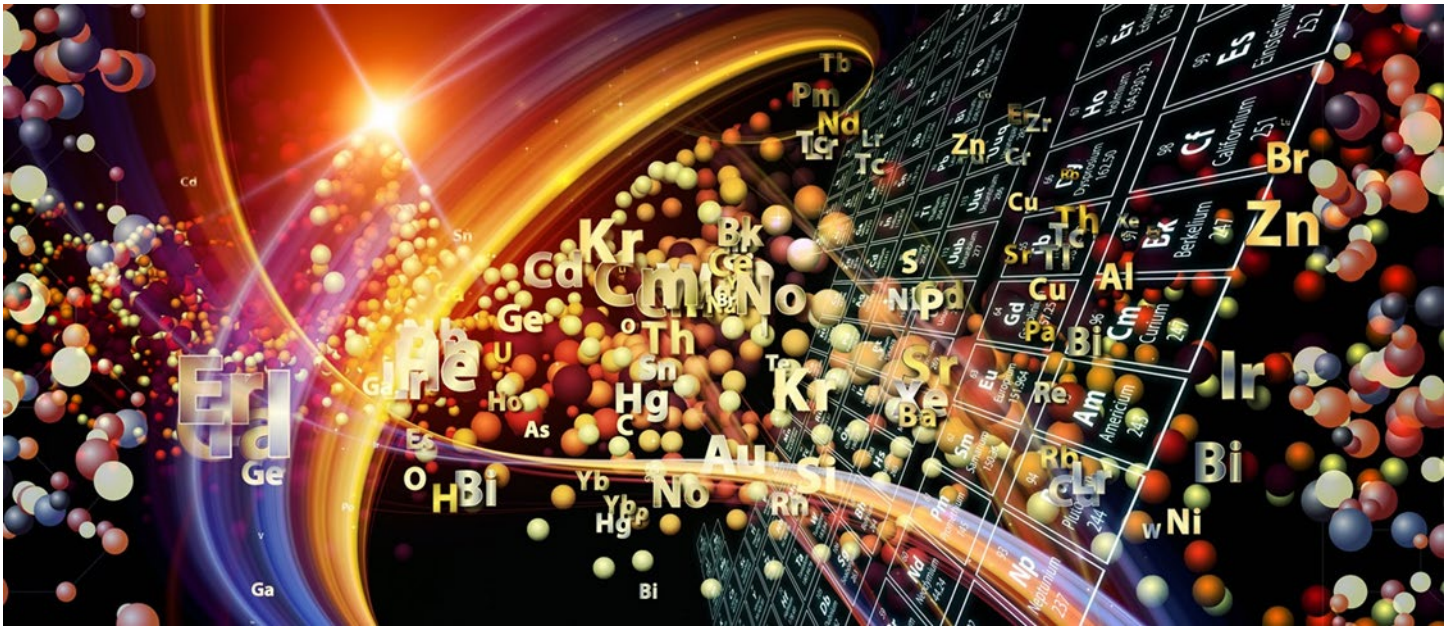

OLI Software Release Notes V12.x

Jim Berthold

6/4/24

Contents

Introduction

Each version will be listed in reverse chronological order. Within each version update to the products will be listed in this order:

- Databank updates
- Databank fixes
- Engine/solver
- OLI Studio/Analyzer
- OLI Flowsheet: ESP
- OLI Chemistry Wizard
- OLI Developer Edition
- OLI Alliance products
    - Aspen Hysys
    - Aspen Plus
    - gProms
    - IDEAS
    - Petro-Sim
    - ProII
    - Unisim Design
- OLI Security/License Manager

Version 12.0.1.11

General Information

Version 12 of the OLI Software was officially released on May 29, 2024

Product	Release Date
OLI Studio/Analyzer (x64)	May 29, 2024
OLI Flowsheet: ESP / ESP FS[1] (x64)	May 29, 2024
Chemistry Wizard	May 29, 2024
OLI Developer Edition (x64)	May 29, 2024
OLI Engine 12.0.1.11 for Aspen Hysys (x64 bit)	May 29, 2024
OLI Engine 12.0.1.11 for Aspen Plus (x64 bit)	May 29, 2024
OLI Engine 12.0.1.11 for Petro-Sim (x64 bit)	May 29, 2024
OLI Engine 12.0.1.11 for ProII (x64)	May 29, 2024
OLI Engine 12.0.1.11 for Unisim Design	May 29, 2024
OLI License Manager[2] (x64 bit)	May 29, 2024

[1] The product ESP FS is for Asia releases. It is functionally identical to OLI Flowsheet: ESP.

