

*Idemitsu Alpha Olefin
“Linealene”*

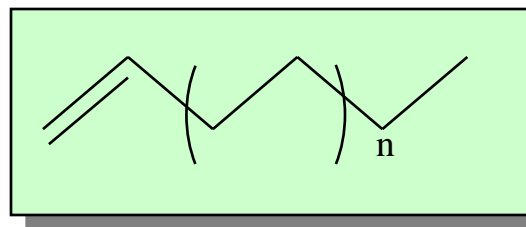
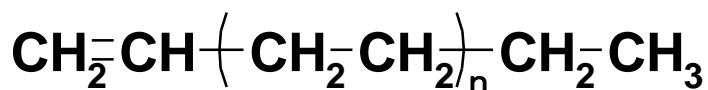
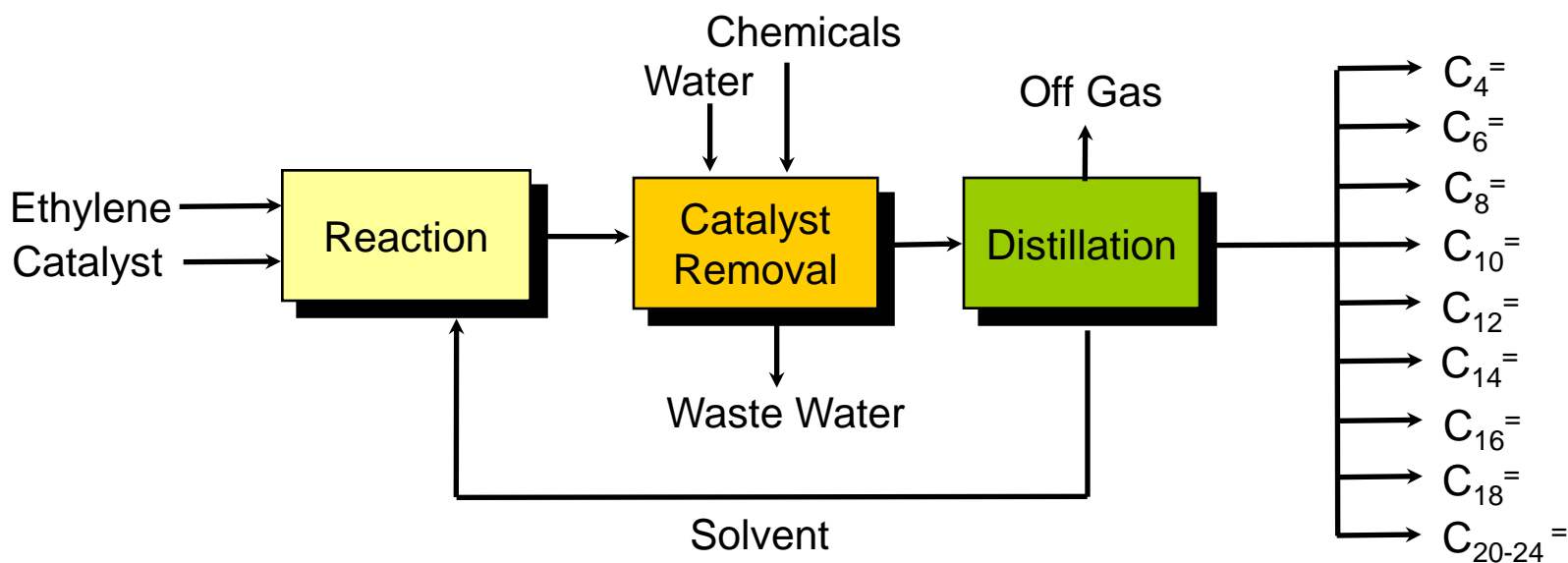
**IDEMITSU KOSAN Co. , Ltd
Performance Chemicals Dept.**



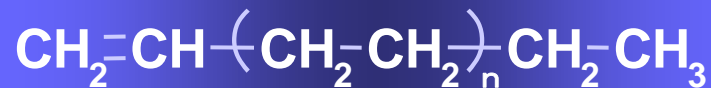
Experiences of Alpha Olefin Production

- Process Development : since 1984 (Start by 50kta)
- Commercial Operation : since 1989
- Production Capacity : 58,000 MT/Y(Expanded '99)
(1 Train in Chiba, Japan)
- Products : 1-C₄=, 1-C₆=, 1-C₈=, 1-C₁₀=, 1-C₁₂=,
1-C₁₄=, 1C₁₆=, 1-C₁₈= and C₂₀₋₂₄=
- Characteristics : 1) Idemitsu own technology
2) High Linearity
3) Narrower Fractions Product
4) More Alpha double bonds

Process Block Flow Diagram



Idemitsu α -Olefin



Advantage

- Own Development Process
- High purity α -Olefin

- Double bond at molecular end
Derivative with functional groups
(Alkylation, addition, Oxidation, etc.)
- Liner Chain
Easy for biological decomposition
- Long Chain
Addition of Flexibility, water-repellent, etc.

Carbon No.		4	6	8	10	12	14	16	18	20-24
Chemical Name		1-Butene	1-Hexene	1-Octene	1-Decene	1-Dodecene	1-Tetradecene	1-Hexadecene	1-Octadecene	Mixture
n- α Olefin	%	99.5<	97.5<	96.5<	96.0<	95.0<	93.5<	91.4<	89.0<	Waxy Solid
B.P.	°C		63.5	122.5	174.3	215.8	254.8	289.0	319.2	
M.P.	°C		-140.0	-102.0	-66.3	-35.2	-13.0	4.1	17.6	
Vis.	20°C	Vapor	0.414	0.618	1.100	1.74	2.64	3.89	5.53	
	50°C		0.329	0.511	0.769	1.13	1.60	2.20	2.92	
F.P.	°C		-26	10	45	87	113	135	159	195

- Co-monomer of Polyolefin
- Lubricant. Oil
- Surfactant, Lubricants, Thermal Storage

Main Application

Polyethylene Pellet

Engine Oil

Detergent

Applications

C4,C6,C8 :L-LDPE comonomer

C10 :PAO

C12 :PAO

:LAB, Alcohol

C14-18 :AOS

:Lubricant

:Drilling Oil

:ASA

C20-24 :Lubricant additives

- Niche Application

C12~C20-24 : Lubricant Additives

(Grease/Sulfurized AO/Alkyl Salicylates)

C6~C12 : Silicone

C8~C18 : Epoxides

C12~C14 : Metalworking Fluids

C16~C18 : Alkenyl Succinic Anhydride

etc....

- Data in this Catalogue shows sample figures measured under certain specific conditions.
- Usage of products in this Catalogue does not warrant the successful results of applications of the product for specific usage.
- In case of product being used for purpose and usage introduced in this Catalogue, please pay attention to industrial property rights of third party which may relate to such use.