



A R O M O L O G Y

IFRA COMPLIANCE STATEMENT

IFRA Standards – 51st Amendment

Aromology Trading LLC

G05 Al Ghazal Building

Nadd Al Hamar

Dubai, United Arab Emirates

Website: www.aromology.com

Email: info@aromology.com

Schiff Ligustral

Product Identification

Item	Details
Product Name	Schiff Ligustral
Manufacturer	Synarome
Product Code	085530
CAS Number	68738-99-8
EC / EINECS Number	272-124-5
Chemical Type	Schiff Base
Chemical Description	Triplal / Ligustral – Methyl Anthranilate Schiff Base
Chemical Family	Anthranilate Schiff Base
Molecular Formula	C ₁₇ H ₂₁ NO ₂
Molecular Weight	271.35 g/mol
Product Type	Synthetic Aroma Chemical
Parent Aldehyde	Dimethylcyclohex-3-ene-1-carbaldehyde / Triplal / Ligustral
Parent Aldehyde CAS	68039-49-6
Odour Family	Floral / White Floral
Odour Profile	White floral, green floral, orange blossom, muguet, fruity, anthranilate

Chemical Identity

Schiff Ligustral, CAS 68738-99-8, is the Schiff-base reaction product associated with:

Ligustral / Triplal

CAS 68039-49-6

and:



A R O M O L O G Y
Methyl Anthranilate
CAS 134-20-3

The resulting Schiff base is chemically distinct from free Triplal/Ligustral.

Therefore:
Schiff Ligustral CAS = 68738-99-8

and NOT:
Triplal/Ligustral CAS = 68039-49-6

IFRA 51 Regulatory Status

Schiff Ligustral must be evaluated according to the IFRA rule concerning Schiff bases formed from IFRA-restricted aldehydes.

IFRA specifies that Schiff bases derived from restricted aldehydes must be taken into account when calculating the total concentration of the corresponding restricted aldehyde.

For:

Triplal / Ligustral – Methyl Anthranilate Schiff Base
CAS 68738-99-8

IFRA specifies:
50.9% TRIPLAL EQUIVALENT

Accordingly:
IFRA Triplal contribution = Schiff Ligustral concentration × 50.9%

Parent Aldehyde IFRA Restriction

The corresponding parent aldehyde:

Dimethylcyclohex-3-ene-1-carbaldehyde
Triplal / Ligustral
CAS 68039-49-6

is subject to an IFRA Restriction Standard.

The restriction covers mixed dimethylcyclohex-3-ene-1-carbaldehyde isomers and applies to the cumulative contribution from all relevant sources.

IFRA 51 Maximum Levels for Triplal Equivalent



AROM OLOGY

The applicable maximum concentrations of Triplal / dimethylcyclohex-3-ene-1-carbaldehyde equivalent in the finished consumer product are:

IFRA Category	Maximum Triplal Equivalent
Category 1	0.45%
Category 2	0.14%
Category 3	2.70%
Category 4	2.50%
Category 5A	0.64%
Category 5B	0.64%
Category 5C	0.64%
Category 5D	0.64%
Category 6	1.50%
Category 7A	5.20%
Category 7B	5.20%
Category 8	0.27%
Category 9	4.90%
Category 10A	18.00%
Category 10B	18.00%
Category 11A	9.80%
Category 11B	9.80%
Category 12	No Restriction

These are the IFRA limits for the restricted parent aldehyde equivalent, not direct limits for CAS 68738-99-8.

Theoretical Maximum Schiff Ligustral Levels

Where Schiff Ligustral is the only source of Triplal/Ligustral in the finished product, a theoretical maximum for Schiff Ligustral can be calculated as:

Maximum Schiff Ligustral = IFRA Triplal Limit ÷ 0.509

This gives:

IFRA Category	Triplal Limit	Calculated Maximum Schiff Ligustral*
Category 1	0.45%	0.884%
Category 2	0.14%	0.275%
Category 3	2.70%	5.305%
Category 4	2.50%	4.912%
Category 5A	0.64%	1.257%
Category 5B	0.64%	1.257%



AROMOL OGY

Category 5C	0.64%	1.257%
Category 5D	0.64%	1.257%
Category 6	1.50%	2.947%
Category 7A	5.20%	10.216%
Category 7B	5.20%	10.216%
Category 8	0.27%	0.530%
Category 9	4.90%	9.627%
Category 10A	18.00%	35.363%
Category 10B	18.00%	35.363%
Category 11A	9.80%	19.253%
Category 11B	9.80%	19.253%
Category 12	No Restriction	No Restriction

*Important

These calculated values apply only when:

- Schiff Ligustral is treated as 100% CAS 68738-99-8;
- the IFRA conversion factor is 50.9%;
- there is no additional Triplal/Ligustral contribution from any other raw material; and
- no other component of the commercial Synarome product imposes a lower limit.

For an official customer IFRA certificate, the current Synarome certificate for Product Code 085530 should take precedence.

IFRA Calculation Examples

Example 1 – 1% Schiff Ligustral

If the finished consumer product contains:

1.00% Schiff Ligustral

then:

$1.00 \times 50.9\% = 0.509\%$ Triplal equivalent

Therefore, the IFRA calculation must include:

0.509% Triplal equivalent

Example 2 – Fine Fragrance

Assume:

- Schiff Ligustral in fragrance concentrate = 5.00%
- Fragrance concentrate in finished perfume = 20.00%
- Schiff Ligustral in finished product:
- $5.00\% \times 20.00\% = 1.00\%$
- Triplal equivalent:



AROM OLOGY

- $1.00\% \times 50.9\% = 0.509\%$

The finished perfume therefore contributes:

- 0.509% Triplal equivalent
 - The Category 4 limit is 2.50%, so this contribution alone would fall below that limit.
 - Other Triplal sources must still be included.
-

Contributions from Other Sources

The IFRA calculation must include the cumulative contribution from:

- Schiff Ligustral – CAS 68738-99-8
- Free Triplal / Ligustral
- Other dimethylcyclohex-3-ene-1-carbaldehyde isomers
- Other Schiff bases derived from these aldehydes
- Fragrance bases containing Triplal
- Proprietary compounds containing relevant restricted aldehydes

The total equivalent concentration must not exceed the applicable IFRA category maximum.

IFRA Declaration

Based on the identified product:

Schiff Ligustral – Synarome

Product Code: 085530

CAS: 68738-99-8

the following applies:

- The product is a Triplal/Ligustral–Methyl Anthranilate Schiff base.
 - It is subject to IFRA assessment through the restricted parent aldehyde.
 - IFRA specifies a 50.9% Triplal-equivalent contribution.
 - The parent aldehyde is subject to category-specific IFRA restrictions.
 - All sources of the restricted aldehyde must be calculated cumulatively.
 - The calculated Schiff Ligustral maximums above are theoretical values derived from the IFRA conversion factor.
 - The current original Synarome IFRA certificate should take precedence for formal regulatory submissions.
 - Final IFRA compliance remains the responsibility of the fragrance manufacturer.
-

Authorised by:

Fozia Khot

Director