[2] This product does not follow the same versioning scheme as the other products. The current version is 5.5.0.10

Databank Updates

Mixed-solvent electrolyte (MSE) databank thermophysical properties

Complexes between Fe and organic species

Fe (II, III) – acetate
Fe (II, III) – diethylenetriamine
Fe (II, III) – ethylenediamine
Fe (II, III) – glycine
Fe (II, III) – pyrozole
Fe (II, III) – catechol
Fe (II, III) – gallic acid
Fe (II, III) – humic acid
Fe (II, III) – phenol

Butyric acid revision, including Ca and K butyrate and butyric + propionic acids

Butyric acid – H_2O (revised)
Butyric acid – propionic acid – H_2O (revised)
Calcium butanoate – H_2O (revised)
Potassium butanoate – H_2O (revised)

NH_3 + K_2CO_3 + MDEA and related systems

NH_3 – K_2CO_3 – H_2O (revised)
NH_3 – K_2CO_3 – $(NH_4)_2CO_3$ – H_2O (revised)
MDEA – K_2CO_3 – H_2O
MDEA – NH_3 – K_2CO_3 – H_2O
MDEA – CO_2 – K_2CO_3 – H_2O
MDEA – K_2CO_3 – CO_2 – NH_3 – H_2O
MDEA – NH_3 – H_2O
MDEA – CO_2 – NH_3 – H_2O
MDEA – NH_4HCO_3 – H_2O
MDEA – NH_3 – NH_4HCO_3 – H_2O

Piperazine + CO_2 +H_2S +H_2O + MDEA

Piperazine – H_2O
Piperazine – CO_2 – H_2O
Piperazine – MDEA – H_2O
Piperazine – CO_2 – MDEA – H_2O
Piperazine – H_2S – H_2O
Piperazine – H_2S – MDEA – H_2O

Revision of properties of selenium species: Se^0 and SeO_4^{2-}

Se – NaCl – H_2O

Crystalline calcium silicates moved from CRMSE databank to GEMSE

Afwillite, $Ca_3Si_2O_4(OH)_6$
Foshagite, $Ca_4Si_3O_9(OH)_2.0.5H_2O$
Gyrolite, $Ca_2Si_3O_7(OH)_2.1.5H_2O$
Hatrurite, Ca_3SiO_5
Hillebrandite, $Ca_2SiO_3(OH)_2.0.17H_2O$
Okenite, $CaSi_2O_4(OH)_2.H_2O$
Rankinite, $Ca_3Si_2O_7$
Tobermorite11A, $Ca_5Si_6H_{11}O_{22.5}$
Tobermorite14A, $Ca_5Si_6H_{21}O_{27.5}$
Tobermorite9A, $Ca_5Si_6H_6O_{20}$
Xonotlite, $Ca_6Si_6O_{17}(OH)_2$

Clinochrysotile, $Mg_3Si_2O_5(OH)_4$

Cobalt chemistry: $CoSO_4$ $(NH_4)_2SO_4$, $Ni_{0.78}Co_{0.22}(NH_4)_2(SO_4)_2$, Co-$NH_3$ complexes

$(NH_4)_2SO_4$ – $CoSO_4$ – H_2O
$CoSO_4(NH_4)_2SO_4$ – H_2O
$NiSO_4(NH_4)_2SO_4$ – $CoSO_4(NH_4)_2SO_4$ – H_2O
System where $Ni_{0.78}Co_{0.22}(SO_4)_2(NH_4)_2 \cdot 6H_2O$ precipitates

$MnSO_4$ + $(NH_4)_2SO_4$ + H_2O

$MnSO_4$ – $(NH_4)_2SO_4$ – H_2O

Nd citrate entropy and Cp: correction

Al phosphates

$AlPO_4$ – H_3PO_4 – H_2O
Al_2O_3 – P_2O_5 – H_2O

NH_4 phosphates

$NH_4H_2HPO_4$ – NH_3 – H_3PO_4 – H_2O
$(NH_4)_2HPO_4$ – NH_3 – H_3PO_4 – H_2O
$(NH_4)_2HPO_4 \cdot 2H_2O$– NH_3 – H_3PO_4 – H_2O
$(NH_4)_3PO_4 \cdot 3H_2O$– NH_3 – H_3PO_4 – H_2O

