

# TOPKLEAN™ MC 1153



## FEATURES

Used for the mechanic and micro-mechanic industry, **TOPKLEAN™ MC 1153** is formulated for warm cleaning applications. It is a colourless product consisting of aliphatic hydrocarbons with a slight odour, a high flash point and a non-film forming rust inhibitor.

Its boiling range provides a particular adaptation for applications in vacuum degreasing machines in order to replace the chlorinated solvents.

Its flash point (class AIII) allows its use as co-solvent degreaser in vapour phase machines in association with INVENTEC's products, NOVEC™ from 3M™ or PROMOSOLV™.



## SPECIFICATIONS

CHARACTERISTICS	Units	Methods	Values
Aspect		visual	Colourless
Density (at 20°C)	kg/m <sup>3</sup>	ASTM D4052	777
Viscosity (at 25°C)	mm <sup>2</sup> /s	ASTM D445	1.65

## CHARACTERISTICS

TYPÈS	Units	Methods	Values
Molecular weight	g/mole	calculated	160
Flash point (PMCC)	°C	ASTM D93	64
Refraction index (at 20°C)		ASTM D1218	1.434
Vapour pressure (at 20°C / 50°C)	hPa	no standard method	0.6/5
Surface tension (at 20°C)	mN/m	ASTM D971	25
Latent heat of vaporization at boiling point	kJ/kg	calculated	330
Heat conductivity (at 20°C)	W/m.K	calculated	0.14
Specific heat (at 20°C/50°C)	kJ/kg.K	calculated	2.0/2.1
Distillation interval	°C	ASTM D1078	184-198
Relative evaporation speed	nBuAc=1	ASTM D3539	0.07
Dielectric rigidity	kV/cm	DIN/VDE 0370/5	200
Miscibility in water			not miscible

## PACKAGING TYPE

Packaging types of 21 l and drums of 200 l available.

## STORAGE & VALIDITY

Keep all products in closed packaging.

Shelf life : 18 months.

## PROCESS PARAMETERS

**TOPKLEAN™ MC 1153** is used neat and applied either by brush or in vacuum machines for cleaning.

**TOPKLEAN™ MC 1153** is exempt of chlorine or halogenated solvents. All appropriated security measures regarding fire and explosion risks must be taken.

**TOPKLEAN™ MC 1153** is compatible with all metals, alloys and also with glass and ceramic. It has no harmful effects on most of plastics and elastomers. It does not damage painted surfaces and is suitable to simultaneously clean different materials

**TOPKLEAN™ MC 1153** can be used with ultrasonics and filtered until 1 micron. The product can generally be recycled in vacuum equipments. For industrial cleaning operations requiring high temperatures (max 50°C) related to the nature of contamination, **TOPKLEAN™ MC 1153** can be used successfully in association with special cleaning process, such as "two phase multi-steps process" that INVENTEC has created. Some standard equipments or some equipments customized by known manufacturers recommending TOPKLEAN™ MC 1007, are available for this process with INVENTEC's products, NOVEC™ or PROMOSOLV™.

Systematic tests and experiment show that cleaning performances are at least as good that the replaced products. Drying can be improved with **clean compressed air**, **warm air** or by using **INVENTEC's** products, **NOVEC™** or **PROMOSOLV™**.

## HSE

CHARACTERISTICS	Units	Methods	Values
WATER :			
pH			7,4
Hydrocarbon residues	mg/l	DIN 38409 T.18	4,8
Chemical request of oxygen	mg/l	DIN 38409 T.41	15
Biological request of oxygen	mg/l	DEV H 5a2	6
Electric conductivity	µS/cm	No standard method	200
Air			
Class		TA-Luft Germany	3
Emission of m2 bath at (20°C/50°C)	g/h.m <sup>2</sup>	Calculated	10/65
Ozone depletion potential	ODP		0
Global warming potential	GWP		N/A
<b>Toxicity</b>			
Exposure average : 8h	TLV ppm		> 500
VOC			YES

- R phrases** :
- R 65** : Harmful: May cause lung damage if swallowed.
  - R 66** : Repeated exposure may cause skin dryness or cracking.
- S phrases** :
- S 23** : Do not breathe vapour, fumes and spray.
  - S 24** : Avoid contact with skin.
  - S 62** : If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.

After use, **TOPKLEAN™ MC 1153** can be easily recovered and recycled or eliminated as entire contaminated oils by our company or some external companies. For further information, please contact our company.

Before using **TOPKLEAN™ MC 1153**, refer to the Safety Data Sheet. All appropriated security measures regarding fire and explosion risks must be taken. During handling or exposition to the product, the individual protection recommended by the Safety Data Sheet must be granted. The typical figures used here above can be changed without notice.

**TOPKLEAN™ MC 1153** has a very low impact on environment and generates low emissions at use temperature. It has no ozone depletion potential.

This is a sum up of **TOPKLEAN™ MC 1153** impact on environment. For further information, please refer to the Safety Data Sheet.

- Neutralization and titration information available upon request.

*This data is based on information that the manufacturer believe to be reliable and offered in good faith. In no event will INVENTEC be responsible for special, incidental and consequential damages. The user is responsible to the Administrative Authorities (regulations for the protection of the Environment) for the conformity of his installation.*

FPW SV 10401 002 - 11/05/2010