VeryOne® Cetane Improver

2-EHN
VeryOne® Cetane Improver
(2-ETHYLHEXYL NITRATE)

SYNONYMS
- Nitric acid, 2-ethylhexyl ester (EINECS Name)
- 2-Ethylhexyl Nitrate (2EHN) (IUPAC name)

ASPECT
Colourless clear liquid. Pungent, fatty, fruity ester odour.

USES
Cetane improver (Fuel additive)

TRANSPORT
Refer to corresponding Safety Data Sheet

PHYSICAL PROPERTIES
Boiling point:
- Decomposition before boiling
- Decomposition Temperature:
  - DSC thermal analysis (6°C/mn):
    - Start: 160°C
    - ONSET: 184°C
    - T° max: 210°C
    - Δ H: 1210 J/g
  - RSST (Thermal runaway temperature): 130°C
  - Vapour pressure: 4.0-5.3 Pa at 10°C
  - 27 Pa at 20°C
  - 40-53 Pa at 40°C
  - Solubility:
    - In water: 12.6 mg/l at 20°C
    - In hydrocarbons, methanol and typical chlorinated solvents.

STORAGE
- Store in a ventilated area in tightly closed containers equipped with means of preventing the product from reaching 100°C
- Maximal recommended handling temperature: 60°C
- Maximal recommended storage temperature: 40°C
- Shelf life: 2 years

TECHNICAL DATA SHEET n° E 389 V-5

VeryOne® Cetane Improver (2-ETHYLHEXYL NITRATE)

H₃C—CH₂—CH—CH₂—O—NO₂

(CH₃)₃

CH₃

Molecular formula : C₈H₁₇NO₃
Molecular weight : 175.23
CAS Nr : 27247-96-7
EINECS Nr : 248-363-6

Parameter Guaranteed value Method
Aspect Clear liquid Visual examination
Color ≤ 50 APHA Coloration (APHA)(1)
Purity ≥ 99.5 % Gas chromatography
Alcohol content ≤ 0.5 % Gas chromatography
Water ≤ 400 ppm Karl Fischer
Mineral Acidity (HNO₃) ≤ 30 ppm Titration
Density at 15°C 0.967 ± 0.005 kg/l Digital Density Meter

Note(1): 50 APHA equivalent to 50 Hazen according to ASTM D 1209
250 APHA equivalent to 0 according to ASTM D 1500
280 APHA equivalent to 0.5 according to ASTM D 1500

FLASH POINT > 65 °C Pensky-Martens Closed Cup Tester

STANDARD PACKAGING
- Bulk
- Metal drum 200 Kg net
- Plastic IBC 975 kg net

Technical data sheet E 389 V-5 March 2018

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