Mn phosphates

MnO – P_2O_5 – H_2O
$Mn_3(PO_4)_2$ – H_3PO_4 – H_2O

Fe phosphates

$FePO_4$ – H_2O
$FePO_4$ – H_3PO_4 – H_2O

Zn phosphates

$Zn_3(PO_4)_2$ – H_3PO_4 – H2O

Na_2HPO_4 + $NaNO_3$ + H_2O

Na_2HPO_4 – $NaNO_3$ – H_2O

H_3BO_3 + sulfates (Na, K, Li, Mg, Ca)

H_3BO_3 – Na_2SO_4 – H_2O
H_3BO_3 – K_2SO_4 – H_2O
H_3BO_3 – Li_2SO_4 – H_2O
H_3BO_3 – $MgSO_4$ – H_2O
H_3BO_3 – $CaSO_4$ – H_2O
HBO_2 (aq, vap) removed – only HBO_2(s) remains

Rare earth element hydroxycarbonates, carbonates and REE fluorocarbonates

$YOHCO_3$ – (CO_2) – H_2O
$LaOHCO_3$ – (CO_2) – H_2O
$CeOHCO_3$ – (CO_2) – H_2O
$PrOHCO_3$ – (CO_2) – H_2O
$NdOHCO_3$ – (CO_2) – H_2O
$SmOHCO_3$ – (CO_2) – H_2O
$EuOHCO_3$ – (CO_2) – H_2O

$GdOHCO_3 – (CO_2) – H_2O$
$TbOHCO_3 – (CO_2) – H_2O$
$DyOHCO_3 – (CO_2) – H_2O$
$HoOHCO_3 – (CO_2) – H_2O$
$ErOHCO_3 – (CO_2) – H_2O$
$TmOHCO_3 – (CO_2) – H_2O$
$YbOHCO_3 – (CO_2) – H_2O$
$LuOHCO_3 – (CO_2) – H_2O$

$Y_2(CO_3)_3 – H_2O$
$La_2(CO_3)_3 – H_2O$
$Ce_2(CO_3)_3 – H_2O$
$Pr_2(CO_3)_3 – H_2O$
$Nd_2(CO_3)_3 – H_2O$
$Sm_2(CO_3)_3 – H_2O$
$Eu_2(CO_3)_3 – H_2O$
$Gd_2(CO_3)_3 – H_2O$
$Tb_2(CO_3)_3 – H_2O$
$Dy_2(CO_3)_3 – H_2O$
$Ho_2(CO_3)_3 – H_2O$
$Er_2(CO_3)_3 – H_2O$
$Tm_2(CO_3)_3 – H_2O$
$Yb_2(CO_3)_3 – H_2O$
$Lu_2(CO_3)_3 – H_2O$

$YFCO_3 – H_2O$
$LaFCO_3 – H_2O$
$CeFCO_3 – H_2O$
$PrFCO_3 – H_2O$
$NdFCO_3 – H_2O$
$SmFCO_3 – H_2O$
$EuFCO_3 – H_2O$
$GdFCO_3 – H_2O$
$TbFCO_3 – H_2O$
$DyFCO_3 – H_2O$
$HoFCO_3 – H_2O$
$ErFCO_3 – H_2O$
$TmFCO_3 – H_2O$
$YbFCO_3 – H_2O$
$LuFCO_3 – H_2O$

Rare earth element oxyfluorides and oxychlorides

$YOCl – H_2O$
$LaOCl – H_2O$
$CeOCl – H_2O$
$PrOCl – H_2O$
$NdOCl – H_2O$
$SmOCl – H_2O$
$EuOCl – H_2O$
$GdOCl – H_2O$
$TbOCl – H_2O$
$DyOCl – H_2O$
$HoOCl – H_2O$
$ErOCl – H_2O$
$TmOCl – H_2O$
$YbOCl – H_2O$
$LuOCl – H_2O$

$YOF – H_2O$
$LaOF – H_2O$
$CeOF – H_2O$
$PrOF – H_2O$
$NdOF – H_2O$
$SmOF – H_2O$
$EuOF – H_2O$
$GdOF – H_2O$
$TbOF – H_2O$
$DyOF – H_2O$
$HoOF – H_2O$
$ErOF – H_2O$
$TmOF – H_2O$
$YbOF – H_2O$
$LuOF – H_2O$

