REMARK

All data and values delivered show the current state of knowledge. Since the CARBOLIQ process is sensitive to changes in input material, changes can occur when the input material quality changes.

GENERAL INFORMATION	
Product trading name:	CARBOLIQ CLR
Product description according REACH PPORD:	Hydrocarbons of secondary recovered fuels origin, catalytic cracking
PPORD notification number:	04-2120781243-56-0000
EC number (PPORD):	948-684-8
Date of submission (YY-MM-DD):	18-09-04
Remarks:	

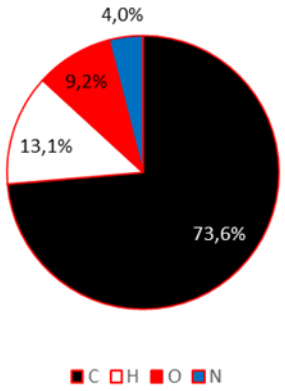
HAZARDS: SAFETY DATA

Code	Classification	Description
H225	Flam. Liq. 2	Highly flammable liquid and vapour.
H332	Acute Tox. 4	Harmful if inhaled.
H315	Skin Irrit. 2	Causes skin irritation.
H340	Muta. 1B	May cause genetic defects.
H350	Carc. 1A	May cause cancer.
H304	Asp. Tox. 1	May be fatal if swallowed and enters airways.
H373	STOT RE 2	May cause damage to organs through prolonged or repeated exposure.
H411	Aquatic Chronic 2	Toxic to aquatic life with long lasting effects.

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

INPUT MATERIAL

Parameter		Min	Max	Typical
Bulk Density	kg/m³	80	200	120
Partikel Size	mm	2	20	10
Polyethylene/PP	wt.-%	60	90	70
Polyamides	wt.-%	5	25	20
Polyethylenterephthalates	wt.-%	5	10	10
Heating Value	MJ/kg	37,5	45	38



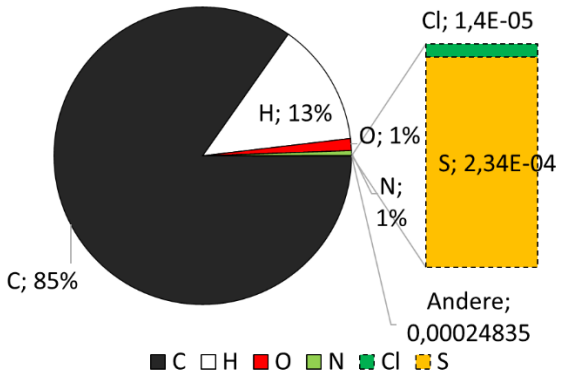
PRODUCT DEFITIONS

GENERAL PARAMETERS

Parameter		Min	Max	Typical/Expected
Density	kg/m³	810	830	825
Dynamic Viscosity	mm²/s	3,143		
Heating Value	MJ/kg	42,5	45,04	44,5
Bromine number	g Br_2/100 g	20	40	25
Acid Number	mg/L	5	15	
Pour Point	°C	< 20 °C		
Flash Point	°C	< 20 °C		
Medium Molar Mass	g/mol	261		

ELEMENTARY COMPOSITION

Parameter		Min	Max	Typical
Carbon	wt.-%	84,5	84,7	84,6
Hydrogen	wt.-%	13,3	13,5	13,4
Oxygen	wt.-%	1,2	1,5	1,3
Chlorine	ppm	5	30	15
Sulfur	ppm	173	264	250
Nitrogen	ppm	4500	6500	5000



