GS 칼텍스

물질안전보건자료

제품명	(05100-00481) Mobis NEW Premium Plus GE		
MSDS번호	목록번호	최초 작성일자	최종 개정일자
제출대상아님	LB3241	2019-06-20	2026-01-05

1. 화학제품과 회사에 관한 정보

가. 제품명

(05100-00481) Mobis NEW Premium Plus GE

나. 제품의 권고 용도와 사용상의 제한

- 제품의 권고 용도 21.1. 윤활유 가솔린 엔진오일
- 제품의 사용상의 제한 정해진 용도 이외에는 사용하지 말것.

다. 공급자 정보

○ **제조자 정보**

- 회사명 지에스칼텍스(주)
- 주소 서울특별시 강남구 논현로 508
- 긴급 전화번호 1899-5145

2. 유해·위험성

가. 유해·위험성 분류

- 해당없음

나. 예방조치문구를 포함한 경고표지 항목

○ **그림문자**

- 해당없음

○ **신호어**

- 해당없음

○ **유해·위험문구**

- 해당없음

○ **예방조치문구**

1) 예방

- 해당없음

2) 대응

- 해당없음

3) 저장

- 해당없음

4) 폐기

- 해당없음

다. 유해·위험성 분류기준에 포함되지 않는 기타 유해·위험성

○ 제품 NFPA 등급

(※ 0-불충분, 1-약간, 2-보통, 3-높음, 4-매우높음)

제품명	보건 Health	화재 Flammable	반응성 Reaction
(05100-00481) Mobis NEW Premium Plus GE	0	1	0

3. 구성성분의 명칭 및 함유량

화학물질명	관용명 및 이명(異名)	CAS No.	KE No.	함유량(%)
Distillates (petroleum), hydrotreated heavy paraffinic	유제 오일	64742-54-7	KE-12546	76 ~ 86
영업비밀				5 ~ 15
Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based		72623-87-1	KE-22621	3 ~ 13
ar-Nonyl-N-(nonylphenyl)benzenamine	DINONYL DIPHENYLAMINE	36878-20-3	KE-26230	0.7 ~ 4
Distillates (petroleum), hydrotreated middle	수소처리한 석유 중간 증류액 ; 수소처리한 중간 증류액(석유);수소처리된 중간 석유 증류액	64742-46-7	KE-12554	0.5 ~ 4
Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt	1-Hexanol,2-ethyl-, O,O-diester with phosphorodithioic acid, zinc salt (7CI)	4259-15-8	KE-28657	0.2 ~ 2
Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based	Factory Supply Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	KE-22620	0.1 ~ 2
Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased	Dodecylphenol, calcium salt, overbased, sulfurized, carbonated	68784-26-9	KE-13012	0.1 ~ 0.9
Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts	다이-C1-14 알킬 다이싸이오인 산, 아연 염 ; 아연, O,O-다이(C1-14)-알킬포스포로다이싸이오에이트; 다이알킬(C1-C14)다이싸이오인산, 아연 염	68649-42-3	KE-28667	0.1 ~ 0.9
1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3)		799241-27-3		0.1 ~ 0.6
Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched		253873-84-6		0.1 ~ 0.6

Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']([N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched		253873-83-5		0.1 ~ 0.6
Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-		90901-24-9		0.1 ~ 0.6

※ 상기 성분 내역을 제외한 모든 구성성분은 규제대상 법률 및 산업안전보건법 제104조(유해인자의 분류기준) 유해성 위험성 분류 기준에 해당하지 않아 표시되지 않았습니다.

※ 이 제품은 IP346 방법에 의해 측정된 DMSO extract가 3% 미만입니다.

4. 응급조치요령

가. 눈에 들어갔을 때
- 물질과 접촉시 즉시 20분 이상 흐르는 물에 눈을 씻어내시오.
- 눈에 자극이 지속되면 의학적인 조치·조언을 구하시오.

나. 피부에 접촉했을 때
- 물질과 접촉시 즉시 20분 이상 흐르는 물에 피부를 씻어내시오.
- 오염된 옷과 신발을 제거하고 격리하시오.
- 재사용 전에는 옷과 신발을 완전히 씻어내시오.
- 피부 자극이 생기면 의학적인 조치·조언을 구하시오.

다. 흡입했을 때
- 신선한 공기가 있는 곳으로 옮기시오.
- 호흡하지 않는 경우 인공호흡을 실시하시오.
- 호흡이 힘들 경우 산소를 공급하시오.
- 호흡기 증상이 나타나면 의료기관(의사)의 진찰을 받으시오.

라. 먹었을 때
- 의식이 없는 사람에게 입으로 아무것도 먹이지 마시오.
- 구토를 유발해야 하는지에 대해서 의사의 조언을 받으시오.
- 즉시 의학적인 조치·조언을 받으시오.
- 입을 씻어내시오.

마. 기타 의사의 주의사항
- 의료인력이 해당물질에 대해 인지하고 보호조치를 취하도록 하시오.

5. 폭발·화재시 대처방법

가. 적절한(부적절한) 소화제
- 소형 화재: 건조모래, 건조화학제, 내알콜포말, 물분무, 일반포말, CO2 (적절한 소화제)
- 대형 화재: 물분무/안개, 일반포말 (적절한 소화제)
- 고압주수 (부적절한 소화제)

나. 화학물질로부터 생기는 특정 유해성
- 열, 스파크, 화염에 의해 점화할 수 있음.
- 화재시 자극성, 독성 가스를 발생할 수 있음.
- 물질의 흡입은 유해할 수 있음.

다. 화재진압시 착용할 보호구 및 예방조치
- 일부는 고온으로 운송될 수 있음.
- 누출물은 오염을 유발할 수 있음.
- 접촉 시 피부와 눈에 화상을 입힐 수 있음.
- 소화수의 처분을 위해 도랑을 파서 가두고 물질이 흩어지지 않게 하시오.
- 위험하지 않다면 화재지역에서 용기를 옮기시오.

- 탱크 화재시 소화가 진화된 후에도 다량의 물로 용기를 식히시오.
- 탱크 화재시 압력 방출장치에서 고음이 있거나 탱크가 변색할 경우 즉시 물러나시오.
- 탱크 화재시 화염에 휩싸인 탱크에서 물러나시오.

6. 누출사고시 대처방법

가. 인체를 보호하기 위해 필요한 조치사항 및 보호구
- 노출물을 만지거나 걸어다니지 마시오.
- 모든 점화원을 제거하시오.
- 오염지역을 환기하시오.
- 위험하지 않다면 누출을 멈추시오.
- 분진 형성을 방지하시오.
- 피해야할 물질 및 조건에 유의하시오.

나. 환경을 보호하기 위해 필요한 조치사항
- 수로, 하수구, 지하실, 밀폐공간으로의 유입을 방지하시오.