Crystalline rare earth hydroxides moved from MSEPUB to GEMSE and CRMSE

$Y(OH)_3cr$
$La(OH)_3cr$
$Ce(OH)_3cr$
$Pr(OH)_3cr$
$Nd(OH)_3cr$
$Sm(OH)_3cr$
$Eu(OH)_3cr$
$Gd(OH)_3cr$
$Tb(OH)_3cr$
$Dy(OH)_3cr$
$Ho(OH)_3cr$
$Er(OH)_3cr$
$Tm(OH)_3cr$
$Yb(OH)_3cr$
$Lu(OH)_3cr$

Lithium chemistry ($Li + Na + K + Cl + SO_4 + H_2O$) (revision)

$Na_2SO_4 – Li_2SO_4 – H_2O$
$NaCl – LiCl – H_2O$
$Li_2SO_4 – Na_2SO_4 – K_2SO_4 – H_2O$
$LiNO_3 – KNO_3 – H_2O$
$Li_2SO_4 – K_2SO_4 – H_2O$
$LiCl – KCl – H_2O$
$Li_2SO_4 – H_2O$ density
$Li_2SO_4 – LiCl – H_2O$
$Li_2SO_4 – K_2SO_4 – H_2O$
$Li_2SO_4 – MgSO_4 – H_2O$
Li_2SO_4 (LiCl) – $CaSO_4(CaCl_2) – H_2O$
$Li_2SO_4 – MnSO_4 – H_2O$
$Li_2SO_4 – CoSO_4 – H_2O$
$Li_2SO_4 – (NH_4)_2SO_4 – H_2O$
$Li_2SO_4 – NiSO_4 – H_2O$

Co hydrolyzed species – conventional and non-conventional species

$Co(OH)_2 – H_2O$
$Co(OH)_2 – NaOH(KOH) – H_2O$
$Co(OH)_2 – HCl – H_2O$

$EuO + H_2O$

EuO – NaOH – H_2O

$LiBF_4$ + organic carbonates

$LiBF_4$ – Dimethyl carbonate (Lithium tetrafluoroborate hemidimethyl carbonate, Lithium tetrafluoroborate dimethyl carbonate)

Co and Ni solvent extraction chemistry

CYANEX272 – H_2O
CYANEX301 – H_2O
DEHPA – H_2O
PC88A – H_2O
VERSATIC10 – H_2O
Co and Ni extraction using CYANEX272 extractant and isooctane as solvent
Co and Ni extraction using CYANEX272 extractant and high boiling kerosene (KEROSENE) as solvent
Co and Ni extraction using CYANEX272 extractant and low boiling kerosene (KEROSENUN) as solvent in the presence of Tributyl phosphate (TRIBUTPHOS)
Co and Ni extraction using CYANEX272 extractant and Toluene as solvent
Co extraction using CYANEX272 extractant and n-Heptane as solvent
Co extraction using PC88A extractant and n-Heptane as solvent
Co and Ni extraction using D2EHPA extractant and low boiling kerosene (KEROSENUN) as solvent in the presence of Tributyl phosphate (TRIBUTPHOS)
Li and Co extraction using D2EHPA extractant and high boiling kerosene (KEROSENE) as solvent
Li, Co, and Ni extraction using PC88A extractant and high boiling kerosene (KEROSENE) as solvent
Li, Co, and Ni extraction using PC88A extractant and low boiling kerosene (KEROSENUN) as solvent
Li, Co, and Ni extraction using PC88A extractant and low boiling kerosene (KEROSENUN) as solvent in the presence of Tributyl phosphate (TRIBUTPHOS)

$MnCO_3$ and $Mn(ClO_4)_2$ systems

$MnCO_3$ – NaCl – $NaClO_4$ – Na_2CO_3 – H_2O
$MnCO_3$ – NaCl – $NaClO_4$ – HCl – H_2O

$MgCl_2$ – adding anhydrous species

$MgCl_2$ – H_2O

KOH revision + related systems

KOH – H_2O (revised)
KOH – Ag_2O – H_2O (tested)
KOH – $Be(OH)_2$ / BeO – H_2O (tested)
KOH – CH_4 – H_2O (tested)
KOH – GaOOH – H_2O including potassium gallate (tested)
KOH – H_3BO_3 – H_2O including potassium borates (tested)
KOH – Np(IV) – K_2CO_3 ($KHCO_3$) – H_2O (tested)
KOH – $PbCO_3$ – CO_2 ($KHCO_3$) – H_2O (tested)
KOH – Pu(IV) – K_2CO_3 ($KHCO_3$) – H_2O (tested)
KOH – tannic acid – H_2O (tested)
KOH – U(IV) –K_2CO_3($KHCO_3$) – H_2O (tested)
KOH – ZnO – H_2O (tested)
KOH (K_2O) – B_2O_3 – H_2O (revised)
KOH – $Zn(OH)_2$ / ZnO – H_2O (revised)