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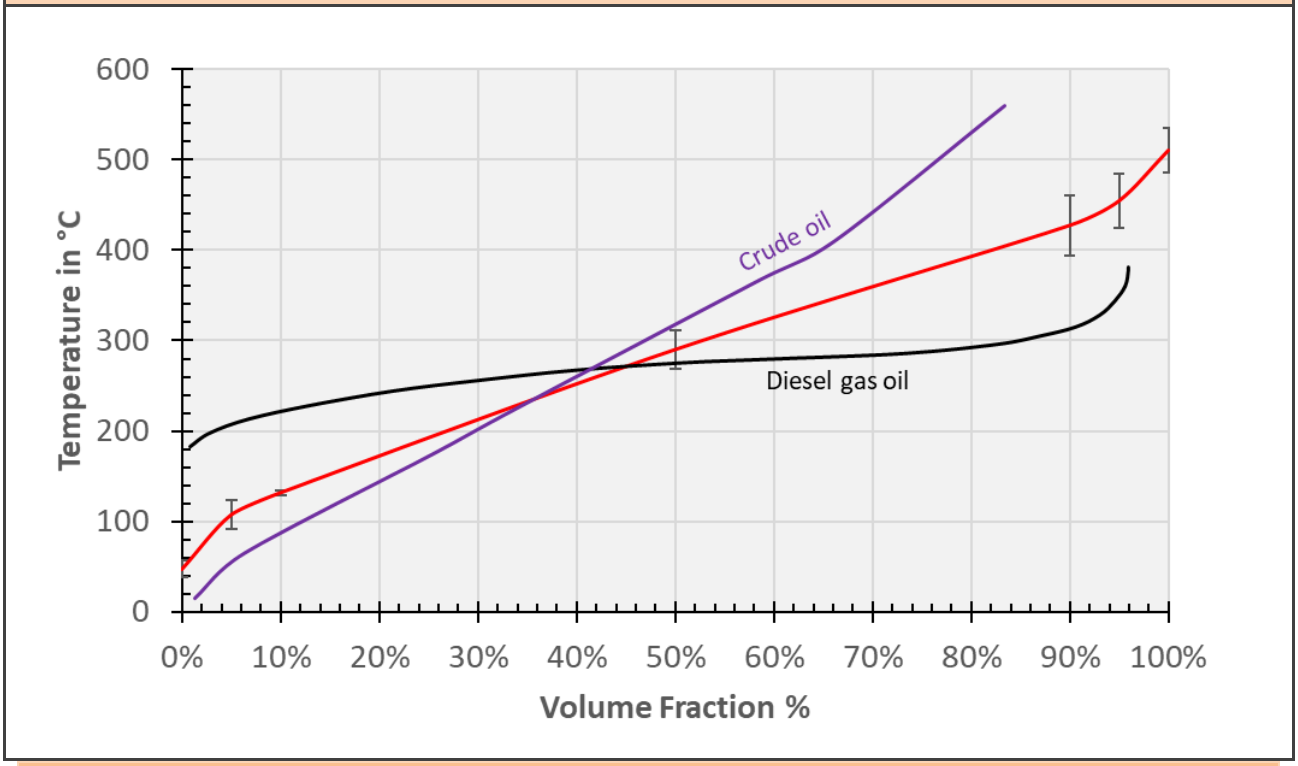
Amtsgericht Wuppertal HRB 21283 | UST-IDNR.: DE 115 382 325 | St-Nr.: 126/5732/1287 | www.carboliq.com

TYPICAL DISTILLATION CURVE



PIONA (DETAILED HYDROCARBON ANALYSIS)

	P	I	O	N	A
	26%	23%	30%	6%	8%
C6	0,0%	0,0%	0,0%	0,0%	1,0%
C7	0,0%	0,0%	0,4%	0,5%	1,1%
C8	0,7%	0,8%	1,7%	0,5%	1,1%
C9	0,9%	1,2%	4,5%	0,7%	0,9%
C10	0,8%	0,8%	1,8%	0,5%	0,7%
C11	1,1%	1,8%	2,0%	0,4%	0,7%
C12	1,2%	1,2%	2,9%	0,5%	0,8%
C13	1,3%	0,9%	1,8%	0,4%	0,5%
C14	1,3%	2,5%	1,5%	0,3%	0,4%
C15	1,4%	1,2%	1,9%	0,2%	0,3%
C16	1,4%	0,7%	1,7%	0,2%	0,2%
C17	1,4%	1,8%	1,0%	0,1%	0,1%
C18	1,4%	1,0%	1,3%	0,1%	0,1%
C19	1,3%	0,8%	0,9%	0,1%	0,1%
C20	1,3%	1,7%	1,0%	0,1%	0,1%
C21	1,1%	0,6%	0,8%	0,1%	0,1%
C22	1,2%	1,1%	0,7%	0,2%	0,0%
C23	1,1%	0,5%	0,6%	0,1%	0,0%
C24	1,3%	1,3%	0,5%	0,1%	0,0%
C25	1,1%	0,5%	0,5%	0,2%	0,0%
C26	0,7%	0,8%	0,5%	0,1%	
C27	0,9%	0,5%	0,2%	0,0%	
C28	0,7%	0,4%	0,5%	0,0%	
C29	0,6%	0,4%	0,4%	0,0%	
C30	0,5%	0,3%	0,2%	0,0%	
C30+	1,4%	0,7%	0,4%	0,0%	

Single compound	
Benzophenon	<0.01%
Caprolactam	1,40%
Benzoeacid	0,29%
More substance classes	
Aldehyde/Ketone	0,02%
Cycloalkyl-Ketone	0,29%
Benzonitrile	1,59%
Benzoeacidester	1,03%
Benzaldehyde	0,07%
Benzamide	0,02%
Pyridine	0,02%
Phenone	0,21%
Sum	4,93%