다. 정화 또는 제거 방법
- 소량 누출시 다량의 물로 오염지역을 씻어내시오.
- 다량 누출시 액체 누출물과 멀게하여 도랑을 만드시오.
- 청결한 삽으로 누출물을 깨끗하고 건조한 용기에 담고 느슨하게 닫은 뒤 용기를 누출지역으로부터 옮기시오.
- 분말 누출시 플라스틱 시트로 덮어 확산을 막고 건조한 상태로 유지하시오.
- 소량 누출시 모래, 비가연성 물질로 흡수하고 용기에 담으시오.

7. 취급 및 저장방법

가. 안전취급요령
- 취급 후 철저히 씻으시오.
- 피해야할 물질 및 조건에 유의하시오.
- 공학적 관리 및 개인보호구를 참조하여 작업하시오.
- 고온에 주의하시오.

나. 안전한 저장방법
- 서늘하고 건조한 장소에 저장하시오.
- 피해야할 물질 및 조건에 유의하시오.
- 밀폐하여 보관하시오.

8. 노출방지 및 개인보호구

가. 화학물질의 노출기준, 생물학적 노출기준 등

화학물질명	국내규정	ACGIH 규정	OSHA 규정	생물학적 노출기준

Distillates (petroleum), hydrotreated heavy paraffinic	TWA : 자료없음	TWA 5 mg/m3, Inhalable particulate matter(Mineral oil, Pure, highly and severely refined)	자료없음	자료없음
Trade secret	자료없음	자료없음	자료없음	자료없음
Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based	TWA : 자료없음	자료없음	자료없음	자료없음
ar-Nonyl-N-(nonylphenyl)benzenamine	자료없음	자료없음	자료없음	자료없음
Distillates (petroleum), hydrotreated middle	TWA : 자료없음	자료없음	자료없음	자료없음
Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt	자료없음	자료없음	자료없음	자료없음
Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based	자료없음	TWA 5 mg/m3, Inhalable particulate matter(Mineral oil, Pure, highly and severely refined)	자료없음	자료없음
Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased	자료없음	자료없음	자료없음	자료없음
Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts	자료없음	자료없음	자료없음	자료없음
1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3)	자료없음	자료없음	자료없음	자료없음

Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched	TWA : 0.5 mg/m3	자료없음	PEL: 5 mg/m3 (Soluble compounds), 15 mg/m3 (Insoluble compounds - Total dust) mg/m3	자료없음
Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched	자료없음	자료없음	자료없음	자료없음
Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-	자료없음	자료없음	자료없음	자료없음

나. 적절한 공학적 관리

- 공정격리, 국소배기를 사용하거나 공기수준을 노출기준 이하로 유지하시오.
- 조건에 맞도록 환기 속도를 조정하시오.

다. 개인보호구

○ 호흡기 보호
- 노출되는 입자상 물질의 물리화학적 특성에 맞는 산업안전보건공단의 인증을 필한 호흡용 보호구를 착용하시오.
- 입자상 물질의 경우 다음과 같은 호흡기 보호구가 권고됨 - 안면부 여과식 방진마스크 또는 공기 여과식 방진마스크(고효율 미립자 여과재) 또는 전동팬 부착방진 마스크(분진, 미스트, 흄용 여과재)
- 산소가 부족한 경우(<196%), 송기마스크, 혹은 자급식 호흡보호구를 착용하시오.
- 사전에 경고 특성을 고려하시오.

○ 눈 보호
- 눈에 자극을 일으키거나 기타 건강상의 장해를 일으킬 수 있는 물질에 대하여 눈을 보호하기 위하여 통기성 보안경을 착용하시오.
- 근로자가 접근이 용이한 위치에 긴급세척시설(샤워식) 및 세안설비를 설치하시오.
- 해당물질에 직접적인 노출 또는 노출 가능성이 있는 경우, 한국산업안전보건공단 인증을 받은 화학물질용 보안경을 착용할 것.

○ 손 보호
- 화학물질의 물리적 및 화학적 특성을 고려하여 적절한 재질의 보호잡강을 착용하시오.
- 해당물질에 직접적인 노출 또는 노출 가능성이 있는 경우, 한국산업안전보건공단 인증을 받은 화학물질용 안전 장갑을 착용할 것.

○ 신체 보호
- 화학물질의 물리적 및 화학적 특성을 고려하여 적절한 재질의 보호의복을 착용하시오.
- 해당물질에 직접적인 노출 또는 노출 가능성이 있는 경우, 한국산업안전보건공단 인증을 받은 화학물질용 보호복을 착용할 것.

9. 물리화학적 특성

항목	입력값
외관	액체

색상	노란색
냄새	석유계 화합물의 냄새
냄새역치	자료없음
pH	자료없음
녹는점/어는점	자료없음
초기 끓는점과 끓는점범위	자료없음
인화점	214 ℃
증발속도	자료없음
인화성(고체,기체)	자료없음
인화폭발범위	자료없음
증기압	자료없음
용해도	자료없음
증기밀도	자료없음
비중	0.844
분배계수	자료없음
자연발화온도	자료없음
분해온도	자료없음
점도	7.7 mm2/s (at 100℃)
분자량	자료없음

10. 안정성 및 반응성

가. 화학적 안정성 및 유해 반응의 가능성
- 상온 상압 조건에서 안정함.
- 가열시 용기가 폭발할 수 있음.
- 일부는 탈 수 있으나 쉽게 점화하지 않음.

나. 피해야 할 조건
- 열, 스파크, 화염 등 점화원.

다. 피해야 할 물질
- 가연성 물질.
- 자극성, 독성 가스.

라. 분해시 생성되는 유해물질
- 자료없음

11. 독성에 관한 정보

가. 가능성이 높은 노출 경로에 관한 정보

○ 호흡기를 통한 흡입

- 호흡기를 통한 흡입 영향 없음

○ 피부접촉

- 피부 접촉 시 영향 없음

○ 눈 접촉

- 눈 접촉 시 영향 없음

○ 입을 통한 접촉

- 입을 통한 섭취 영향 없음

나. 건강 유해성 정보

○ 급성독성

*** 경구 - 분류되지 않음 (ATEmix > 2000 mg/kg)**

- Distillates (petroleum), hydrotreated heavy paraffinic : 랫드(암/수), LD50 > 5,000 mg/kg bw, 사망개체 없음 (유사물질 자료: 64742-56-9) (OECD TG 401, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 랫드(암/수); LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 401, GLP) (유사물질 자료: 64742-56-9) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 랫드(암/수); LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 401) (ECHA)
- Distillates (petroleum), hydrotreated middle : 랫드(암/수); LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 401, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 랫드(수); LD50 = 3100 ㎎/kg bw (OECD TG 401) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 랫드(암/수); 사망없음; LD50 > 5000 mg/kg bw; (유사물질자료: CAS No. 64742-56-9) (OECD TG 401, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 랫드, LD50 = 5000 - 16000 ㎎/kg bw, 사망없음 (NICNAS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 랫드; LD50 = 3100 mg/kg bw (유사물질 자료: zinc bis(O,O?diisooctyl) bis(dithiophosphate) (ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