Density of $NaHCO_3$ + H_2O and $NaHCO_3$ + Na_2CO_3 + H_2O

$NaHCO_3$ – H_2O
$NaHCO_3$ – Na_2CO_3 – H_2O

KBr + H_2O

KBr – H_2O

$Ca(OH)_2$ + NaOH and LiOH + H_2O

$Ca(OH)_2$ – NaOH – H_2O
$Ca(OH)_2$ – LiOH – H_2O

Cl_2 – HCl – chloride salts

Cl_2 – HCl – H_2O
Cl_2 – NaCl – H_2O
Cl_2 – KCl – H_2O
Cl_2 – $MgCl_2$ – H_2O
Cl_2 – $CaCl_2$ – H_2O
Cl_2 – $SrCl_2$ – H_2O
Cl_2 – $BaCl_2$ – H_2O
Cl_2 – $NiCl_2$ – H_2O
Cl_2 – H_2SO_4 – H_2O

Mixed-solvent electrolyte (MSE) databank transport properties

Cl_2 (HClO) – H_2O	(revised, electrical conductivity)
LiCl – H_2O	(revised, electrical conductivity)
LiCl – H_2O	(thermal conductivity)
LiCl – H_2O	(revised, viscosity)
LiCl – methanol – H_2O	(revised, electrical conductivity)
KOH – H_2O	(revised, electrical conductivity)
KOH – H_2O	(thermal conductivity)
KOH – H_2O	(revised, viscosity)
KOH – ZnO – H_2O	(electrical conductivity)

Mixed-solvent electrolyte (MSE) databank Scaling inhibition kinetics

$SrSO_4$	(revised)
$BaSO_4$	(revised)
$CaSO_4 \cdot 2H_2O$	(revised)
$CaCO_3$ (Calcite)	(revised)
SrSO4-HEDP	(revised)
SrSO4-DTPMP	(revised)
BaSO4-HEDP	(revised)
BaSO4-NTMP	(revised)
BaSO4-DTPMP	(revised)
$CaSO_4 \cdot 2H_2O$-HEDP	(revised)
$CaSO_4 \cdot 2H_2O$-NTMP	(revised)
$CaSO_4 \cdot 2H_2O$-DTPMP	(revised)
$CaSO_4 \cdot 2H_2O$-EDTMP	
$CaSO_4 \cdot 2H_2O$-PBTC	(revised)
$CaCO_3$(Calcite)-HEDP	(revised)
$CaCO_3$(Calcite)-NTMP	(revised)
$CaCO_3$(Calcite)-DTPMP	(revised)
$CaCO_3$(Calcite)-PMLA	(revised)

HEDP: 1-hydroxyethane 1,1-diphosphonic acid
NTMP: Nitrilotris(methylenephosphoric acid)
DTPMP: Diethylenetriamine penta(methylene phosphonic acid)
EDTMP: Ethylenediamine tetra(methylene phosphonic acid)
PBTC: 2-phosphono-butane-1,2,4-tricarboxylic acid
PMLA: Poly maleic acid

MSE Corrosion: Electrochemical kinetics databank

MSE Alloy 2507

Corrosive environments:

NaCl
Seawater – O_2
$MgCl_2$ – NaCl
NaCl – O_2
H_2S – NaCl
CO_2 – NaCl
CO_2 – H_2S – NaCl
NaCl – acetic acid – H_2S – CO_2
NaOH
NaOH – NaCl
Formic acid
Acetic acid
Formic acid - acetic acid
H_2SO_4
HCl
HNO_3
H_3PO_4
HCl – H_2SO_4
HCl – HNO_3
HF
H_2SO_4 – HNO_3
HCl – H_3PO_4
HNO_3 – H_3PO_4
H_2SO_4 – HF
HF – HNO_3
HF – H_3PO_4
HCl – HF
HBr – H_3PO_4
H_2SO_4 – acetic acid
H_2SO_4 –formic acid
NaCl – acetic acid
NaCl –formic acid
$CuCl_2$
$FeCl_3$
$FeCl_3$ – $FeCl_2$ – NaCl – HCl
$CuCl_2$ – CuCl – NaCl – HCl
H_2SO_4 – $Fe_2(SO_4)_3$
H_2SO_4 – $Fe_2(SO_4)_3$ – NaCl

