids, C16-18 and C18-unsatd., Me esters is a common component in gasoils and fuels. Further it is used as an intermediate in industrial settings. The chemical structure of the fatty acids, C16-18 and C18-unsatd., Me esters combines a good environmental profile, especially in terms of ready biodegradability and no harmful effects on aquatic life, with the structural features required for their uses.

3. Physical/Chemical Properties

The substance poses no dangers by its physical or chemical properties.

Property	Value
Physical state	Liquid, oil at 20 °C
Density	0,8881 g/m³ at 20 °C
Melting point	6,29 °C at 1013 hPa (range from -16,92 °C to 15,59 °C)
Boiling point	354,3 °C
Flash point	173 °C +/-1 °C
Flammability	Non flammable
Explosive properties	Non explosive

Property	Value
Self-ignition temperature	261 °C
Vapor pressure	420 Pa, at 25 °C 360 Pa at 20 °C
Water solubility	<0,023 mg/l
Molecular weight	ca. 296
Octanol/water partition coefficient (log Kow)	6,2 at 25 °C

4. Human Health Safety Assessment

The substance poses no dangers by its physical or chemical properties. Extensive testing showed no adverse health effects.

Effect Assessment	Result
Acute Toxicity oral/ dermal	Based on the available data not considered to be acutely toxic when swallowed or in contact with skin
Irritation skin/ eye	Based on the available data not considered to irritate skin or eye
Sensitization	Based on the available data not considered to cause allergic skin reaction
Toxicity after repeated exposure	Based on the available data not considered to cause damage to organs through prolonged or repeated oral exposure
Mutagenicity	Based on the available data not considered to cause genetic defects
Carcinogenicity	Based on the available data not considered to cause cancer
Toxicity for reproduction	Based on the available data not considered to damage fertility or the unborn child

Risk Assessment

Based on the health assessment fatty acids, C16-18 and C18-unsatd., Me esters does not give rise to any particular concern thus exposure is considered to be without risk. Nevertheless worker should conduct standard safety measures and refer to Safety Data Sheets for further detail. Consumer should always read product information before use and follow the label / use instructions.

5. Environmental Safety Assessment

Extensive aquatic toxicity and environmental fate testing showed that, C16-18 and C18-unsatd., Me esters does not have to be considered as harmful for the environment, since the concentrations of the substance present in the environment are considered to be negligible, due to its ready biodegradability and an its expected low accumulation potential in the food chain.

Effect Assessment	Result
Aquatic Toxicity	Based on available data not classified as harmful for the environment
Biodegradation	Readily biodegradable
PBT / vPvB conclusion	Not persistent in the environment, not bioaccumulating in organisms and not toxic (PBT) nor very persistent and very bioaccumulating (vPvB)

Risk Assessment

Releases into the environment from different uses as mentioned above may occur. As demonstrated in the hazard assessment fatty acids, C16-18 and C18-unsatd., Me esters is considered to be readily biodegradable and is therefore removed from waste water during waste water treatment processes. Remaining insignificant amounts reaching surface waters are rapidly removed by biological degradation processes. Hence exposure of aquatic organisms for a prolonged time period can be excluded. Even in the case of accidents or spills the substance does not pose a risk for the environment since it does not cause acute or chronic adverse effects in aquatic organisms up to its water solubility. Finally, the substance is not expected to accumulate in the food chain. Consequently, all identified uses of the substance are considered to be safe for the environment.

6. Exposure

Consumer

Fatty acids, C16-18 and C18-unsatd., Me esters is found in gasoils and fuels. Further it is used as intermediate in industrial settings. In this case the general public does not get in contact with fatty acids, C16-18 and C18-unsatd., Me esters because in it is used to produce another substance/product. Exposure can occur either in a fatty acids, C16-18 and C18-unsatd., Me esters manufacturing facility or in industrial facilities that use fatty acids, C16-18 and C18-unsatd., Me esters. Those working with fatty acids, C16-18 and C18-unsatd., Me esters in industrial operations

could be exposed during maintenance, sampling, testing, or other procedures. The general public may come in contact with fatty acids, C16-18 and C18-unsatd., Me esters contained in gasoils or fuels. The main exposure routes are via skin contact or after swallowing accidentally. Exposure through inhalation is not likely since fatty acids, C16-18 and C18-unsatd., Me esters have a very low vapor pressure and are therefore not fugacious.