*** 경피 - 분류되지 않음 (ATEmix > 2000 mg/kg)**

- Distillates (petroleum), hydrotreated heavy paraffinic : 토끼(암/수), LD50 > 5,000 mg/kg bw, 사망개체 없음 (유사물질 자료: 64742-56-9) (OECD TG 402, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 토끼(암/수); LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 402, GLP) (유사물질 자료: 64742-56-9) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 랫드(암/수); LD50 > 2000 ㎎/kg bw (OECD TG 402) (ECHA)
- Distillates (petroleum), hydrotreated middle : 토끼(암/수); LD50 > 2000 ㎎/kg bw, 사망없음 (OECD TG 402, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 토끼(수); LD50 > 5000 ㎎/kg bw (OECD TG 402) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 토끼; 사망없음; LD50 > 2000 mg/kg bw (유사물지자료: CAS No. 64742-53-6) (OECD TG 402, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 랫드; LD50 >2000 - >15000 mg/kg bw, 사망 없음 (NICNAS)

- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 토끼(암/수); LD50 > 3160 mg/kg bw, 사망없음 (ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

*** 흡입(가스) - 해당없음**

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

*** 흡입(증기) - 분류되지 않음 (ATEmix > 20 mg/L)**

- Distillates (petroleum), hydrotreated heavy paraffinic : 자료없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 자료없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 자료없음
- Distillates (petroleum), hydrotreated middle : 자료없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 자료없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 자료없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 랫드; 증기 및 에어로졸 흡입; LC50 >1.67 mg/L, 사망 없음 (OECD TG 403) (NICNAS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 랫드; LC50 > 5 mg/L air, 사망없음 (노출시간 언급 없음) (ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

*** 흡입(분진, 미스트) - 분류되지 않음 (ATEmix > 5 mg/L)**

- Distillates (petroleum), hydrotreated heavy paraffinic : 에어로졸 흡입; 랫드(암/수); 4h-LC50 > 5.53 mg/L. 사망 개체 없음 (유사물질: MRD-87-102) (OECD TG 403) (ECHA)

- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 랫드(암/수); 에어로졸 흡입; LC50 > 5.53 mg/L air /4h, 사망없음 (OECD TG 403) (유사물질 자료: MRD-87-102) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 자료없음
- Distillates (petroleum), hydrotreated middle : 랫드(암/수); 에어로졸/증기 혼합 흡입; LC50 = 7.640 mg/L air /4h, 사망없음 (OECD TG 403, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 자료없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 랫드; 흡입: 에어로졸; 사망없음; LC50 > 5.53 mg/L air 4시간 (유사물질자료: CAS No. 64741-88-4) (OECD TG 403) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 자료없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 자료없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 피부부식성 또는 자극성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic	:	토끼를 대상으로 피부부식성/자극성 시험결과, 비자극성 (유사물질 자료 : 64742-56-9) (GLP) (ECHA)
- Trade secret	:	자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based	:	토끼를 대상으로 피부부식성/자극성 시험결과, 비자극성 (GLP) (유사물질 자료: 64742-56-9) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine	:	토끼를 대상으로 피부부식성/자극성 시험결과, 경자극성 유발 (OECD TG 404, GLP) (유사물질 자료: TK12340) (ECHA)
- Distillates (petroleum), hydrotreated middle	:	토끼를 대상으로 상업용 C14-C20 Aliphatic Hydrocarbon Solvents (≤ 2% Aromatics) (CAS RN 64742-47-8, 64742-46-7, 90622-47-2, 60908-77-2 (analogue), 90622-46-1, and 52845-07-5 (analogue))를 이용하여 피부부식성/자극성 시험결과, 평균 홍반지수(24, 48, 72 시간)는 0.0 ~ 1.11이었으나 일반적으로 1.0 미만이며, 평균 부종지수(24, 48, 72시간)는 0.0 ~ 1.0이었으나, 일반적으로 0.0으로서 이 용매들은 경미한 피부자극성 또는 피부자극성을 유발하지 않는 것으로 판단됨 (SIDS)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt	:	토끼를 대상으로 피부부식성/자극성 시험결과, 비자극성 (OECD TG 404, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based	:	토끼를 대상으로 피부 부식성/피부 자극성 시험결과 비자극성 (유사물질자료: CAS No. 64742-53-6) (OECD TG 404, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased	:	토끼를 대상으로 피부부식성/자극성 시험결과, 피부자극제 아님 (NICNAS)
- Phosphorodithioic acid	:	토끼를 대상으로 피부부식성/자극성 시험결과, 자극성 유발 (1차 피부자극지수

O,O-dialkyl(C=1-14) esters zinc salts : (PDII)=4) (유사물질 자료: Cetrimonium chloride (CAS No: 112-02-7))(ECHA)

- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 심한 눈손상 또는 자극성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 토끼를 대상으로 심한 눈손상성/자극성 시험결과, 비자극성 (유사물질 자료: 64742-56-9) (OECD TG 405와 유사, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 토끼를 대상으로 심한 눈손상/자극성 시험결과, 비자극성 (OECD TG 405, GLP) (유사물질 자료: 64742-56-9) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 토끼를 대상으로 심한 눈손상/자극성 시험결과, 비자극성 (OECD TG 405, GLP) (유사물질 자료: TK12340) (ECHA)
- Distillates (petroleum), hydrotreated middle : 토끼를 대상으로 심한 눈손상/자극성 시험결과, 비자극성 (OECD TG 405, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 토끼를 대상으로 심한 눈손상/자극성 시험결과, 아연염은 21일까지 눈자극 지속 유발; 부식성 (OECD TG 405, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 토끼를 대상으로 심한 눈 손상성/눈 자극성 시험결과 비자극성 (유사물질자료: CAS No. 64742-56-9) (OECD TG 405, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 토끼를 대상으로 심한 눈손상성/자극성 시험결과, 경자극성 유발 (NICNAS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters : 토끼를 대상으로 심한 눈손상/자극성 시험결과, 자극성 유발 (유사물질 자료: Stearyltrimethylammonium chloride) (OECD TG 405)(ECHA)

zinc salts

- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 호흡기과민성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 자료없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 자료없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 자료없음
- Distillates (petroleum), hydrotreated middle : 자료없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 자료없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 자료없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 자료없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 자료없음

- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 피부과민성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 기니피그를 대상으로 피부과민성 시험결과, 비과민성 (유사물질 자료: 64742-56-9) (OECD TG 406, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 기니피그를 대상으로 피부과민성 시험결과, 비과민성 (OECD TG 406, GLP) (유사물질 자료: 64742-53-6) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 기니피그를 대상으로 피부과민성 시험결과, 비과민성 (OECD TG 406, GLP) (ECHA)
- Distillates (petroleum), hydrotreated middle : 기니피그를 대상으로 피부과민성 시험결과, 비과민성 (OECD TG 406, GLP) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 기니피그를 대상으로 피부과민성 시험결과, 비과민성 (OECD TG 406, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 기니피그를 대상으로 피부 과민성 시험결과 비과민성 (유사물질자료: CAS No. 64742-53-6) (OECD TG 406, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 기니피그를 대상으로 피부과민성 시험결과, 비과민성 (OECD TG 406) (NICNAS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 인체 패치테스트 결과, 비과민성 (양성 반응지수=0) (유사물질 자료: Cetrimonium chloride (CAS No: 112-02-7))(ECHA)
- 1-Tridecanamine, N- : 자료없음

tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3)

- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 발암성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : EU CLP 1272/2008 : Carc. 1B (Note L : IP346 방법에 의해 측정된 DMSO extract가 3% 미만인 경우는 제외)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : EU CLP 1272/2008 : Carc. 1B (Note L : IP346 방법에 의해 측정된 DMSO extract가 3% 미만인 경우는 제외)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008: 등재되지 않음
- Distillates (petroleum), hydrotreated middle : EU CLP 1272/2008 : Carc. 1B (Note L : 완전한 정제 이력이 알려져 있고 발암물질이 아님을 알 수 있는 물질은 제외.)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008: 등재되지 않음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : EU CLP 1272/2008: 발암성 1B (Note L : IP346 방법에 의해 측정된 DMSO extract가 3% 미만인 경우는 제외)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008 : 등재되지 않음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008 : 등재되지 않음
- 1-Tridecanamine, N-tridecyl-, branched, : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008: 등재되지 않음

reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3)

- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008: 등재되지 않음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008: 등재되지 않음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 고용노동부고시, 산업안전보건법, IARC, OSHA, NTP, ACGIH, EU CLP 1272/2008: 등재되지 않음

○ 생식세포변이원성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 시험관 내 박테리아 복귀돌연변이시험결과, 음성 (OECD TG 471과 유사) (ECHA)
  시험관 내 포유류 염색체이상시험결과, 음성 (유사물질 자료 : 64742-53-6) (OECD TG 473과 유사, GLP) (ECHA)
  생체 내 소핵시험결과, 음성(유사물질 자료 : 64741-62-4, 64741-53-3) (OECD TG 474와 유사) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 시험관 내 박테리아 복귀돌연변이시험 (OECD TG 471)결과, 양성 (유사물질 자료: 64741-50-0) (ECHA), 시험관 내 포유류 염색체이상시험결과, 음성 (OECD TG 473) (유사물질 자료: L-06 Light Hydrotreated Feedstock) (ECHA)
  생체 내 포유류 적혈구를 이용한 소핵시험결과, 음성 (OECD TG 474) (유사물질 자료: solvent-extracted, dewaxed paraffin oil) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 시험관 내 박테리아 복귀돌연변이시험결과, 음성 (OECD TG 471) (유사물질 자료: TK12340) (ECHA), 시험관 내 포유류세포 유전자돌연변이시험결과, 음성 (OECD TG 476) (유사물질 자료: 4,4-dioctyldiphenylamine) (ECHA)
  생체 내 설치류 우성치사시험결과, 음성 (OECD TG 478) (ECHA)
- Distillates (petroleum), hydrotreated middle : 시험관 내 박테리아 복귀돌연변이시험 (OECD TG 471, GLP) (ECHA)결과 음성 및 자매염색분체시험결과, 대사활성계 존재시 모호, 존재하지 않을 시 음성 (OECD TG 479, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
  생체 내 포유류 골수를 이용한 염색체이상시험결과, 음성 (OECD TG 475) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 시험관 내 박테리아 복귀돌연변이시험결과, 음성 (OECD TG 471, GLP) (ECHA)
  생체 내 포유류 적혈구를 이용한 소핵시험결과, 음성 (OECD TG 474, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 시험관내 포유류 유전자에서 염색체 이상시험결과 음성 (유사물질자료: CAS No. 64741-52-2) (OECD TG 473) (ECHA)
  시험관내 미생물을 이용한 복귀 돌연변이 시험결과 음성 (유사물질자료: CAS No. 64742-54-7 and 64742-52-5) (OECD TG 471) (ECHA)
  시험관내 포유류 세포를 이용한 유전자 돌연변이 시험결과 음성 (유사물질자료: CAS No. 64742-52-5) (OECD TG 476, GLP) (ECHA)

생체내 포유류 적혈구를 이용한 소핵시험결과 음성 (유사물질자료: solvent-extracted, dewaxed paraffin oils, sufficiently refined, IP 346 < 3%) (OECD TG 474) (ECHA)

- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 시험관 내 박테리아 복귀돌연변이시험결과, 음성 (OECD TG 471) (NICNAS)
  시험관 내 포유류 세포를 이용한 유전자돌연변이시험결과, 음성 (OECD TG 476) (NICNAS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 시험관 내 박테리아 복귀돌연변이시험결과, 음성 (OECD TG 471) (유사물질 자료; Cetrimonium chloride (CAS No: 112-02-7), 2',4',5',7'-tetrabromo-4,5,6,7-tetrachloro-3',6'-dihydroxy-3H-spiro[2-benzofuran-1,9'-xanthen]-3-one) (ECHA)
  생체 내 자료없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 생식독성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 랫드를 대상으로 생식/발달독성 스크리닝시험결과, 시험된 농도 어디에서도 생식능에 악영향을 미치지 않았고 신생아독성도 발견되지 않음 (유사물질 자료: Chevron 100 Neutral) (OECD TG 421, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 랫드(암/수)를 대상으로 1000 mg/kg/day의 농도로 생식/발달독성 스크리닝시험결과, 어느 농도에서도 생식능에 부정적인 영향을 미치지 않았으며, 신생아 독성 또한 관찰되지 않음 (OECD TG 421, GLP) (유사물질 자료: Chevron 100 Neutral) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 랫드를 대상으로 50, 150, 500 mg/kg bw의 농도로 태아발달독성시험결과, 기형발생이나 태아독성을 유발하지 않으며, 500 mg/kg bw에서 모독성 유발 (OECD TG 414, GLP) (ECHA)
- Distillates (petroleum), hydrotreated middle : C14-C20 Aliphatic Hydrocarbon Solvents (≤2% aromatics) 카테고리류는 생식 또는 발달독성물질이 아닌 것으로 예상됨 (SIDS)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 랫드(암/수)를 대상으로 30, 100, 200 mg/kg/day의 농도로 생식/발달독성 시험결과, NOAEL(모동물 및 신생아 독성)=30 mg/kg/day (OECD TG 421, GLP) (ECHA)

- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 랫드를 대상으로 생식/발달독성 스크리닝 시험결과 생식관련 활동은 어느 투여 농도에서도 중대하게 영향받지 않음. 신생아 독성은 어느 투여 농도에서도 발견되지 않음 (유사물질자료: CAS No. 64742-54-7) (OECD TG 421, GLP) (ECHA)
랫드를 대상으로 발달독성 시험결과 최기성의 증거 발견되지 않음. 외부, 골격, 또는 내장에서 투여 관련 변화 관찰되지 않음 (유사물질자료: CAS No. 64741-88-4) (OECD TG 414) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : NOAEL(전신 모독성 및 신생아독성)=50 mg/kg/day, NOAEL(생식독성)=300 mg/kg/day으로 설정되었으며, 세대간 누적 독성 영향은 관찰되지 않음 (OECD TG 416, GLP)(NICNAS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 랫드(암)를 대상으로 0, 100, 300, 1000 mg/kg/day의 농도로 경구 발달독성시험결과, 대조군과 비교하여 모체독성과 임상증상 또는 행동학적 변이가 관찰되지 않음. NOAEL(모독성)=300 mg/kg bw, NOAEL(F1)=1000 mg/kg bw (유사물질 자료: Quaternary Silsesquioxane)(ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 표적장기·전신독성물질(1회노출) : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 랫드(암/수)를 대상으로 급성 경구독성시험결과, 사망개체 없었으며 한마리의 오른쪽 신장에 수신증 관찰되었으나 시험물질의 투여와 관련된 것은 아니며, 다른 이상증상은 관찰되지 않음 (유사물질 자료: 64742-56-9) (OECD TG 401, GLP) (ECHA)
토끼(암/수)를 대상으로 급성 경피독성시험결과, 5000 mg/kg bw의 농도에서 피부자극이나 임상 독성의 징후를 야기하지 않았으며 육안 부검에서 전신독성의 징후 또한 관찰되지 않음 (유사물질 자료: 64742-56-9) (OECD TG 402, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 랫드(암/수)를 대상으로 급성경구독성시험결과, 독성의 임상 증상 관찰되지 않음. LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 401, GLP) (유사물질 자료: 64742-56-9) (ECHA)
토끼(암/수)를 대상으로 급성경피독성시험결과, 뚜렷한 임상 독성의 증후는 관찰되지 않음. LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 402, GLP) (유사물질 자료: 64742-56-9) (ECHA)

랫드(암/수)를 대상으로 급성흡입독성시험결과, 노출이 감소되고 관찰 10일째까지 개체 털에 물질 침전. 그룹간 평균 체중에 통계학적으로 유의미한 차이 없음. LC50 > 5.53 mg/L air /4h, 사망없음 (OECD TG 403) (유사물질 자료: MRD-87-102) (ECHA)

- ar-Nonyl-N-(nonylphenyl)benzenamine : 랫드(암/수)를 대상으로 급성경구독성시험결과, 물질 관련 육안적 장기 변이 관찰되지 않음. LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 401) (ECHA)
랫드(암/수)를 대상으로 급성경피독성시험결과, 급성독성시험에서 흔히 관찰되는 입모, 비정상적 체위, 설사 관찰되었으며 9일 이내 회복됨. LD50 > 2000 ㎎/kg bw (OECD TG 402) (ECHA)
랫드(암/수)를 대상으로 급성흡입독성시험결과, 부검 및 조직병리학적 검사결과 물질관련 소견 없음. LC50 > 5.1 mg/L air /4h, 사망없음 (OECD TG 403) (ECHA)
- Distillates (petroleum), hydrotreated middle : 랫드(암/수)를 대상으로 급성경구독성시험결과, 활동저하, 뇨로 얼룩진 복부 및 기름기가 발린 것처럼 보이는 털 관찰됨. LD50 > 5000 ㎎/kg bw, 사망없음 (OECD TG 401, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
토끼(암/수)를 대상으로 급성경피독성시험결과, 눈에 띄는 병변 보고 없음. LD50 > 2000 ㎎/kg bw, 사망없음 (OECD TG 402, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
랫드(암/수)를 대상으로 급성흡입독성시험결과, 대부분의 개체에게서 호흡곤란, 비루, 과도한 타액분비, 엉겨붙은 털과 같은 일반증상이 관찰됨. LC50 = 7.640 mg/L air /4h, 사망없음 (OECD TG 403, GLP) (유사물질 자료: CAS# 64742-80-9) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 랫드(수)를 대상으로 급성경구독성시험결과, 우울, 설사, 사료 섭취 감소. LD50 = 3100 ㎎/kg bw (OECD TG 401) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 랫드를 대상으로 급성경구독성 시험결과 암/수 개체에서 독성관련 임상적 징후 관찰되지 않음. LD50 > 5000 mg/kg bw, 사망없음 (유사물질자료: CAS No. 64742-56-9) (OECD TG 401, GLP) (ECHA)
랫드를 대상으로 급성경피독성 시험결과 몇몇 개체들에서 피부 자극과 부드러운 변이 관찰되었으나 일시적임. LD50 > 2000 mg/kg bw, 사망없음 (유사물질자료: CAS No. 64742-53-6) (OECD TG 402, GLP) (ECHA)
랫드를 대상으로 급성에어로졸흡입독성 시험결과 모든 개체들을 방에서 내보낸 결과 털에 상당한 양의 시험 물질이 남아있음. 노출 후 시험 물질이 털에 남아있는 개체 수는 감소했고 10일 째에는 없음, LC50 > 5.53 mg/L air 4시간, 사망없음; (유사물질자료: CAS No. 64741-88-4) (OECD TG 403) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 랫드를 대상으로 급성 흡입독성시험결과, 사망이나 전신독성의 영향이 관찰되지 않음. LC50 >1.67 mg/L (OECD TG 403) (NICNAS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 유의한 영향이 관찰되지 않음 (ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음

- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 표적장기·전신독성물질(반복노출) : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 토끼를 대상으로 28일간 아급성 경피독성시험결과, 전신독성 영향이 관찰되지 않았으므로 NOAEL(전신독성)=1,000 mg/kg로 설정됨 (유사물질 자료 : 64742-53-6) (OECD TG 410, GLP) (ECHA)
  랫드를 대상으로 4주간 0, 50, 220, 1000 mg/m3의 농도로 아급성 흡입독성시험결과, 전신 영향이 관찰되지 않음. 폐 내 오일 침착과 관련된 폐 변이에 대한 NOAEL=220 mg/m3로, 총체적 NOAEL(전신영향)은 전신독성이 관찰되지 않았으므로 > 980 mg/m3로 설정됨 (유사물질 자료 : 64742-70-7) (OECD TG 412와 유사) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 토끼(암/수)를 대상으로 반복경피독성시험결과, 시험된 최고 농도에서 전신 악영향이 관찰되지 않았으므로 NOAEL = 1,000 mg/kg (OECD TG 410, GLP) (유사물질 자료: 64742-53-6) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 랫드(수)를 대상으로 28일간 반복경구독성시험결과, 임상 결과 및 체중에 대한 영향 없음 (ECHA)
- Distillates (petroleum), hydrotreated middle : 랫드(암/수)를 대상으로 90일간 반복경피독성시험결과, Light Catalytically Cracked Distillate은 125, 500, 1,250 mg/kg/day의 농도에서 체중 감소, 흉선 중량 감소, 간 무게 증가. NOEL =25 mg/kg/day(수컷), 125 mg/kg/day(암컷) (OECD TG 411) (유사물질 자료: Light Catalytically Cracked Distillate) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 랫드(암/수)를 대상으로 10, 50, 125, 250, 500 mg/kg/day의 농도로 28일간 반복경구투여시험결과, 유의미한 영향 관찰안됨. NOAEC(전신독성)=125 mg/kg bw/day (OECD TG 407, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 랫드를 대상으로 아급성 경구투여시험결과 125 mg/kg 농도로 투여된 모든 개체는 예정된 희생되는 날 이전까지 살아남음. 임상적 징후 관찰되지 않음. NOAEL은 경구투여시 125mg/kg보다 작지만 정확한 값은 밝혀지지 않음 (OECD TG 408) (ECHA)
  토끼를 대상으로 반복경피독성 시험결과 1000 mg/kg 농도에서 전신 부작용의 영향은 경미하며 NOAEL 은 1000 mg/kg 농도로 설정되었음 (유사물질자료: CAS No. 64742-53-6) (OECD TG 410, GLP) (ECHA)
  랫드를 대상으로 반복흡입독성 시험결과 전신에 미치는 영향 관찰되지 않음에 따라 NOAEL은 > 980 mg/m3 (0.980 mg/L) 로 결정됨 (유사물질자료: CAS No. 64742-70-7) (OECD TG 412) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 랫드를 대상으로 125, 250, 500, 1000 mg/kg bw/day의 농도로 90일간 아만성 경구투여시험결과, 사망이나 유의미한 영향이 관찰되지 않았으므로 NOAEL=1000 mg/kg bw/day으로 평가됨 (OECD TG 408) (NICNAS)

- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 랫드(암)를 대상으로 0, 100, 300, 1000 mg/kg/day의 농도로 경구 발달독성시험결과, 대조군과 비교하여 모체독성과 임상증상 또는 행동학적 변이가 관찰되지 않음. NOAEL(모독성)=300 mg/kg bw, NOAEL(F1)=1000 mg/kg bw (유사물질 자료: Quaternary Silsesquioxane)(ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 흡인유해성 : 분류되지 않음

- Distillates (petroleum), hydrotreated heavy paraffinic : 동점도 : 73.9 mm2/s (40°C)(ECHA)이면서 탄화수소류
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : > 2 mm2/s (40°C) (ECHA)의 동점도를 갖는 탄화수소류
- ar-Nonyl-N-(nonylphenyl)benzenamine : 585 mPa.s (40°C) (ECHA)의 점도를 가지며 탄화수소류 아님
- Distillates (petroleum), hydrotreated middle : distillate fuels의 동점도 범위 : >= 2 - 8.1 mm2/s (40°C)이면서 탄화수소류
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 131.6 cSt (40°C) (ECHA)의 동점도를 가지며 탄화수소류 아님
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : > 2 mm2/s (40°C) (CONCAWE, 2010a; CONCAWE, 1984; CONCAWE, 1997) 의 동점도를 가지며 (ECHA) & 탄화수소류임
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 자료없음

- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 점도: > 9 - < 15 mm2/s (100°C; OECD TG 114)(ECHA)이면서 탄화수소류 아님
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

12. 환경에 미치는 영향

가. 생태독성

- 급성 수생 환경유해성 : 분류되지 않음 (ATEmix>1mg/L)
- 만성 수생 환경유해성 : 분류되지 않음

○ 급성 수생 환경유해성

어류

- Distillates (petroleum), hydrotreated heavy paraffinic : 96h-LL50(Pimephales promelas) > 100 mg/L (OECD TG 203, GLP)(ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 96h-LL50(Pimephales promelas) > 100 mg/L (OECD TG 203, GLP) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 수용해도 (< 5 μg/L) 한계까지 독성 영향 없음
- Distillates (petroleum), hydrotreated middle : C14-C20 Aliphatic Hydrocarbon Solvents [≤2% aromatics] 카테고리류의 수용해도 범위는 <0.001 ~ 0.13 mg/L (at 25 °C) (SIDS)로서, 수용해도 한계까지 독성영향 없음으로 판단(96h-LL50(Oncorhynchus mykiss) = 21 mg/L (OECD TG 203, GLP) (유사물질 자료) (ECHA))
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 96h-LL50(Oncorhynchus mykiss) = 4.4 mg/L (OECD TG 203, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 96h-LL50(Pimephales promelas) > 100 mg/L (OECD TG 203, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 96h-LL50(Pimephales promelas) > 1000 mg/L (유사물질: 122384-85-4) (OECD TG 203) (OECD SIDS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 불용성(수용해도: 0.000000000005072 mg/L, 25°

C)물질로서 수용해도까지 급성독성이 나타나지 않음 (ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

갑각류
- Distillates (petroleum), hydrotreated heavy paraffinic : 48h-EL50(Daphnia magna) > 10,000 mg/L (유사물질 자료: 64742-53-6 또는 64741-97-5) (OECD TG 202와 유사) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 48h-EL50(Daphnia magna) > 10000 mg/L (OECD TG 202) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 수용해도 (< 5 μg/L) 한계까지 독성 영향 없음
- Distillates (petroleum), hydrotreated middle : C14-C20 Aliphatic Hydrocarbon Solvents [≤2% aromatics] 카테고리류의 수용해도 범위는 <0.001 ~ 0.13 mg/L (at 25 °C) (SIDS)로서, 수용해도 한계까지 독성영향 없음으로 판단(48h-EL50(Daphnia magna) = 210 mg/L (OECD TG 202, GLP) (유사물질 자료) (ECHA))
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 48h-EL50(Daphnia magna) = 75 mg/L (OECD TG 202, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 48h-EL50(Daphnia magna) > 10000 mg/L (OECD TG 202) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 48h-LL50(Daphnia magna) > 1000 mg/L (유사물질: 122384-85-4) (OECD TG 202) (OECD SIDS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 불용성(수용해도: 0.000000000005072 mg/L, 25° C)물질로서 수용해도까지 급성독성이 나타나지 않음 (ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

조류
- Distillates (petroleum), hydrotreated heavy paraffinic : 자료없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 자료없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 수용해도 (< 5 μg/L) 한계까지 독성 영향 없음
- Distillates (petroleum), hydrotreated middle : C14-C20 Aliphatic Hydrocarbon Solvents [≤2% aromatics] 카테고리류의 수용해도 범위는 <0.001 ~ 0.13 mg/L (at 25 °C) (SIDS)로서, 수용해도 한계까지 독성영향 없음으로 판단(72h-ErL50(Pseudokirchneriella subcapitata) = 22 mg/L (OECD TG 201) (유사물질 자료) (ECHA))
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 72h-ErL50(Desmodesmus subspicatus) = 410 mg/L (OECD TG 201, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 자료없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 96h-LL50(Pseudokirchneriella subcapitata) > 1000 mg/L (유사물질: 122384-85-4) (OECD TG 201) (OECD SIDS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 불용성(수용해도: 0.000000000005072 mg/L, 25° C)물질로서 수용해도까지 급성독성이 나타나지 않음 (ECHA)

- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ **만성 수생 환경유해성**

어류

- Distillates (petroleum), hydrotreated heavy paraffinic : 자료없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 자료없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 자료없음
- Distillates (petroleum), hydrotreated middle : 자료없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 자료없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 14d-NOELR(Oncorhynchus mykiss) >= 1000 mg/L (예측치) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 자료없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 자료없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

