

No.: CE/2020/14697

Date: 2020/01/30

Page: 1 of 12

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

The following samples was/were submitted and identified by/on behalf of the applicant as:

: CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. Sample Submitted By

Sample Description : PUFF DINO LUBRICANT

Style/Item No. : DA42

Sample Receiving Date: 2020/01/16

Testing Period : 2020/01/16 to 2020/01/30

: Please refer to following pages. Test Result(s)





This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-Conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.



No.: CE/2020/14697

Date: 2020/01/30

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Result(s)

PART NAME No.1 : TRANSPARENT LIQUID

Test Item(s)	Unit	Method	MDL	Result No.1
CFC's (Chlorofluorocarbons)				
Group I				
Chlorofluorocarbon-11 (CAS No.: 75-69-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-12 (CAS No.: 75-71-8)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-113 (CAS No.: 76-13-1)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-114 (CAS No.: 76-14-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-115 (CAS No.: 76-15-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Group III				
Chlorofluorocarbon-13 (CAS No.: 75-72-9)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-111 (CAS No.: 354-56-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-112 (CAS No.: 76-12-0)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-211 (CAS No.: 422-78-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-212 (CAS No.: 3182-26-1)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-213 (CAS No.: 2354-06-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-214 (CAS No.: 29255-31-0)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-215 (CAS No.: 4259-43-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-216 (CAS No.: 661-97-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Page: 2 of 12



No.: CE/2020/14697

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Item(s)	Unit	Method	MDL	Result
. ,				No.1
Chlorofluorocarbon-217 (CAS	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.
No.: 422-86-6)		Analysis was performed by GC/MS.		
HCFCs				
(Hydrochlorofluorocarbons)				
HCFC-21 (CAS No.: 75-43-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-22 (CAS No.: 75-45-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-31 (CAS No.: 593-70-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-121 (CAS No.: 354-14-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-122 (CAS No.: 354-21-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-123 (CAS No.: 306-83-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-124 (CAS No.: 2837-89-0)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-131 (CAS No.: 359-28-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-132b (CAS No.: 1649-08-7)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-133a (CAS No.: 75-88-7)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-141b (CAS No.: 1717-00-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-142b (CAS No.: 75-68-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-221 (CAS No.: 422-26-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-222 (CAS No.: 422-49-1)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-223 (CAS No.: 422-52-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.

Date: 2020/01/30

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Page: 3 of 12



No.: CE/2020/14697

Date: 2020/01/30

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Item(s)	Unit	Method	MDL	Result No.1
HCFC-224 (CAS No.: 422-54-8)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-225ca (CAS No.: 422-56- 0)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-225cb (CAS No.: 507-55-1)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-226 (CAS No.: 431-87-8)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-231 (CAS No.: 421-94-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-232 (CAS No.: 460-89-9)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-233 (CAS No.: 7125-84-0)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-234 (CAS No.: 425-94-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-235 (CAS No.: 460-92-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-241 (CAS No.: 666-27-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-242 (CAS No.: 460-63-9)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-243 (CAS No.: 460-69-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-244	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-251 (CAS No.: 421-41-0)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-252 (CAS No.: 819-00-1)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-253 (CAS No.: 460-35-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-261 (CAS No.: 420-97-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-conditions/ferms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exproved to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Page: 4 of 12



No.: CE/2020/14697

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Item(s)	Unit	Method	MDL	Result No.1
HCFC-262 (CAS No.: 421-02-03)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HCFC-271 (CAS No.: 430-55-7)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Halons				
Halon-1211 (CAS No.: 353-59-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Halon-1301 (CAS No.: 75-63-8)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Halon-2402 (CAS No.: 124-73-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Bromomethane (CAS No.: 74-83-9)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFCs				
(Hydrobromofluorocarbons)				
HBFC-21B2 (CHFBr2) (CAS No.: 1868-53-7)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-22B1 (CHF2Br) (CAS No.: 1511-62-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-31B1 (CH2FBr) (CAS No.: 373-52-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-121B4 (C2HFBr4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-122B3 (C2HF2Br3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-123B2 (C2HF3Br2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-124B1 (C2HF4Br)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-131B3 (C2H2FBr3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-132B2 (C2H2F2Br2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-133B1 (C2H2F3Br)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.