Environment

Fatty acids, C16-18 and C18-unsatd., Me esters has to be considered as a substance that is omnipresent due to its uses by the general public and its industrial uses. Release into the environment can happen at any time from production site to consumer home.

Fatty acids, C16-18 and C18-unsatd., Me esters is used as a component in gasoils and fuels which are consumed during use. Hence, a release into the environment may occur during preparation, handling and storage of formulated products only. In industrial settings releases to the environment are highly controlled. In case the substance is released into the environment during consumer uses it might either enter municipal sewage treatment plants or surface waters. In sewage treatment plants Fatty acids, C16-18 and C18-unsatd., Me esters is nearly entirely removed from water during the sewage treatment processes due to its ready biodegradability. In surface waters it is also considered to be quickly removed by microorganisms.

The substance is not volatile and emission into air can be excluded.

7. Risk Management Recommendations (for manufacturing plant workers)

Hazard assessment showed no adverse effects to the human health or the environment. As a consequence there is no need to further recommend specific operational conditions and further risk management measures for the manufacture and identified uses of the substance are not required.

Nevertheless, workers should always refer to the corresponding Safety Data Sheet before handling any substance.

When using chemicals make sure that there is adequate ventilation. Always use 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 the substance gets into your eyes, rinse eyes thoroughly for at least 15 minutes with tap water and seek medical attention.

All effluent releases that may contain the substance must be directed to a (municipal) waste water treatment plant that removes the substance from the final releases to the receiving water. Releases to air are not expected and therefore no specific recommendations are required.

8. EU REACH Status

This substance has been registered under the European REACH Regulation EC/1907/2006.

9. Classification and Labeling

Under GHS substances are classified according to their physical, health, and environmental hazards. The hazards are communicated via specific labels and the (M)SDS. GHS attempts to standardize hazard communication so that the intended audience (workers, consumers, transport workers, and emergency responders) can better understand the hazards of the chemicals in use.

Labeling according to EU GHS/ CLP

UN GHS is the basis for country specific GHS labeling.

This GPS Safety Summary implements the legal obligations for classification, labeling and packaging (CLP, EU GHS) as laid down in the EU directive 1272/2008 and its amendments as in force at time of compilation. This is an adaptation of the general UN GHS implementation which may be adapted to country specific demands. Hence the classification presented in this document may differ from classifications applied in non EU countries.

Based on the above information classification is not required for Fatty acids, C16-18 and C18-unsatd., Me esters.

10. Conclusion

As a result of the hazard assessment and PBT/ vPvB assessment it is found that Fatty acids, C16-18 and C18-unsatd., Me esters does not meet the criteria for classification as hazardous (according to Regulation (EC) 1272/2008/) nor is it considered to be a PBT/ vPvB.

It was demonstrated that the substance does not pose any unacceptable risks to the environment since the majority of the substance is consumed during its use as a fuel or fuel additive, the substance is readily biodegradable, not bioaccumulating and of very low toxicity in aquatic life. Furthermore, based on its low toxicity concerning human health a risk to the general public or worker is not anticipated.

11. Contact Information

For further information on this substance or product safety summaries in general, please contact us via email at reachpgc.im@pg.com or visit our website at

http://www.pgproductsafety.com/productsafety/icca-gps.shtml

Additional information on the ICCA global product strategy can be found here: http://www.icca-chem.org/en/Home/ICCA-initiatives/global-product-strategy/

12. Date of Issue

Date of issue: 30/03/2012

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13. Disclaimer

The information contained in this Safety Summary is provided in utmost good faith and has been based on the best information currently available (i.e. the EU REACH Registration dossier). All endpoint data presented in this paper refer to the active ingredient (i.e. concentrated/undiluted substance), unless otherwise noted. This document is NOT intended to be comprehensive or to replace information found in the corresponding Material Safety Data Sheet (SDS). When handling the material in plants, SDS should be used and not this summary. This document may be subject to additional legal terms and conditions set out in the internet disclaimer, http://www.pg.com/en_US/terms_conditions/index.shtml.