갑각류

- Distillates (petroleum), hydrotreated heavy paraffinic : 21d-NOEL(Daphnia magna)=10 mg/L (유사물질: 64742-53-6) (OECD TG 211과 유사, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 21d-NOEL(Daphnia magna) = 10 mg/L (OECD TG 211, GLP) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 자료없음
- Distillates (petroleum), hydrotreated middle : 자료없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 28d-NOEC(Daphnia magna) = 0.4 mg/L (OECD TG 211, GLP) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 21d-NOEL(Daphnia magna) = 10 mg/L (OECD TG 211, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 자료없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 자료없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

조류

- Distillates (petroleum), hydrotreated heavy paraffinic : 72h-NOErL(Pseudokirchnerella subcapitata) >= 100 mg/L (유사물질: 72623-87-1) (OECD TG 201) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 72h-NOErL(Pseudokirchneriella subcapitata) >=100 mg/L (OECD TG 201) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 자료없음
- Distillates (petroleum), hydrotreated middle : 72h-NOErL(Pseudokirchneriella subcapitata) = 1 mg/L (OECD TG 201) (유사물질자료) (ECHA); 수용해도 한계까지 만성독성 관찰되지 않음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 자료없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 72h-NOEL(Pseudokirchneriella subcapitata) >= 100 mg/L (OECD TG 201) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 자료없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 자료없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

나. 잔류성 및 분해성

○ 잔류성

- Distillates (petroleum), hydrotreated heavy paraffinic : 본 물질은 UVCB이므로 해당없음 (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : log Kow = 7.87 (예측치) (EPISUITE)
- ar-Nonyl-N-(nonylphenyl)benzenamine : log Kow=12.24 (예측치) (EPISUITE); 유효하지 않은 자료 (-4<log Kow<8 의 범위 초과)
- Distillates (petroleum), hydrotreated middle : log Kow = 7.71 (예측치) (EPISUITE)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : log Kow = 3.59 (22 °C, pH: 약 5) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : log Kow = 6.43 (예측치) (EPISUITE)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 이 카테고리군의 물질들은 높은 log Kow를 갖음 (log Kow > 6.6, 측정치) (OECD SIDS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : log Kow=14.876 (예측치) (EPISUITE); -4 < log Kow < 8를 초과하는 값으로서 유효하지 않음 (ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 분해성

- Distillates (petroleum), hydrotreated heavy paraffinic : 기타 윤활기유 카테고리를 구성하는 화학물질은 전적으로 탄소와 수소로 구성되어 있으며 가수분해성 작용기를 포함하지 않으므로 이러한 가수분해 과정은 환경에서 제거되는 데 기여하지 않음 (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 자료없음

- ar-Nonyl-N-(nonylphenyl)benzenamine : 물과 접촉시 가수분해는 예상되지 않음 (ECHA)
- Distillates (petroleum), hydrotreated middle : 자료없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 자료없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 가수분해 가능성 매우 낮음 (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 가수분해하지 않음 (OECD SIDS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 자료없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

다. 생물농축성

○ 생물농축성

- Distillates (petroleum), hydrotreated heavy paraffinic : 본 물질은 UVCB이므로 해당없음 (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : BCF = 4996 (예측치) (EPISUITE)
- ar-Nonyl-N-(nonylphenyl)benzenamine : BCF=35.87 (예측치) (EPISUITE)
- Distillates (petroleum), hydrotreated middle : BCF = 1516 (예측치) (EPISUITE)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : BCF=448.2 (예측치) (EPISUITE)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : BCF = 8137 (예측치) (EPISUITE)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : BCF=3.162 (예측치)(EPISUITE)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : BCF=3.162(ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

○ 생분해성

- Distillates (petroleum), hydrotreated heavy paraffinic : 본 물질은 본질적으로 생분해되나 쉽게 생분해되지 않는 (28일 후 31% 생분해됨)것으로 확인됨 (유사물질 자료: Solvent Neutral 600 Base Oil (MRD-94-981)) (OECD TG 301F, GLP) (ECHA)
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 28일 후 31 % 생분해됨; 난분해성 (OECD TG 301F, GLP) (ECHA)
- ar-Nonyl-N-(nonylphenyl)benzenamine : 28일 후 1% 생분해됨; 난분해성 (OECD TG 301B, GLP) (유사물질 자료: TK12340) (ECHA)
- Distillates (petroleum), hydrotreated middle : 28일 후 34.82 % 생분해됨; 난분해성 (EPA OTS 796.3100) (ECHA)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 27일 후 < 5% 생분해됨; 난분해성 (OECD TG 301D) (ECHA)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 28일 후 31% 생분해됨; 본질적으로 생분해됨 (OECD TG 301F, GLP) (ECHA)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 이 카테고리(Combined Alkyl Phenol Sulfide and Alkyl Phenate Sulfide category)의 물질들은 쉽게 생분해되지 않음 (OECD SIDS) 28일 후 4.7~13.4% 생분해됨

(유사물질: CAS # 122384-85-4) (OECD TG 301B) (OECD SIDS)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 28일 후 0% 생분해됨; 난분해성 (유사물질 자료: Didecyl dimethyl ammonium chloride) (OECD TG 301C)(ECHA)
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

라. 토양이동성
- Distillates (petroleum), hydrotreated heavy paraffinic : 자료없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : Koc=6760000 (EPISUITE)
- ar-Nonyl-N-(nonylphenyl)benzenamine : Koc=44900000 (EPISUITE)
- Distillates (petroleum), hydrotreated middle : Koc=4910000 (EPISUITE)
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : Koc=495900 (EPISUITE)
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : Koc = 380400 (예측치) (EPISUITE)
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : Koc=3615000000000 (EPISUITE)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Koc=3268000000
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

마. 오존층 유해성
- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

바. 기타 유해 영향
- Distillates (petroleum), hydrotreated heavy paraffinic : 자료없음
- Trade secret : 자료없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 자료없음

- ar-Nonyl-N-(nonylphenyl)benzenamine : 자료없음
- Distillates (petroleum), hydrotreated middle : 자료없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 자료없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 자료없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 자료없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 자료없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 자료없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 자료없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 자료없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 자료없음

13. 폐기시 주의사항

가. 폐기방법

- 기름과 물을 분리하여 분리된 기름성분은 소각하고, 분리한 후 남은 물은 수질오염방지시설에서 처리하시오.
- 증발・농축방법으로 처리한 후 그 잔재물은 소각하거나 안정화 처리하시오.
- 응집・침전방법으로 처리한 후 그 잔재물은 소각하시오.
- 분리・증류・추출・여과・열분해의 방법으로 정제 처리하시오.
- 소각하거나 안정화 처리 하시오.
- 폐기물관리법에 의한 지정폐기물에 해당하는 처리기준 및 방법에 따라 처분하시오.

나. 폐기시 주의사항

- 사업장폐기물을 배출하는 사업자(사업장폐기물배출자)는 사업장에서 발생하는 폐기물을 스스로 처리하거나, 폐기물처리업의 허가를 받은 자, 다른 사람의 폐기물을 재활용하는 자, 폐기물 처리시설을 설치 운영하는 자 또는 해양오염방지법 규정에 의하여 폐기물해양배출업을 등록한 자에게 위탁하여 처리하시오.
- 폐기물관리법상 규정에 명시된 처리 시 주의사항을 고려하시오.