Repassivation potential parameters:

Cl^-
H_2S
SO_4^{2-}

NO_3^-
OH^-
VO_4^{3-}
MoO_4^{2-}
NO_2^-

MSE Alloy 2205

Corrosive environments:

NaCl
Seawater – O_2
$MgCl_2$ – NaCl
NaCl – O_2
H_2S – NaCl
CO_2 – NaCl
CO_2 – H_2S – NaCl
NaCl – acetic acid – H_2S – CO_2
NaOH
NaOH – NaCl
Formic acid
Acetic acid
Formic acid - acetic acid
H_2SO_4
HCl
HNO_3
H_3PO_4
HCl – H_2SO_4
HCl – HNO_3
HF
H_2SO_4 – HNO_3
HCl – H_3PO_4
HNO_3 – H_3PO_4
H_2SO_4 – HF
HF – HNO_3
HF – H_3PO_4
HCl – HF
HBr – H_3PO_4
H_2SO_4 – acetic acid
H_2SO_4 –formic acid
NaCl – acetic acid
NaCl –formic acid
$CuCl_2$
$FeCl_3$
$FeCl_3$ – $FeCl_2$ – NaCl – HCl
$CuCl_2$ – CuCl – NaCl – HCl
H_2SO_4 – $Fe_2(SO_4)_3$
H_2SO_4 – $Fe_2(SO_4)_3$ – NaCl

Repassivation potential parameters:

Cl^-
H_2S
SO_4^{2-}
NO_3^-
OH^-
VO_4^{3-}

MoO_4^{2-}
NO_2^-

Aqueous (AQ) thermophysical property databank

Crystalline calcium silicates moved from the CORROSION databank to GEOCHEM:

Afwillite, $Ca_3Si_2O_4(OH)_6$
Foshagite, $Ca_4Si_3O_9(OH)_2.0.5H_2O$
Gyrolite, $Ca_2Si_3O_7(OH)_2.1.5H_2O$
Hatrurite, Ca_3SiO_5
Hillebrandite, $Ca_2SiO_3(OH)_2.0.17H_2O$
Okenite, $CaSi_2O_4(OH)_2.H_2O$
Rankinite, $Ca_3Si_2O_7$
Tobermorite11A, $Ca_5Si_6H_{11}O_{22.5}$
Tobermorite14A, $Ca_5Si_6H_{21}O_{27.5}$
Tobermorite9A, $Ca_5Si_6H_6O_{20}$
Xonotlite, $Ca_6Si_6O_{17}(OH)_2$
Clinochrysotile, $Mg_3Si_2O_5(OH)_4$

AQ Corrosion: Electrochemical kinetics databank

AQ Alloy 304 – revision

Corrosive environments:

O_2
$NaCl - O_2$
Seawater $- O_2$
$MgCl_2 - O_2$
$Na_2SO_4 - O_2$
$NaCl - HF - O_2$
$HF - O_2$
$H_2O_2 - H_2 - O_2$
$H_2O_2 - H_2 - O_2 - NaCl - FeCl_3$
$Cl_2 - O_2$
$NaOH - O_2$
$LiOH - O_2$
$B(OH)_3 - O_2$

AQ Alloy 316 – revision

Corrosive environments:

NaCl
HCl
$HCl - HNO_3$
$HCl - H_3PO_4$
$HCl - H_2SO_4$
$FeCl_3$
$FeCl_2$
$CuCl_2$
CuCl

AQ Alloy 2205 – revision

Corrosive environments:

O_2
HF
Seawater – O_2
NaCl – O_2
NaOH– O_2

AQ Alloy 2507 – revision

Corrosive environments:

O_2
HF
NaCl-NaF-O_2
Seawater – O_2
NaCl – O_2
NaOH– O_2
H_3PO_4 - HF

OLI Databook – Bugs & Features & Resolved issues.