Date: 2020/01/30

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-Conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Analysis was performed by GC/MS.

Page: 5 of 12



No.: CE/2020/14697

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Item(s)	Unit	Method	MDL	Result
rest item(s)	Oilit	Wiethou		No.1
HBFC-141B2 (C2H3FBr2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-142B1 (C2H3F2Br)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-151B1 (C2H4FBr)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-221B6 (C3HFBr6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-222B5 (C3HF2Br5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-223B4 (C3HF3Br4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-224B3 (C3HF4Br3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-225B2 (C3HF5Br2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-226B1 (C3HF6Br)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-231B5 (C3H2FBr5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-232B4 (C3H2F2Br4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-233B3 (C3H2F3Br3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-234B2 (C3H2F4Br2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-235B1 (C3H2F5Br)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-241B4 (C3H3FBr4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-242B3 (C3H3F2Br3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
HBFC-243B2 (C3H3F3Br2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.

Date: 2020/01/30

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Page: 6 of 12



CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Report	No. : CE/2020/14697	Date : 2020/01/30	Page : 7 of 12
-------------	---------------------	-------------------	----------------

Test Item(s)	Unit	Jnit Method		Result	
rest item(s)	Offic	Wiethod	MDL	No.1	
HBFC-244B1 (C3H3F4Br)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HBFC-251B3 (C3H4FBr3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HBFC-252B2 (C3H4F2Br2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HBFC-253B1 (C3H4F3Br)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HBFC-261B2 (C3H5FBr2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HBFC-262B1 (C3H5F2Br)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HBFC-271B1 (C3H6FBr)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFCs (Hydrofluorocarbon)					
HFC-23 (CHF3) (CAS No.: 75-46-7)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-32 (CH2F2) (CAS No.: 75- 10-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-41 (CH3F) (CAS No.: 593- 53-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-43-10mee (C5H2F10)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-125 (C2HF5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-134 (C2H2F4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-134a (CH2FCF3) (CAS No.: 811-97-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-143 (CH3F3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-143a (CH3F3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	
HFC-152a (C2H4F2) (CAS No.: 75-37-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.	

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/terms-and-conditions/ferms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exproval of the to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.



No.: CE/2020/14697

Date: 2020/01/30

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Item(s)	Unit	Method	MDL	Result	
, ,	Oilit		WIDE	No.1	
HFC-227ea (C3HF7) (CAS No.:	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
431-89-0)		Analysis was performed by GC/MS.			
HFC-236fa (C3H2F6)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
		Analysis was performed by GC/MS.			
HFC-236ea (C3H2F6) (CAS No.:	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
431-63-0)		Analysis was performed by GC/MS.			
HFC-245ca (C3H3F5)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
		Analysis was performed by GC/MS.			
HFC-245fa (C3H3F5)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
		Analysis was performed by GC/MS.			
HFC-365mfc (C4H5F5)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
		Analysis was performed by GC/MS.			
PFCs (Perfluorocarbon)					
F14 (CAS No.: 75-73-0)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
		Analysis was performed by GC/MS.			
Fluorocarbon 116 (CAS No.: 76-	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
16-4)		Analysis was performed by GC/MS.			
Freon 218 (CAS No.: 76-19-7)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
		Analysis was performed by GC/MS.			
Decafluorobutane (CAS No.: 355-	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
25-9)		Analysis was performed by GC/MS.			
Freon C318 (CAS No.: 115-25-3)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
		Analysis was performed by GC/MS.			
Perfluor-1-butene (CAS No.: 357-	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
26-6)		Analysis was performed by GC/MS.			
perfluorisobutene (CAS No.: 382-	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
21-8)		Analysis was performed by GC/MS.			
1,4-dihydrooctafluorobutane	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
(CAS No.: 377-36-6)		Analysis was performed by GC/MS.			
Nonafluor-2- (trifluoromethyl)	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
butane (CAS No.: 594-91-2)		Analysis was performed by GC/MS.			
Perfluoro-n-pentane (CAS No.:	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
678-26-2)		Analysis was performed by GC/MS.			
2-perfluoromethylpentane (CAS	mg/kg	With reference to US EPA 5021A (2014).	1	n.d.	
No.: 355-04-4)		Analysis was performed by GC/MS.			