14. 운송에 필요한 정보

가. 유엔번호(UN No.)

- 해당없음

나. 적정선적명

- 해당없음

다. 운송에서의 위험성 등급

- 해당없음

라. 용기등급

- 해당없음

마. 해양오염물질

- 해당없음

바. 사용자가 운송 또는 운송수단에 관련해 알 필요가 있거나 필요한 특별한 안전대책

- 화재시 비상조치의 종류 : 해당없음
- 유출시 비상조치의 종류 : 해당없음
- 육상/해상/항공 운송규제사항(ADR/RID, AND, IMDG, ICAO/IATA)에 의한 분류 및 규제 : 해당없음

15. 법적 규제현황

가. 산업안전보건법에 의한 규제

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 노출기준설정물질, 작업환경측정대상 유해인자, 특수건강진단대상 유해인자
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 노출기준설정물질, 작업환경측정대상 유해인자, 특수건강진단대상 유해인자
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 노출기준설정물질
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

나. 화학물질관리법에 의한 규제 - PRODUCT : 해당없음

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 배출량조사대상물질
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 배출량조사대상물질
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

다. 화학물질의등록 및 평가 등에관한 법률에 의한 규제

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-

hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

라. 위험물안전관리법에 의한 규제 - PRODUCT : 제4류 인화성액체제4석유류, 6000L

- Distillates (petroleum), hydrotreated heavy paraffinic : 위험물
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

마. 폐기물관리법에 의한 규제 - PRODUCT : 지정폐기물- 폐유(액체상태)

바. 기타 국내 및 외국법에 의한 규제

○ 고압가스안전관리법

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

○ 잔류성유기오염물질관리법

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음

- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

○ EU 규제정보

EU 분류정보(확정분류결과)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

EU 분류정보(위험문구)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

EU 분류정보(안전문구)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

REACH 제한물질

- Distillates (petroleum), hydrotreated heavy paraffinic : REACH 제한물질
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : REACH 제한물질
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : REACH 제한물질
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : REACH 제한물질
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

REACH 허가대상물질

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-

ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

REACH SVHC
- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

EU PBT
- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

○ 미국 규제정보

미국관리정보(OSHA 규정)
- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음

- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

미국관리정보(CERCLA 규정)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

미국관리정보(EPCRA 302 규정)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

미국관리정보(EPCRA 304 규정)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음

- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

미국관리정보(EPCRA 313 규정)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

○ 국제협약 정보

로테르담 협약물질

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

스톡홀름 협약물질

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음

- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

몬트리올 의정서물질

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

○ National Inventory

유럽 기존화학물질 Inventory(EINECS)

- Distillates (petroleum), hydrotreated heavy paraffinic : 유럽 EINECS 기존화학물질
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 유럽 EINECS 기존화학물질
- ar-Nonyl-N-(nonylphenyl)benzenamine : 유럽 EINECS 기존화학물질
- Distillates (petroleum), hydrotreated middle : 유럽 EINECS 기존화학물질
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 유럽 EINECS 기존화학물질
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 유럽 EINECS 기존화학물질
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 유럽 EINECS 기존화학물질
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 유럽 EINECS 기존화학물질
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음

- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

유럽 신고화학물질 Inventory(ELINCS)

- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 해당없음
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 해당없음
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

미국 기존화학물질 Inventory(TSCA)

- Distillates (petroleum), hydrotreated heavy paraffinic : 미국 TSCA 기존화학물질
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 미국 TSCA 기존화학물질
- ar-Nonyl-N-(nonylphenyl)benzenamine : 미국 TSCA 기존화학물질
- Distillates (petroleum), hydrotreated middle : 미국 TSCA 기존화학물질
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 미국 TSCA 기존화학물질
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 미국 TSCA 기존화학물질
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 미국 TSCA 기존화학물질
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 미국 TSCA 기존화학물질
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 미국 TSCA 기존화학물질
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 미국 TSCA 기존화학물질
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 미국 TSCA 기존화학물질

중국 기존화학물질 Inventory(IECSC)

- Distillates (petroleum), hydrotreated heavy paraffinic : 중국 기존화학물질
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 중국 기존화학물질
- ar-Nonyl-N-(nonylphenyl)benzenamine : 중국 기존화학물질
- Distillates (petroleum), hydrotreated middle : 중국 기존화학물질
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 중국 기존화학물질
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 중국 기존화학물질
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 중국 기존화학물질
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 중국 기존화학물질
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-

hexanamine and molybdenum oxide (MoO3) : 해당없음
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

일본 기존화학물질 Inventory(ENCS)
- Distillates (petroleum), hydrotreated heavy paraffinic : 해당없음
- Trade secret : 해당없음
- Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based : 해당없음
- ar-Nonyl-N-(nonylphenyl)benzenamine : 일본 ENCS 기존화학물질
- Distillates (petroleum), hydrotreated middle : 해당없음
- Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt : 일본 ENCS 기존화학물질
- Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 해당없음
- Dodecyl phenol, sulfurized, carbonates, calcium salts, overbased : 해당없음
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : 해당없음
- 1-Tridecanamine, N-tridecyl-, branched, reaction products with carbon disulfide 2-ethyl-N-(2-ethylhexyl)- 1-hexanamine and molybdenum oxide (MoO3) : 일본 ENCS 기존화학물질
- Bis(ditridecylcarbamodithioato-κS,κS']dioxodi-μ-thioxodimolybdenum, branched : 해당없음
- Molybdenum, [N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S'](N,N-ditridecylcarbamodithioato-.kappa.S,.kappa.S')dioxodi-.mu.-thioxodi-, branched : 해당없음
- Molybdenum, bis[N,N-bis(2-ethylhexyl)carbamodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi- : 해당없음

16. 기타 참고사항

가. 자료의 출처
- 본 MSDS는 내부 기술데이터 및 OECD eChemPortal, ECHA, NITE, TOXNET, IPCS, KOSHA 등을 근거로 작성하였음.

나. 최초작성일자
- 2019-06-20

다. 개정횟수 및 최종 개정일자

○ **개정횟수**
- 2

○ **최종 개정일자**
- 2026-01-05

○ **최종개정이력**
- 화학성분조성 및 회사에 관한 정보 개정

라. 기타
- 본 MSDS는 산업안전보건법 제110조 및 고용노동부고시 제2025-50호(화학물질의 분류·표시 및 물질안전보건자료에 관한 기준)에 근거하여 국내 관련 규제 법규 현황 등을 고려하여 기술함. 본 MSDS에 포함된 정보는 당사의 최신 지식 및 경험을 바탕으로 제품안전취급 관련 정보에 대해서만 기술한 것이며, 본 MSDS는 제품의 기술자료(TDS), 시험성적서(CoA) 및 규격합의서로(Specification agreement) 사용될 수 없음. 본 제품의 사용자는 현행 법률이 정한 규정을 확인하여 준수할 책무가 있음.