Bug ID	Problem	Resolution
DT-2	Electrical Conductivity Data missing for HClO	Update data for V12
DT-428	Rare Earth hydroxides with the formula RE(OH)3 not recognized	Code updated.
DT-441	Eliminate the name "Celestite" from SrSO4 name	Removed.
DT-459	Some chemical formulas have square brackets (e.g., La[C2H3O2]3 instead of parenthesis. This prevents proper database searches by chemical formula	290 species were updated.
DT-528	Add piperazine to the MSE database (already in AQ)	Added.
DT-547	Searching for a species not in the database creates a pseudo-species	Updated the code to protect against invalid searches.
DT-598	Add MnCO3 to MSE (already in AQ)	Added.
DT-708	The synonym for Tl(OH) is incorrect. It is marked as Tl(NO3)	Updated
DT-722	Add Co-NH3 complexes to MSE	Added
DT-756	Add Zn3(PO4)2 to MSE	Added
DT-829	Data for Ca(OH)2-NaOH-H2O is under predicting	Updated
DT-830	Data for LiOH-Ca(OH)2-H2O is not regressed	Updated

Engine/Solver - Features

Bug ID	AREA	Problem	Resolution
		No new features were added for version 12.0.1.11	

Engine/Solver - Bugs

Bug ID	AREA	Problem	Resolution
DT-675	Solver	Incorrect phase behavior was found in a carbon capture case	There is an odd phase transition in the CO2 VLE. Special phase check handlers were added to detect this special condition.

DT-695	Solver	A Flowsheet case fails with multiple models with ion-exchange.	The second model did not properly update all variables which caused the error.
DT-750	Solver	Reactor did not mass balance with user entered reaction kinetics	There was an issue with the chemistry model parsing the equation. This was corrected.
DT-791	Solver	A mixer case in OLI Studio worked in previous versions but failed in 11.5	The case requires a better estimate of initial temperature in adiabatic cases. Handlers were added to provide better estimates.

OLI Studio/Analyzer - Features

Bug ID	AREA	Problem	Resolution
DT-386	Scaling Inhibition	A user cannot easily identify a scaling inhibitor in the inflow list	The Letter "I" has been added to the grid to show scaling inhibition chemicals.
DT-426	Chemistry	The database lists were not sorted by the display name but rather by the file name	List updated to be sorted by display name
DT-838	Kinetics Editor	No reaction kinetics editor exists in survey calculations	This feature was added.

OLI Studio/Analyzer - Bugs

Bug ID	AREA	Problem	Resolution
DT-534	Report	Selected species to report not honored, all species displayed.	Logic updated.
DT-556	ScaleChem Report	Exporting a facility calculation to a CSV file has a maximum of 14 nodes.	This restriction has been removed.
DT-564	Chemistry Model	Redox subsystem missing tag in UI	Subsystem not properly tagged in database
DT-565	Chemistry Model	Redox subsystem for Pb (AQ framework) missing an oxidation state.	Subsystem not properly tagged in AQ PUBLIC database.
DT-574	UI	Copying data from an inflow grid to another file crashed the program.	A deadlock in the UI was found and resolved.
DT-575	Chemistry Model	The interaction matrix did not report transport properties (e.g., viscosity)	The calls to the generator were updated to include transport properties
DT-740	Report	The program crashed when clicking on the report tab.	A private database was used in this case that did not have the MATC records completely filled out. The report code was enhanced to trap this condition and display blanks.
DT-764	Chemistry Model	A user entered reaction kinetic parameter had a stray character. This caused the program crash when running.	Stray characters which are normally permitted in FORTRAN equations, e.g., "*", are now trapped and a warning provided.
DT-803	UI	Using gauge pressure (BARG or PSIG) was entered as "0" but returned a very small non-zero value after calculation, sometimes negative	Updated logic properly displays gauge pressure.
DT-813	UI	A case saved in a previous version with custom calculations enabled shows a blank screen when opened with the option not enabled	Custom calculations are now enabled by default.
DT-923	UI	Water Analysis in MSE using expanded species results in invalid species (e.g., HION)	Expanded species updated for MSE

OLI Flowsheet: ESP / ESP-FS – Features/Improvements

Bug ID	AREA	Problem	Resolution
DT-54	UI	There is a limit of 50 controllers	Limit increased to 100. Older files that are opened in V12 may display a momentary error which will resolve itself.
DT-84	UI	The convergence monitor drop-down menu is to narrow.	Field was widened.
DT-291	Chemistry	OLI Studio has the ability to modify the critical parameters of a pseudocomponent from an assay. This ability does not exit in OLI Flowsheet: ESP	Added support to modify generated pseudocomponent data from an assay.
DT-417	Chemistry/UI	A user cannot identify a private database name from the chemistry model view. This feature exists in OLI Studio	The UI was modified to show the internal name of the database in a similar fashion as OLI Studio.
DT-420	UI	Sensitivity plots do not include block properties such as heat duty.	Block results are now captured for each sensitivity run.