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions/terms-

Page: 8 of 12



No.: CE/2020/14697

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Item(s)	Unit	Method	MDL	Result No.1
Perfluorohexane (CAS No.: 355-42-0)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
CHCs (Chlorinate hydrocarbon)				
1,1,1,2-Tetrachloroethane (CAS No.: 630-20-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,1,1-Trichloroethane (CAS No.: 71-55-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,1,2,2-Tetrachloroethane (CAS No.: 79-34-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,1,2-Trichloroethane (CAS No.: 79-00-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,1-Dichloroethane (CAS No.: 75-34-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,1-Dichloroethene (CAS No.: 75-35-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,1-Dichloropropene (CAS No.: 563-58-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,2,3-Trichloropropane (CAS No.: 96-18-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,2-Dichloroethane (CAS No.: 107-06-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,2-Dichloropropane (CAS No.: 78-87-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
1,3-Dichloropropane (CAS No.: 142-28-9)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
2,2-Dichloropropane (CAS No.: 594-20-7)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Carbon tetrachloride (CAS No.: 56-23-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chloroethane (CAS No.: 75-00-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chloroform (CAS No.: 67-66-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Chloromethane (CAS No.: 74-87-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.

Date: 2020/01/30

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-Conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Page: 9 of 12



No.: CE/2020/14697

Date: 2020/01/30

Page: 10 of 12

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Test Item(s)	Unit	Method	MDL	Result No.1
cis-1,2-Dichloroethene (CAS No.: 156-59-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
cis-1,3-Dichloropropene (CAS No.: 10061-01-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Hexachlorobutadiene (CAS No.: 87-68-3)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Dichloromethane, Methylene chloride (CAS No.: 75-09-2)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Tetrachloroethene (CAS No.: 127-18-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
trans-1,2-Dichloroethene (CAS No.: 156-60-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
trans-1,3-Dichloropropene (CAS No.: 10061-02-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Trichloroethylene (CAS No.: 79-01-6)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Bromochloromethane (CAS No.: 74-97-5)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.
Sulfur Hexafluoride (SF6) (CAS No.: 2551-62-4)	mg/kg	With reference to US EPA 5021A (2014). Analysis was performed by GC/MS.	1	n.d.

Note:

1. mg/kg = ppm; 0.1wt% = 1000ppm2. MDL = Method Detection Limit

3. n.d. = Not Detected = less than MDL



Test Report No. : CE/2020/14697

Date: 2020/01/30

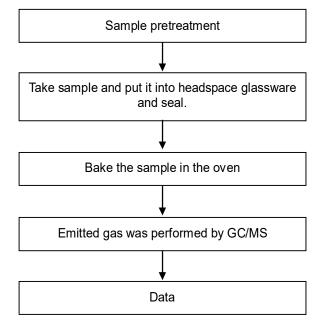
CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

Analytical flow chart - volatile organic compounds (VOCs)

Technician: Chun Wu

Supervisor: Shinjyh Chen

【Reference method: US EPA 5021, 5021A】



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-Conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Page: 11 of 12



No.: CE/2020/14697

Date: 2020/01/30

CHUNG TAI SING CHEMICAL INDUSTRY CO., LTD. 105 NIU PU SOUTH ROAD, HSINCHU, TAIWAN

* The tested sample / part is marked by an arrow if it's shown on the photo. *

CE/2020/14697



** End of Report **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com/en/Terms-and-Conditions/terms-e-document. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Page: 12 of 12