DT-434	Chemistry	Add classical inert species as found in OLI Chemistry Wizard	Species added.
DT-482	UI	The error panel column is not adjustable.	The columns are now adjustable.
DT-491	UI	The term “Dissolved Phases” is incorrect in a separator	Changed to “Entrained”
DT-611	UI	To phase separate the results of a chemical reactor a user must also use a separator unit operation.	The reactor and separator blocks have now been combined.
DT-646	UI/Units Manager	°F and °C units are missing in heat exchanges when U*A is specified. Only absolute K is permitted	Units added.
DT-670	Sensitivity	The sensitivity study does not work for parameters in a multi-stage block (a/k/a column)	Parameters were added for the sensitivity study.

OLI Flowsheet: ESP / ESP-FS - Bug

Bug ID	AREA	Problem	Resolution
DT-127	Optimizer	An optimized final value was negative, but the report shows a positive value	The report captured a value just before the final iteration of the optimizer. The logic was updated to capture the final value.
DT-377	Chemistry/Reactor	A reaction rate does not have a reverse reaction (KR=0) yet the report shows a reverse reaction.	An very small value was entered to indicate a zero reaction (1E-300). This is now explicitly made zero in the report.
DT-515	Sensitivity	Sensitivity calculation reports errors about species missing in the chemistry model.	The chemistry model removed species which were monitored or adjusted in the sensitivity block. Logic was enhanced to warn about such situations.
DT-523	Chemistry/Reactor	Reaction Kinetics does not work with ion-exchange reactions	The OLI Reaction Kinetics was not designed to work with SOL species. For this version, the reactor is allowing to run without kinetics till a permanent solution is found.
DT-578	Units Manager	ScaleChem units are appearing in OLI Flowsheet	ScaleChem units have been removed.
DT-584	Sensitivity	The range (when decremented) was not being honored	The range is now honored.
DT-586	UI	The call out for a flow split reports flows as mole % when the actual splitter units were in mass %	Units are now being honored.
DT-591	UI/Report	Pre-scaling tendencies are enabled but do not show up in all streams that have solids eligible for pre-scaling calculations.	The restart option did not always save post-calculation variables such as pre-scaling tendencies. The logic was updated to save this information and other post-calculations values (e.g., TDS, Alkalinity, etc.)
DT-657	UI	Opened report tabs are not saved when reopening a saved file	Logic enhanced to remember which tabs are open when being saved.
DT-676	Units Manager	For MSE the units manager should use Liquid-1 instead of Aqueous	Table was updated.
DT-758	Chemistry Model	Error when entering a species from the drop-down menu	The species was previously entered but deleted. The UI did not understand that the species had been removed. The logic was updated.
DT-889	Solver/UI	Dew Point calculation does not work when calculating the dew point pressure	The block was originally set to bubble point pressure but then changed to dew point pressure. The UI did not update the call to the solver to indicate that it is now a dew point.
DT-893	Solver	An adiabatic mixer has a different phase split (VLE) than an isothermal calculation at the same converged temperature.	The adiabatic mixer used a poor initialized temperature. Other changes to the solver fixed the initialized variable.
DT-926	Solver	The case file, previously saved in an earlier version, fails to open with two private database	The memory stack was exceeded due to new features having been added. The stack was reduced in size.

Alliance Products - Features

Bug ID	Program	Problem	Resolution
		No new features were added for version 12.0.1.11	

Alliance Products - Bugs

Bug ID	Program	Problem	Resolution
DT-725	Unisim Design	Case crashes with S(0) redox enabled.	OLI Engine updated to prevent crash.

OLI Chemistry Wizard (all products)

Bug ID	Program	Problem	Resolution
DT-771	All	Oil assay fails to generate with then name HSP2	Cross-referencing name logic was updated.

OLI Developer Edition - General

Bug ID	Program	Problem	Resolution
		No new features were added for version 12.0.1.11	

OLI Framework - General

Bug ID	Program	Problem	Resolution
		No new features were added for version 12.0.1.11	

OLI License Manager / Security

Bug ID	Program	Problem	Resolution
DT-582	License Manager	Trailing space at the end of the server name in the OLI Software is not recognized as a valid name	Trailing spaces trimmed
DT-887	License Manager	Previous log files are autodeleted when rolling over to a new file	Previous log files are not deleted.